Mental Health, United States, 2004

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Mental Health, United States, 2004

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Foreword

Our Nation has made great strides in recent years in achieving recovery for persons with mental illnesses. We know much more about how to deliver recovery-oriented mental health care, improve service quality, achieve desired improvements in quality of life outcomes, and implement needed care systems in each community in America. Our goal is a healthy life in the community for everyone.

Current efforts, however, are far from complete. Many individuals find the services they need to be inaccessible owing to distance, cost, or coverage limitations. Others are able to access services, but the services may not be fully evidence based; of the highest quality; respectful of the recipient's culture, race, and ethnicity; or recovery oriented.

The recent report from the Institute of Medicine, *Improving the Quality of Health Care for Mental and Substance-Use Conditions,* recommends close coordination among primary care, mental health care, and substance use care. It also advocates for the adoption and application of quality improvement tools so that high-quality care can be provided to all who need it. *Mental Health, United States, 2004* addresses each of these issues.

Mental Health, United States, 2004 adds to our knowledge base, helps guide our program and policy direction, and helps us identify where we need to correct our course toward system transformation in mental health care. We hope you will find many uses for the information contained in this volume and that you will join in our goal of helping all Americans with mental illnesses realize healthy, contributing lives in their communities nationwide.

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Executive Summary

I. Quality Improvement

Section I of the 2004 edition of *Mental Health, United States* introduces the quality improvement model and its application to the mental health field. Manderscheid (chapter 1) provides a brief overview of this topic, followed by Daniels et al. (chapter 2), who describe the Crossing the Quality Chasm Model—a framework developed by the Institute of Medicine—as a tool to reform health care and improve its quality. Power (chapter 3) introduces the goals of the President's New Freedom Commission on Mental Health—the guiding goals for transformation of mental health care in the United States—and links those goals to performance measures, which are critical to quality improvement efforts. The final two chapters in this section address more specialized topics. Bassman (chapter 4) recounts the history of the mental health consumer movement in the United States and the role it has played in quality improvement. Manderscheid (chapter 5) examines the role of information technology as a force that promotes transformation and that can be applied effectively to improve the quality of care.

II. Measures To Improve Quality

Measures of quality are essential for any quality improvement initiative. Section II reviews such measures. Following a brief overview by Manderscheid of performance measures (chapter 6), Minden et al. (chapter 7) outline a range of quality tools available on the Decision Support 2000+ (DS2K+) Web site, including consumer and provider surveys, and vehicles for entering, processing, and bench-marking quality measures. DS2K+ is a key national infrastructure resource designed to foster better quality measurement. Bartlett et al. (chapter 8) discuss developments in the Forum on Performance Measures in Behavioral Healthcare, a joint effort of the three centers of Substance Abuse and Mental Health Services Administration (SAMHSA) to develop common measures across the mental health and substance abuse fields. Administrative measures currently are being tested, and a modular consumer survey is being completed. Smith and Gianju (chapter 9) introduce the MHSIP Quality Report, a second-generation Report Card designed to replace the original MHSIP Consumer-Oriented Report Card. Lutterman and Gonzalez (chapter 10) report progress in implementing the Uniform Reporting System (URS) in the States and Territories, including the subset of measures designated by the SAMHSA Administrator as National Outcome Measures (NOMs). Finally, Lutterman et al. (chapter 11) report findings from the annual State Mental Health Agency Profile System, organized to show how the States and Territories are progressing in implementing the six goals identified in the report of the President's New Freedom Commission on Mental Health.

III. Mental Health Care In Primary Care Settings

Section III highlights the fast-growing role of mental health care provided in primary care settings. Reiss-Brennan (chapter 12) introduces the topic by highlighting the importance of clinical and financial factors in this service arrangement. Druss et al. (chapter 13) summarize research and other evidence about the accessibility, quality of service delivery, and effectiveness of mental health care in

this setting. Wang et al. (chapter 14) provide the most recent information about the prevalence of this type of care from community surveys.

IV. Population Assessments

Section IV examines population assessments to identify persons with mental illness from community surveys and cost assessments drawn from encounter payment data for consumers served in major public and private funding programs. Kessler et al. (chapter 15) provide detailed estimates for the adult population with serious mental illness from the National Comorbidity Survey Replication. Cowell et al. (chapter 16) report annual national and per-person expenditures for mental health and substance abuse services under Medicare, parallel annual State expenditures for four States under Medicaid, and annual program and per-person expenditures for several different private-sector insurance plans. Jonas et al. (chapter 17) describe national estimates of depression in young adults that were derived from the National Health Interview Survey, and Pastor et al. (chapter 18) offer the first national findings for a National Child Mental Health Indicator that were collected through this same survey.

V. National Service Statistics

Section V presents annual national service statistics collected through the Center for Mental Health Services National Mental Health Statistical Reporting Program. Foley et al. (chapter 19) report the most recent annual national and State statistical information on mental health organizations in the United States, and Crider et al. (chapter 20) report the most recent national statistical information on persons served in those organizations. Goldstrom et al. (chapter 21) summarize findings from the first-ever national survey of consumer-operated services. Finally, Duffy et al. (chapter 22) enumerate the latest statistical information on human resources, including trainees, in each of the core mental health disciplines.

Section I.
Quality Improvement

Chapter 1

Promoting Independence in the Community: Introduction to Quality Improvement Strategies

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The President's New Freedom Commission on Mental Health (2003) has defined independence and full community participation as essential goals of mental health care. Achievement of these goals will require broad-based transformation of mental health care systems in the United States. This transformation will be effected through quality improvement strategies, as identified by the Institute of Medicine (IOM) (2001) in its report, *Crossing the Quality Chasm: A New Health System for the 21st Century.* A primary characteristic of these transformed systems will be consumer- and family-directed care.

Quality improvement strategies are positive, planned interventions designed to modify the process of health care delivery and its outcomes. IOM (2001) has identified four strategies that are essential for successful transformation: implementation of evidence-based practices; better initial and continuing training of health care providers; reform of financing mechanisms; and adoption of improved information technology and performance measures.

In the past, quality improvement was thought to depend on the imposition of negative sanctions by external agents. In contrast, modern quality improvement strategies rely on direct benchmarking by health care providers themselves, with extensive input from primary consumers and family members through surveys and report cards. This change, effected in a period of fewer than 10 years, is nothing short of revolutionary.

New developments continue to emerge in each of these areas. The IOM is currently conducting a new study titled *Adaptation of Crossing the Quality Chasm Framework to Mental and Addictive Disorders.* This study will provide a blueprint for action in transforming behavioral health care in the United States. The anticipated release date for the report from this study is fall 2005.

The Center for Mental Health Services (CMHS) continues to implement an Action Plan to facilitate broad-based transformation of mental health care systems. Daniels and Adams (2003) have shown how the transformational goals of the President's New Freedom Commission on Mental Health (2003) map directly to the IOM goals and strategies. CMHS has major transformational initiatives under way around each of the IOM strategies. The mental health consumer movement continues to evolve apace. Currently, recovery and consumer control have emerged as major themes and focuses for effort in the movement.

Finally, successful adoption of information technology itself is viewed as a primary vehicle for effecting transformation. The effects can be seen at the clinical, organizational, and institutional levels. CMHS is currently working with the Software and Technology Vendors Association to develop and implement a strategic plan for application of information technology in behavioral health care.

Succeeding chapters provide additional detail around each of these developments.

REFERENCES

Daniels, A. S., & Adams, N. (2003). *From policy to service: A quality vision for behavioral health.* Pittsburgh, PA: American College of Mental Health Administration.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America.* Rockville, MD: U.S. Department of Health and Human Services.

Chapter 2

Crossing the Quality Chasm: Adaptation for Mental Health and Addictive Disorders

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In November 2003, the Institute of Medicine (IOM) of the National Academies of Science initiated a new study at the request of the Department of Health and Human Services' Substance Abuse and Mental Health Services Administration (SAMHSA) and the Robert Wood Johnson Foundation. These organizations asked the IOM to identify ways to improve the quality of mental health services and services for the treatment of substance use disorders in the United States. They further asked that the IOM use a previously published IOM titled *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001) as the framework for this study.

Crossing the Quality Chasm

Crossing the Quality Chasm was the final report of the Committee on the Quality of Health Care in America. This unique committee was created by the IOM in 1998 as a response to the accumulating number of studies documenting that the way in which health care is delivered has not kept pace with the advances in medical technology and with the growing evidence about how to effectively treat diseases. Many people fail to receive the care that is known to be most effective in treating their health conditions, or they receive costly care that carries risk but has little or no benefit. And sometimes, individuals simply receive the wrong treatments.

The committee's first report, *To Err Is Human,* (IOM, 2000) was a wake-up call to health care providers, organizations, and all components of the health care system. It documented that not only was health care often of poor quality, it was actually unsafe. The evidence in this report indicates that between 44,000 and 98,000 people in the United States die every year from problems in the way the delivery of health care is designed. This number is more than those who die from breast cancer, AIDS, or motor vehicle accidents. These deaths are not necessarily a result of "bad" doctors, nurses, or other health care workers, but of fundamental problems in how health services are organized and delivered. The report received widespread attention at the highest level of the government, in the media, and among health care organizations and consumer advocates.

The report's message and its recommendations for building safer systems of care delivery within health care organizations and across the entire U.S. health care system spurred action by the government and many private sector organizations. At the same time, the Committee on the Quality of Health Care in America knew that keeping patients safe

from harm is not the only goal for health care. Consumers also need to receive care that is effective in treating their illness, responsive to their values and treatment preferences, timely, efficient, and equitable. These concerns were the focus of the second and final Committee report: *Crossing the Quality Chasm: A New Health System for the 21st Century* (IOM, 2001).

This report advanced the notion that failures in the health system are not due to the intent or efforts of those involved in the care process but to fundamental failures in the way these systems are established. It called attention to the need to redesign health care practices at every level of the U.S. health care system. Changes needed in the design of health systems include:

- how individual health care providers interact with their patients
- how the multiple providers who deliver care to an individual patient communicate and coordinate with each other
- how health care organizations design their delivery of care
- how those parties external to the actual delivery of care, but that exert tremendous influence on how care is delivered (i.e., the regulatory agencies, payers, and external oversight organizations), need to align their practices to foster the delivery of quality health care.

The *Quality Chasm* report put forth the following **six aims** or common values for the U.S. health care system that it urged all parties to embrace and use to guide their quality improvement efforts:

1. **Safe care—**avoids injuries to patients from the care intended to help them.
2. **Effective care—**provides services based on scientific knowledge to all who could benefit and refrains from providing services to those not likely to benefit.
3. **Patient-centered care—**is respectful of and responsive to individual patient preferences, needs, and values and ensures that patient values guide all clinical decisions.
4. **Timely care—**reduces waiting time and sometimes harmful delays for both those who receive and those who give care.
5. **Efficient care—**avoids waste, in particular waste of equipment, supplies, ideas, and energy.
6. **Equitable care—**does not vary in quality because of personal characteristics, such as gender, ethnicity, geographic location, and socioeconomic status.

The *Chasm* report called for health care system redesign efforts to be guided by 10 rules that called for:

1. *Care based on continuous healing relationships.* Patients should receive care whenever they need it and in many forms, not just as face-to-face visits. This rule implies that the health care system should be responsive (24 hours a day, every day) and that access to care should be provided over the Internet, by telephone, and by other means, in addition to face-to-face visits.
2. *Customization based on patient needs and values.* The system of care should be designed to meet the common types of needs but to have the capacity to respond to individual patient choices and preferences, including those shaped by ethnic and cultural beliefs and practices.
3. *The patient as the source of control.* Patients should be given the necessary information and the opportunity to exercise the degree of control they choose over health care decisions that affect them. The health system should be able to accommodate differences in patient preferences and to encourage shared decision-making.
4. *Shared knowledge and the free flow of information*. Patients should have unfettered access to their own medical information and to clinical knowledge. Clinicians and patients should communicate effectively and share information.
5. *Evidence-based decisionmaking.* Patients should receive care based on the best available scientific knowledge. Care should not

vary illogically from clinician to clinician or from place to place.

6. *Safety as a system property.* Patients should be safe from injury caused by the care systems. Reducing risk and ensuring safety require greater attention to systems that help prevent and mitigate errors.

7. *The need for transparency.* The health care system should make information available to patients and their families, allowing them to make informed decisions when selecting a health plan, hospital, or clinical practice, or choosing among alternative treatments. This should include information describing the system's performance on safety, evidence-based practice, and patient satisfaction.

8. *Anticipation of needs.* The health systems should anticipate patient needs, rather than simply reacting to events.

9. *Continuous decrease in waste.* The health system should not waste resources or patient time.

10. *Cooperation among clinicians.* Clinicians and institutions should collaborate actively and communicate to ensure an appropriate exchange of information and coordination of care.

The *Chasm* report also described specific actions that health care organizations and other parties will need to take to achieve the six aims, such as the following:

- Apply work design principles, which are well known and used in other industries, to health care.

- Provide decision support to health care workers to help them appropriately incorporate the burgeoning knowledge base into their clinical practices.

- Use the power of information technology to support all levels of decisionmaking and communication across the multiple providers serving a given patient.

- Realign payment policies to support the adoption of strategies to achieve better quality health care.

The Adaptation for Behavioral Health

Following the publication of the *Quality Chasm* report, the American College of Mental Health Administration (ACMHA) focused its annual summit (2002) on "Crossing the Quality Chasm: Translating the Institute of Medicine Report for Behavioral Health." This summit brought together more than 90 leaders in the behavioral health field who examined the report and considered its relevance. The overwhelming consensus of the participants of the ACMHA 2002 Summit was that the IOM *Quality Chasm* framework is immediately relevant and applicable to the concerns of behavioral health systems of care and policy. In addition, the participants affirmed the need to translate the material to the specific field of behavioral health care issues and to address its integration into the larger general health care systems. Furthermore, the participants acknowledged and endorsed the IOM paradigm as a strategic planning blueprint for the redesign of the behavioral health care system. Detailed summaries of the findings of this summit are available at www.acmha.org.

The *Quality Chasm* report has been well received by public and private health care organizations, government bodies, and quality improvement organizations. As testimony to its success—and to its potential value for improving the quality of care of mental health and substance use treatment services—a committed group of public and private sponsors with long-standing commitments to improved delivery of mental health and substance use treatment services have come together to provide support for the study. This group includes The Substance Abuse and Mental Health Services Administration (SAMHSA), the Robert Wood Johnson Foundation, the Department of Veterans Affairs, the National Institute on Drug Abuse, the National Institute on Alcohol Abuse and Alcoholism, the Annie E. Casey Foundation, and the Cigna Foundation.

The IOM project has convened the Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders. The charge for this committee is to (1) consider the *Chasm* report's aims, rules, and organizational and environmental supports and identify those that need special attention and implementation strategies for application in mental health and addictions disorders care and (2) develop a blueprint for the redesign of behavioral health care delivery.

The committee conducting this study consists of consumers and consumer advocates, health care

providers, health services researchers, and policy experts with knowledge in mental health and addiction illness and treatment; primary care; child mental health; systems engineering; Medicaid; geropsychiatry; veterans' health care; mental health law and ethics; mental health, addiction, and general health delivery systems; economics of general and mental health care; and information technology. The committee is chaired by Mary Jane England, M.D., and a full committee membership roster is available at www.iom.edu.

The charge to the committee is to use the context of the *Quality Chasm* report to create a strategic blueprint for the field that encompasses the following areas: mental illness and substance use disorders; public and private payer and delivery systems; care for children and adults; veterans; and all four levels of *Quality Chasm* intervention points (clinician, microsystems or teams, health care organizations, and external agencies). To complete its project, the committee will meet six times between April 2004 and April 2005 and produce a final report in fall 2005.

The committee's work, which is governed by the methods established by the Institute of Medicine, includes direct testimony, commissioned reports, and evidence-based findings. The final report will summarize the findings of the committee and include a review of the current issues that face the field, the implications of the original *Quality Chasm* report, their application for the behavioral health field, and recommendations that will help guide the strategic blueprint. It is also anticipated that the final report will include systems of accountability for measuring the successful application of the recommendations.

Conclusions

The Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders has been actively working on this project. A wide spectrum of stakeholders has supplied constructive testimony. Stakeholders include recipients of care; providers; and representatives of behavioral health systems, funders, and purchasers of care. The work of the committee has been an open and constructive dialog, with the goal of producing a report that will be helpful to the field and will fulfill the committee's charge. The full report will be available late in 2005 and will be accessible through the IOM Web site.

REFERENCES

Institute of Medicine. (2000). *To err is human: Building a safer health system.* L. T. Kohen, J. M. Corrigan, & M. S. Donaldson (Eds.). Washington, DC: National Academy Press.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

Chapter 3

Strategies for Transforming Mental Health Care Through Data-Based Decisionmaking

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Transformation Goals

The Center for Mental Health Services (CMHS) is charged with providing leadership for the national system that delivers mental health services and with facilitating the transformation of the mental health care system called for in the report of the President's New Freedom Commission on Mental Health, *Achieving the Promise: Transforming Mental Health Care in America* (President's New Freedom Commission on Mental Health, 2003). This report calls for major change in how mental health care services are organized and delivered. In a transformed system, the commission envisions that U.S. mental health care will be consumer and family-centered, focused on recovery, and guided by informed decisionmaking. In this system, the highest quality of mental health care and information will be available to consumers and families, regardless of their race, gender, ethnicity, language, age, or residence.

Achieving this transformation means overcoming impediments to high-quality mental health care for all Americans. The commission noted that, despite enormous investments in the scientific knowledge base and the development of many effective treatments, most Americans are not benefiting from these investments (Department of Health and Human Services (DHHS), 1999). Treatments and services based on rigorous clinical research are too slowly applied in practice, and consumers and clinicians lack access to the information they need to guide decisionmaking. To overcome these barriers, the commission recommends changes in how a broad range of data are collected, shared, and used at the national, State, community, and consumer levels.

Need for a Strategy

Achieving the Promise echoes the goals identified by the Institute of Medicine (IOM) in its report, *Crossing the Quality Chasm: A New Health System for the 21st Century* (IOM, 2001). The IOM report states that, between the quality of health care Americans have and that which they could and should have "lies not just a gap, but a chasm." The IOM identified two specific forces that are impeding quality health care:

1. The growing complexity of science and technology, with lengthy delays between when an innovation is developed and when it is implemented in clinical practice

2. The failure to implement treatments known to be effective

These two reports both document a critical need for mental health system transformation, even within current fiscal limitations. Creating a new policy framework for data-based decisionmaking is essential to facilitating a transformed system. Keeping in mind the limited resources available to accomplish the task, a realistic approach is to take current knowledge and to share it with those who need to know so they can use it for data-based decisionmaking. The Federal Government and the States have a major responsibility to undertake this sharing.

Questions to answer in developing a new policy framework include the following:

1. What is the "applied practice into research" agenda?

2. What data are needed to support this agenda?

3. How should data collection and dissemination be approached?

4. How should data from all the different groups involved in mental health care be accessed? For example, how should data be acquired from Federal programs such as Medicaid and the Veterans Health Administration?

The answers to these questions lie in the resolution of much broader problems that affect the current U.S. mental health care system. The New Freedom Commission described a large-scale problem of fragmented, disconnected, and inadequate services and knowledge. In the commission's assessment, these problems—and the need for system transformation—exist at all four levels of involvement: Federal, State, community, and consumers and their families. The Federal Government is the single largest payer of mental health and supportive services, including health care, housing, employment, and education. Programs with the most substantial role in financing mental health services, such as Medicare and Medicaid, do not have missions focused on mental health care. Each of the many Federal programs contributing to mental health care financing has a complex, and sometimes contradictory, set of rules. Each has its own data and reporting system; information is seldom collected and shared in a common framework. As a result, services are disconnected and are seldom tailored to the needs of individual consumers.

On a national scale, the consequence is that people with mental illnesses are being denied access to quality care and falling into the quality chasm. There are nearly 200,000 chronically homeless persons in America. A large percentage of chronically homeless individuals have a mental illness, a substance abuse disorder, or both. Each year, approximately 800,000 persons with serious mental illness are admitted to U.S. jails. Jails are not designed to be treatment facilities. One of most distressing and preventable consequences of undiagnosed, untreated, or undertreated mental illnesses is suicide. In the United States, nearly 30,000 persons commit suicide *each year*.

Nature of a Transformed System

In a transformed national system, the New Freedom Commission envisions that Federal programs will be better aligned across agencies to improve access to and accountability for mental health services at the Federal, State, community, and consumer levels (see figure 3.1). In addition, the Federal Government will advance and accelerate the transfer of science to service. Technology and telehealth will become major vehicles for informing, coordinating, and delivering care.

At the State level, the New Freedom Commission noted that State mental health and behavioral health authorities have an enormous responsibility to deliver mental health care and support services, yet they have limited influence over many of the programs that consumers and families need. The commission also noted that States lack direct control or accountability for most resources for people with serious mental illnesses, such as Medicaid. As a result, mental health care delivery at the State level faces the same problems of fragmentation and lack of coordinated information as exist at the Federal level.

The New Freedom Commission envisions that, under a transformed system, States will develop

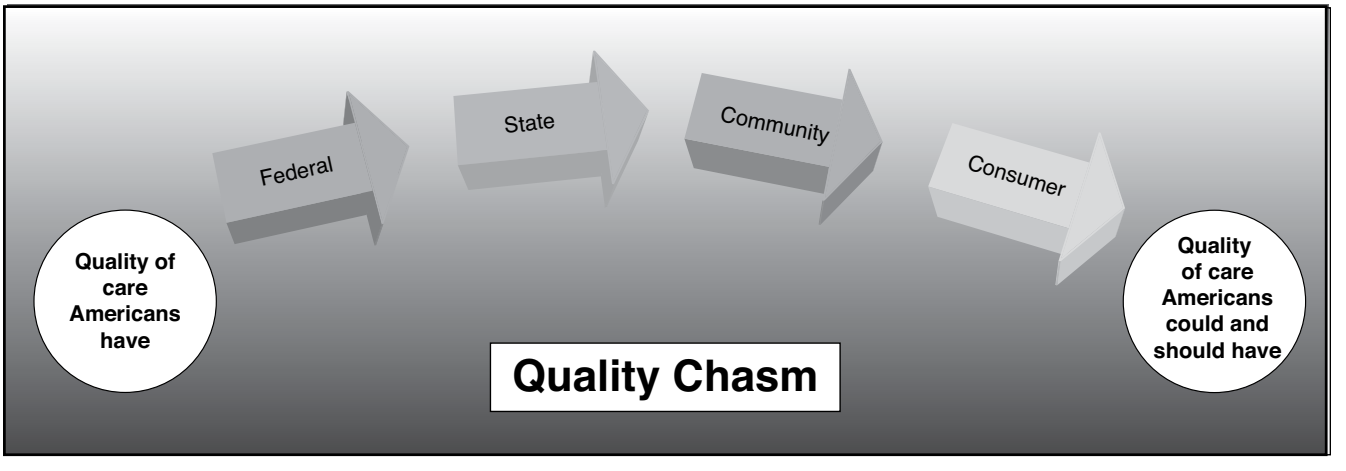

Figure 3.1. The Ultimate Goal of System Transformation.

comprehensive plans outlining how a full range of programs will be coordinated and delivered. In exchange for greater flexibility in determining how Federal, State, and local funds are combined to meet consumer needs, the States will be held more accountable to the Federal Government, as well as to consumers and their families. Improved performance and outcome data will be critical to this process of transformation.

Also crucial is the community level, where policy becomes practice and the opportunities to improve the lives of persons with mental illnesses are greatest. Unfortunately, this is the level at which the lengthy delay between research and practice is most apparent. Too often, providers and consumers do not have access to the most recent information about which treatments and services are the most effective. Too often, they lack the information they need to make informed decisions about care. In addition, consumers may not have access to the full range of services they need. In the *Olmstead* ruling (1999), the U.S. Supreme Court affirmed a person's right to live and receive appropriate treatments within the community. Consumer recovery hinges on community care plans that take into account the full range of an individual's needs as a whole person. These needs include finding and maintaining housing, finding and keeping a job, and developing a caring social support network. Meeting these needs demands the coordination of a broad-based coalition of community organizations and leaders. All too often, stigma, ignorance, and lack of involvement by groups that should be involved are preventing the delivery of high-quality care at the community level.

This situation would be drastically altered under a transformed mental health care system. The New Freedom Commission envisions a system in which consumers receive the best possible community-based treatments, services, and supports through individualized recovery plans of care. This care will be culturally competent and extend to geographically remote communities. Necessary care will begin early in the life of an illness because a broad group of community organizations, such as schools and faith-based organizations, will assume a role in helping to detect potential illnesses, advocating treatment, making appropriate referrals, and achieving and sustaining recovery.

At the consumer level, the New Freedom Commission found that a major barrier to treatment is that consumers and families typically have limited influence over the care they receive. Without choice and the availability of acceptable treatment options, some people with mental illnesses cannot or choose not to engage in treatment or to participate in timely interventions.

Under a transformed system, the commission envisions that consumers and their families will play a significant role in shifting the focus of treatment to recovery. It will be their role—as well as their responsibility—to participate in evaluation, planning, research, training, and service delivery of mental health care. Consumers also will have greater control over funds spent on their care. This will give consumers an economic interest in obtaining and sustaining recovery, and shift the incentives toward a system that promotes learning, self-monitoring, and accountability.

The ultimate goal of system transformation is to bring together the four levels—Federal, State, community, and consumer and family—in crossing the quality chasm, fostering recovery in all individuals.

Strategy for Transformation

A clear strategy is available to effect transformation of the mental health care system. Process change will be critical to accomplishing this goal. In its *Chasm* report, the IOM gives us a framework for looking at process problems at each of these levels and solving them. Figure 3.2 provides an outline of this framework. The column on the left contains the four levels of involvement. Across the top of the grid are the four strategies for system transformation proposed by the IOM.

The next step is to fill in each square of the grid by identifying a strategy and a solution at each level. In many instances, the New Freedom Commission or the IOM has recommended actions that fit into the squares. When both problems and their potential solutions become commonly accepted, we are left with the very challenging questions of "What is needed?" "Who will do it?" and "How?"

1. Transform Financing.

The current U.S. system of mental health care relies on numerous sources of financing (DHHS, 1999). Many of these funding streams are tightly restricted in how they can be used or for whom. If the mental health care system is to be responsive to the unique needs of consumers, health care financing must be transformed so that it is flexible enough to accommodate the needs of each person. One solution to this problem at the Federal level is to elimi-

	IOM Strategies: Transform health care system by…			
Level	**Transforming Financing**	**Transforming Human Resources**	**Rapid Integration of Evidence-Based Practices & Performance Measurement**	**Expanding Use of Information Technology**
Federal	Reduce funding silos	Develop national strategy		
State			Uniform Reporting System	
Community				Telehealth for rural and frontier communities
Consumer				

Source: Kathryn Power presentation at the 14th Annual Conference on State Mental Health Agency Services

Figure 3.2. Strategies for Crossing the Quality Chasm.

nate funding silos that prevent better coordination of services.

Investigation has begun of ways to transform health care financing so that individuals can assume greater control and accountability in seeking mental health care. The use of medical savings and spending accounts, as well as vouchers, appears to be particularly promising. Under this new system of financing, medical savings and spending accounts would be developed for either the public or the private sector. In the private sector, individuals would contribute pretax dollars from earnings for future care. In the public sector, funds from a range of entitlement sources would be deposited into an account for use in future care. This financing system can promote continuity of care among the different types of services while allowing consumers a high degree of self-determination in how funds are spent.

2. Transform Human Resources.

There is a national crisis in the training of the behavioral health workforce. Not only is there a shortage of providers, but many of the system's most experienced providers are not trained in cutting-edge, evidence-based practices. In addition, there is a serious need to cross-train primary care providers to be more knowledgeable participants in providing mental health care. Primary care providers prescribe the majority of psychotropic drugs for both children and adults. About 70 percent of the care for common mental disorders is delivered in general medical settings (Kessler, personal communication). Yet primary care physicians may not be fully trained to diagnose, treat, or make appropriate referrals for persons with mental illnesses. The bottom line is that we cannot effectively serve people in need if the frontline providers are ill equipped to use breakthroughs in modern medicine.

Efforts to transform human resources are already under way. With funding from the Substance Abuse and Mental Health Services Administration (SAMHSA), the American College of Mental Health Administration and the Academic Behavioral Health Consortium have formed the Annapolis Coalition, whose mission is to promote major reforms in the quality and relevance of education and training for behavioral health care. Its work is proceeding in three phases:

1. Building consensus about the nature of the workforce crisis and the key strategies of reform

2. Disseminating recommendations

3. Focusing on competencies

The Annapolis Coalition has completed one cycle of its work and published the results in the journal *Administration and Policy in Mental Health* (Hoge & Morris, 2002). In brief, the coalition found that behavioral health education is not keeping pace with changes in managed care and technology, nor is it adequately addressing the needs of diverse consumers. Equally important, many persons providing direct care and support—such as paraprofessionals and families—are receiving very little educational information.

The current focus of the coalition is to promote the use of competency-based approaches to building a stronger workforce. Issues being addressed are as follows:

- Fundamental concepts and definitions of competencies
- Strategies for building competency models
- Core competencies for key segments of the workforce
- Tools for assessing competency

The coalition will draw heavily on the advanced work of business and industry to address these issues of competency, which brings up a very important point of system transformation. If we are to make cost-effective and efficient changes to the mental health care system, we need to learn from and build on the best practices employed by other systems.

3. Transform Treatment Through Rapid Integration of Evidence-based Practices and Adoption of Performance Measures.

Mental health research is making great strides in knowledge of the brain, its behavior, effective medications, and psychosocial interventions. The field is too slow, however, in transferring research to service. The lag between the discovery of effective treatments and their incorporation into routine patient care can be as long as 15 to 20 years (IOM, 2001).

There must be a push to integrate evidence-based practices rapidly on the clinical, program, and system levels. Information should be presented in a population or aggregate view to support population management and quality improvement and in a patient-centric view for individual patient care. For the mental health care field, integrating evidence-based practices requires determining what is the best practice, developing the specific description of how to adhere to the practice, and presenting it in a timely fashion. The most critical need is to make current standards of practice available at the time and place where decisions are being made.

Also necessary is the integration of evidence-based practices into consumer-operated services for recovery. Consumer-run services broaden access to peer support and engage more individuals in traditional mental health services. Consumers who work as providers help expand the range and availability of services and supports that professionals offer, and they are living proof of recovery in action.

SAMHSA is taking steps to identify and disseminate evidence-based practices more rapidly. One important and recent advance is the expansion of the National Registry of Effective Programs and Practices (NREPP). NREPP conducts expert evaluations of programs to determine model and promising evidence-based interventions. These programs are then included in a national registry. Last year, NREPP was expanded by adapting its criteria to mental health and co-occurring disorder treatment programs.

There is another very important consideration to implementing evidence-based practices. Evidence-based practices must be developed in the context of quality improvement models that serve as a measure of self-improvement, *not* as an external constraint. The basic concept of *Crossing the Quality Chasm* is that quality improvement must result from the personal commitment of the persons involved rather than from fear of penalties, such as loss of funding.

SAMHSA is working to instill this concept of internal quality control through changes proposed to its Community Mental Health Services Block Grant program. Previously, State reporting requirements emphasized accountability based on expenditures and documentation of compliance. Under the proposed changes, States would be more accountable for performance-based outcomes. The purpose of this change is to promote an atmosphere in which States integrate best practices into their programs as part of a continuing cycle of quality improvement. The Federal Government would not use performance reporting to compare one State with another. Instead, each State would use these data to compare its current performance with its desired outcomes. Unlike business, the public sector does not have profit as a measure of performance. However, there is a very real need to be able to measure how effectively we provide mental health care services to those who seek them. Like business, we can tie performance goals to specific outcomes in terms of growth, costs,

quality, and customer satisfaction. This means developing quality metrics to be used by health care systems, employers, and consumers in selecting services and providers, with the ultimate goal of creating a system based on, and rewarding, high-quality care. Simply stated, a need exists for a national vehicle for sharing data on the scope of mental health problems, the responses to those problems, and our successes and failures in addressing them. Ideally, data standards would have three attributes:

1. Consensual development
2. Universal adoption
3. Implementation through information technology

SAMHSA, together with other agencies and in coordination with the National Association of State Mental Health Program Directors (NASMHPD), has been working on a data reporting system that can achieve these standards. The result is the Uniform Reporting System (URS), which is now being used by 50 States and 8 territories in connection with their block grants. In addition, SAMHSA and the NASMHPD have developed the National Outcomes Measures to guide States in determining performance-based outcomes. The latter are a subset of the URS measures.

Data mean little, however, unless they are implemented and used for planning and decisionmaking, which is the basis for developing a universal decision support system. At the national level, integration of data may be provided by the States into Decision Support 2000+ (DS2000+). The goal of this system is to frame data standards within the context of decision support rather than information management. DS2000+ includes data standards for each domain of the public health model. All relevant data sets are designed to meet Health Insurance Portability and Accountability Act (HIPAA) requirements. Accommodating the new HIPAA requirements allows evolving another concept in data standards for DS2000+. This is the concept of "value added"—what specific value added can be attributed to mental health and behavioral health care? Value added measures make it possible to incorporate some of the important features of behavioral health care that are not reflected through HIPAA data, such as the delivery of culturally competent mental health care. Future development of data standards will revolve around three key concepts for improved data-based decisionmaking:

1. Customization of decision support tools
2. Incorporation of feedback loops to improve self-direction and decisionmaking
3. The combination of quantitative and qualitative data

4. Transform Health Care Through the Expanding Use of Information Technology.

Information technology is the force that can pull and keep data together while crossing the quality chasm. It is the continuous link needed between science to service and service to science, as guided by consumer- and family-driven needs. In addition, information technology is, in itself, a powerful tool to transform the health care system because it can get care to people who cannot get it any other way (Manderscheid, 2005).

The New Freedom Commission highlighted the importance of information technology to transforming mental health care by making information technology the cornerstone of one of its six goals. Goal 6 of *Achieving the Promise* is that "Technology is used to access mental health care and information." The commission further defined this goal through two recommendations:

1. Using health technology and telehealth to improve access to and coordination of mental health care
2. Developing and using integrated electronic health record and personal information systems

Using information technology as the source of information for persons at all levels of involvement, and with all levels of basic understanding of what the data mean, presents a serious systems conundrum. Output from online decision support systems will have to be responsive to consumer needs on an individual level, while the system itself is based on standardized data that permit comparison with benchmarks and other users. This is a conundrum because consumers will need person-specific information, while service systems will need comparable, aggregated statistical data. Another aspect of this conundrum is the need for information to improve service quality, while at the same time protecting consumer privacy and confidentiality.

Charge for the Future

A collective effort to combine resources, both financial and human, is needed to leverage the resources' impact. Transforming the mental health care system from the Federal to the consumer level is a task that will require both resources and commitment. Partnerships must be built where they have not existed in the past, including shared responsibilities and accountability. Professional identities must be merged rather than forming barriers to comprehensive behavioral health care. Coordination among the four levels of involvement requires not only new attitudes but also new ways of working together to accomplish all that needs to be done to collect, disseminate, and utilize new information.

Almost 44 million Americans are affected by mental illness in any given year. More than 5 percent of our Nation's population is diagnosed each year with a serious mental illness, such as schizophrenia, bipolar disorder, or severe depression; at least as many children are diagnosed with a serious emotional disturbance. These are the most important statistics to remember in developing and refining a data-based decisionmaking system for mental health care, because the majority of these persons receive no care at all.

Mental illness can be treated effectively, and people can and do recover. Most people with mental illnesses experience success at work, raise healthy families, and are contributing members of their communities. However, their recovery depends on getting quality services when and where they are needed—preferably early in the course of an illness and close to home. Individuals' need to obtain quality services should be the driving force behind any data-based decisionmaking system.

President Bush delivered a State of the Union address (2004) in which he said, "We are living in a time of great change—in our world, in our economy, in science and medicine. Yet some things endure—courage and compassion, reverence and integrity, respect for differences of faith and race." The U.S. mental health care system is also experiencing a time of great change—in our understanding, in *our* economy, in *our* science and medicine and technology. While taking advantage of these changes, the system must integrate those same qualities of respect for each individual that the President used to characterize our Nation—"courage and compassion, reverence and integrity, respect for differences of faith and race." The most important bridge over the quality chasm is the one that takes us from idea to action, from *thinking* about what is necessary to *doing* what is necessary.

REFERENCES

President George W. Bush. State of the Union Address, January 20, 2004.

Hoge, M. A., & Morris, J. A. (2004). Behavioral health workforce education and training. *Administration and Policy in Mental Health,* Special Issue, *29*(4/5), 295–439.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

Kessler, R. A. (2004). Personal communication.

Manderscheid, R. W. (2005). Information technology can drive transformation. *Public Manager, 33*(3), 3–6.

The President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America. Final report.* DHHS Pub. No. SMA-03-3832. Rockville, MD: U.S. Department of Health and Human Services.

U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General. Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health Surgeon General's Report. (1999). *Mental health: A report of the Surgeon General.* Rockville, MD: Author.

Chapter 4

The Evolution from Advocacy to Self-Determination

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Introduction

The 21st century promises new hope and opportunity for persons diagnosed with mental illness. The President's New Freedom Commission on Mental Health report, *Achieving the Promise: Transforming Mental Health Care in America* (2003), concluded that people are more likely to recover from a mental disorder when they are treated with fairness and respect. When their human rights are ignored or neglected, recovery is undermined. The power of this insight is validated by the profound changes in the supports and services available for people with mental illnesses. The person with mental illness, once having no choice but to be a passive recipient of services, now has the opportunity to be an active, decisionmaking participant in community life.

From antiquity to the present day, madness has stubbornly resisted numerous and varied attempts to unlock its unwelcome grip on human beings. Historically, people with mental illness have suffered not only from the effects of their extreme mental and emotional states, but also from harmful treatments. Too often, desperate, ill-conceived attempts to control, prevent, and eliminate this frightening and confounding human condition have resulted in severe and painful damage to the minds and bodies of people whose voices, rights, and feelings were sacrificed in the name of treatment.

Until the latter half of the 20th century, knowledge of mental illness was the exclusive domain of the professional observers and treaters of madness. By virtue of being mad, a person was deemed to be without credibility and not able to contribute any meaningful knowledge to help understand madness. But the compelling need to give testimony to what one has experienced and witnessed as a patient has defied all attempts at suppression. A vast body of rarely read, first-person stories bears witness to patients' need to reclaim their voices and find a way to speak their own truth (Frank, 1995).

Hornstein (2002) points to parallels between patients' autobiographical accounts of mental illness and slave narratives, in that both bear firsthand witness to oppressive treatment and injustice. The personal stories of abuses and the descriptions of self-initiated successful recoveries were not only dismissed, but were often actively silenced. Hornstein notes the silencing of patients reflected in the autobiography of the 19th century economist and feminist theorist, Charlotte Perkins Gilman; her doctor warns her "never [to] touch pen, brush, or pencil as long as you live."

Occasionally, one of these patient narratives breaks into public awareness and becomes a catalyst for change. In *A Mind That Found Itself* (1908), Clifford Beers vividly described the abuses he saw and experienced as a patient confined to an institution after a failed suicide attempt. He advocated for extending the rights of mental patients and for the reform of inhumane practices. Of note is the assistance he received from a prominent psychiatrist, Adolph Meyer, who helped edit this book, while also convincing Beers to tone down his criticism of asylums and psychiatry. Beers, Meyer, and other colleagues founded the National Mental Hygiene Committee (now the National Mental Health Association) in 1909. Without the backing of a prominent and credible person, Beers's story and the reforms it inspired might have languished in obscurity along with other silenced testimonies.

This chapter explores how consumer/survivors[1] have expanded our understanding of major mental illness and contributed to changes in attitudes and in the way mental health services are delivered. Before the rise of the consumer/survivor movement, it was almost unthinkable that a person diagnosed with mental illness would be regarded as a whole person who was entitled to dignity and respectful treatment. While many significant social, economic, political, and demographic forces were instrumental in changing the mental health system, the main fo-

[1] For purposes of ease and clarity, and to avoid the ideology associated with various names, the term *consumer/survivor* will be used to refer to persons who have been diagnosed and/or treated for major mental illness—usually but not necessarily as inpatients in a psychiatric institution.

cus of this chapter is on the changes wrought by the passionate, dedicated work of those whose label as mental patients once excluded them from any credibility. Today, consumer/survivors are exposed to concepts that were unheard of several decades ago: Recovery, resilience, empowerment, self-determination, informed choice, self-help, and peer support are now embedded in the language of mental health.

The integration of health care and behavioral health care principles are fast finding acceptance as the preferred practice for sustaining a healthy population (Institute of Medicine, 2001). Consumer-centered care for mental illness is following closely behind the ideal for general health care—encouraging physicians and patients to engage in collaborative relationships in which transparency of information is a prominent feature. The chapter concludes by projecting the theme of consumer-centered services 25 years into the future. It speculates about what newer forms of mental health services might look like, and how changes in attitudes about mental illness and mental health services can result in more inclusive communities for everyone.

Historical Roots of the Consumer/Survivor Movement in Mental Health

Historical precedent for today's consumer/survivor activism may go back to *The Petition of the Poor Distracted People in the House of Bedlam,* a pamphlet published in 1620 (Brandon, 1991). However, the prototype of today's consumer/survivor self-help groups was the Alleged Lunatics' Friend Society, which was begun in England in 1845. For John Perceval,[2] the most famous of the founders, obtaining the cure for oneself was an act of resistance to the system.

The criticism of the Alleged Lunatics' Friend Society, appearing in the British newspaper, *The Times,* on March 27, 1846, is ironic:

> Some of the names we have seen announced suggest to us the possibility that the promoters of this scheme are not altogether free from motives of self-preservation . . . we think they should be satisfied to take care of themselves, without tendering their services to all who happen to be in the same position (Hervey, 1986, p. 245).

[2] See Bateson (1974) for Perceval's autobiographical account of his psychosis and recovery.

In 1838, Richard Paternoster was released from the "madhouse" after being confined there for 41 days. After he was discharged, he advertised in a newspaper for fellow sufferers to join him in a campaign to redress abuses suffered by mental patients. Initially, he was joined by four men, the most influential being John Perceval, son of the assassinated prime minister. Perceval was in the asylum administered by Edward Long Fox, which was known then as the foremost institution of its kind. Such was Dr. Fox's reputation that he had been invited to treat the madness of King George III. Yet, reputation not withstanding, Perceval said that his care in the asylum was barbarous. Paternoster and Perceval were joined by William Bailey, an inventor who had spent 5 years in madhouses, and Dr. John Parkin, another ex-patient. The four men named their self-help group The Alleged Lunatics' Friend Society. The objectives of the society were to reduce the likelihood of illegal incarceration and improve the condition of asylums, to offer help to discharged patients, and to convert the public to an enlarged view of Christian duties and sympathies (Hervey, 1986).

In the 20th century, the 1960s served as the incubator for groups of people who banded together to focus on making major societal changes. The civil rights movement, the women's movement, gay pride, the anti-Vietnam War movement, and people with disabilities, including disabled veterans, were challenging attitudes, legal barriers, and institutional practices. These social action groups had several common themes centered around a critical attitude toward authority and the bureaucratic organizations that controlled policies and services (Borkman, 1997).

The History of the Consumer/Survivor Movement in the United States

In the United States during the 1960s and 1970s, the organizing efforts of former psychiatric patients laid the groundwork for the current consumer/survivor movement. The early participants were angry at being treated as if they were less than human in institutions where they were seen as so hopeless that any treatment could be tried on them. They found their experiences validated only by others who shared similar experiences of abuse within institutions. After they were forced to suppress their feelings and denied credibility both within institutions and in the outside community, their meetings

helped them realize that they were capable human beings with unique abilities who were deserving of dignity and respect.

During much of the 20th century, one could be judged psychotic and confined to a psychiatric facility for disorders prompted by poverty, race, culture, sexual orientation, or the failure to meet gender expectations in one's marriage. Services were guided by "our willingness to incarcerate them in hospitals and our unwillingness to have them in our communities . . . an 'out of mind, out of sight' attitude" (Mosher & Burti, 1994, p. 20). Persons who fit into the broad category of mental illness were, with few exceptions, thought to be in need of special care, monitoring, and controls. Beginning in the early 1970s, consumer/survivors challenged the existing attitudes and treatments.

For the first time in American history, formerly hospitalized mental patients created and ran their own organizations. The earliest groups formed spontaneously in Oregon, California, New York, Massachusetts, Pennsylvania, and Kansas. The first organized group was the Insane Liberation Front founded in Portland, Oregon, in 1970. A year later, the Mental Patients' Liberation Project was founded in New York, and the Mental Patients' Liberation Front was organized in Boston. In 1972, the Network Against Psychiatric Assault was established in San Francisco. Other groups formed in the early 1970s included Project Release in New York and The Alliance for the Liberation of Mental Patients in Philadelphia (Beard, 2000; Chamberlin, 1990).

The strongest critics of mental health treatments have always been former mental hospital patients. They expressed their pain and outrage and insisted that the therapies forced upon them were not effective. Members of these groups asserted that they were best qualified to judge how they needed to be treated. Some of the groups sought to establish their own programs as alternatives to hospitals. Activities of the movement pioneers included organizing support groups, advocating for patient rights, lobbying for changes in laws, identifying themselves as former mental patients when speaking out in public, and publishing articles and books about their experiences. The experiences they shared with other consumer/survivors had taught them that the treatments of people diagnosed with mental illness were rife with physical and emotional abuses, and that the blatant insults to their dignity and integrity as individuals hindered their recovery. The consumer/survivors adopted the consciousness-raising methods of the women's movement and challenged the oppression of what they came to call "mentalism" (Chamberlin, 1990). The names that they called themselves, like "psychiatric survivors" and "psychiatric inmates" and group names like the Insane Liberation Front were designed to call attention to the humiliating language others thoughtlessly used to describe them. By communicating through newsletters like the *Madness Network News,* organizing meetings with other groups, and staging protests, they began to convey their messages to a larger constituency.

Carole Hayes-Collier (2004), an early participant in the consumer/survivor movement, proudly describes her introduction to the movement as a turning point in her life. She had been working part time for a small human service agency when a student brought her a copy of an article about a group of mental patients meeting together to work on rights issues. Hayes-Collier had earned a bachelor's degree in sociology at Le Moyne College, but before that time had been in four mental hospitals. Since she was open about being a mental patient and often spoke up about related issues, she was intrigued. She and a few other consumer/survivors decided to work together to create a local chapter of New York City's Mental Patients' Liberation Project. The first meeting was modeled after an article in *Parade* magazine, which described that New York City group. At meetings held in a free clinic space and in a church basement, they held discussions about abuses and oppression in mental hospitals. Working together, they organized demonstrations and public education initiatives.

The significance of the consumer/survivor movement and self-help groups is demonstrated in Hayes-Collier's description of the meetings. She recalls,

> Gatherings were very much energized by the motivation to create social change and join with other movements in asserting and assuring our rights. By joining together, we gained a sense of empowerment and the initiative to reclaim not only our rights, but also our lives. We were excited about meeting others who shared similar experiences and who understood our points of view. We wanted to eliminate coercion and promote alternatives (Hayes-Collier, 2004).

The Consumer/Survivor Movement Enters the Mental Health Arena

The political and socioeconomic climate of the second half of the 20th century provided fertile ground for the growth of the consumer/survivor

movement. Changes in government policy, funding, and responsibilities toward people with mental illness gave consumer/survivors new opportunities. Yet, despite the push for reform beginning in the mid-1950s, State institutions were essentially custodial facilities: Treatment programs were limited, wards were overcrowded, few recreational and social activities were available to patients, individual privacy was lacking, and recovery was not an expectation. The introduction of Thorazine into treatment protocols in the 1950s stimulated thinking about changes in the institutional environment. However, the provision of mental health treatment in the community did not become a national goal until 1963 when President John F. Kennedy proposed—and Congress enacted—the Community Mental Health Construction Act. Kennedy sought to change the locus of services by promoting the development of a range of community-based services. The goal was to enable people with the most serious mental disabilities to remain in, or return to, their communities and to live as independently as possible.

During the 1960s and into the 1970s, other State and Federal initiatives continued to nudge the mental health system away from its reliance on institutional care. Title XIX of the Social Security Act, enacted in 1965, established the Medicare and Medicaid program, which funded outpatient mental health services as well as general medical care for low-income citizens. The Federal Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) programs provided people with psychiatric disabilities a subsistence income, which for the first time supplied the financial means for many people to leave institutions. But the income was not sufficient for most people to live on their own; many people leaving institutions at this time ended up in congregate living facilities or single-room occupancy housing. They were out of the hospital, but not really part of their communities.

These new Federal entitlements coincided with the rise of mental health legal advocacy initiatives inspired by the civil rights movement. Congress passed the Protection and Advocacy for Individuals with Mental Illness Act (PAIMI) in 1986. The purpose of PAIMI was to protect and advocate for the rights of persons with mental illness. With the formation of federally funded Protection and Advocacy agencies, consumer/survivors were able to become involved in the investigation of abuse and to advocate for patient rights legislation. The judiciary began to heed the arguments of patients' rights attorneys who challenged the way States treated citizens diagnosed with mental illness. Across the country, advocates challenged the civil commitment process. Court decisions created the constitutionally based doctrines of the right to treatment (as opposed to custodial care) and the right to be treated in the least restrictive environment. In many States, the use of involuntary treatment was limited through court decisions and statutory change, thus becoming another factor driving down the census of State hospitals. Still, the forces that resulted in what came to be known as "deinstitutionalization"—psychotropic drugs, community mental health centers (CMHCs), Federal entitlement programs, civil rights advocacy, and court decisions outlawing unpaid labor—were not sufficient in themselves to ensure that people with long institutional histories could successfully re-integrate into their communities. The income support, mental health treatment, and housing arrangements were insufficient for people who had been completely dependent on psychiatric institutions to meet all their needs. The learned helplessness that served as a survival skill within psychiatric institutions conflicted with the skills required for community living. These factors combined to make deinstitutionalization an apparent failure in the view of many (Scull, 1990).

In response, the National Institute of Mental Health (NIMH) created the Community Support Program (CSP) in 1977. CSP was built on the recognition that people with long-term psychiatric disabilities needed access to a wide variety of support services, not just mental health treatment, to live successfully in the community. CSP encouraged the development of networks providing access to a range of services, including health care, social services, housing, and transportation, which were to be coordinated on the individual level by case managers.

At the beginning, CSP invited input and participation first from families and later from consumer/survivors. Consumer/survivors insisted that the interests of families were not the same as their own, because many consumer/survivors objected to forced treatment and involuntary commitment, while many families favored both. These differences in ideology between families and consumer/survivors sharpened after families organized the National Alliance for the Mentally Ill (NAMI) in 1979 and fashioned it into a powerful advocacy organization (McClean, 2003). Although polarized stances on forced treatment and self-determination continue to be divisive issues for the consumer/survivors who support key principles (self-determination, speaking for themselves) of the movement founders, NAMI has expanded its base by reaching out to consumers for participation and membership.

The consumer/survivor movement received a large boost when consumer/survivors gathered at

the first Conference on Human Rights and Against Psychiatric Oppression in 1973. Continuing until 1984, these annual conferences became a means of support, raising consciousness, discovering identity, and developing a sense of pride. At first, consumer/survivors found rapport with critical anti-psychiatry theorists who challenged mainstream conceptions of mental illness. Radical practitioners and academics found commonality and shared change agendas with consumers/survivors. These collaborative relationships with nonconsumer/survivors ended in the early 1980s when consumer/survivors decided to exclude mental health professionals from their movement. Much like the leadership of Alcoholics Anonymous, they believed that it was necessary to exclude those who lacked the lived experience in order to preserve consumer/survivor leadership and independence.

The structure and composition of the annual meetings shifted when the conferences received financial support from the Federal Government. In 1985, On Our Own of Maryland was awarded CSP funds to hold the first Alternatives Conference at the College of Notre Dame in Baltimore. It was a national meeting at which consumer/survivors offered workshops on how to start self-help groups, how to raise funds, and other topics relevant to self-help. These conferences brought in new people, consumers who were less rejecting of mental health services than the early movement participants who identified themselves more as psychiatric survivors. The consumer/survivor movement of the late 1960s began as a human rights movement by ex-patients and psychiatric survivors who objected to institutionalization and treatments that deprived them of hope, independence, and control over their lives. With government support, the first Alternatives conference expanded, validated, and gave notice of the importance of the consumer/survivor movement. However, it also strayed from its 1960s origins. The pioneering anti-psychiatry "survivors and ex-patients" were joined by "consumers," who accepted the medical model of mental illness while still advocating for changes in services, including self-help and consumer-run services. This first Alternatives conference splintered the movement into polarized groups. Acceptance of the medical model and the overriding value of psychiatric drugs and the opposition to forced treatment became contentious issues. Although they were unable to reach agreement on such issues, participation in national conferences gave consumer/survivors an opportunity to exchange and refine their ideas (McClean, 2003). The National Alternatives conferences continue to meet annually and receive funding from the Center for Mental Health Services (CMHS).

Consumer/survivor influence was ensured when, in 1989, a new Federal law mandated new State mental health planning processes that included consumer/survivors and other stakeholders. Involving consumer/survivors in the process of constructing their State's mental health policy assured them of a seat at the policy table. Consumer/survivor visibility and credibility were heightened by a series of CSP-sponsored dialogs on recovery between consumer/survivors and policy-making administrators and mental health professionals representing different disciplines. These meetings facilitated communication between groups with diverse views and enhanced their ability to work together.

In 1988, CSP began funding consumer/survivor-run demonstration services projects that were developed in collaboration with State mental health program staff. These collaborations allowed consumer/survivors to share their ideas about service needs and their empowerment philosophy. The meetings and discussions gave evidence of the contributions that consumer/survivors could make and stimulated thinking about how to best utilize their lived expertise. The National Association of State Mental Health Program Directors (NASMHPD), composed of all of the directors of their respective State mental health agencies, unanimously signed the Position Paper on Consumer Contributions to Mental Health Service Delivery, which affirmed the value of consumer/survivor perspectives (NASMHPD, 1989).

The 1990s saw the creation of offices of consumer affairs in more than 50 percent of the Nation's State mental health agencies. The ideas behind these offices, which were headed and staffed by people with psychiatric histories, were to ensure that consumer/survivors were involved in all aspects of planning, policy development, program development, and other agency operations and to promote a recovery-oriented reform agenda.

In the early 1990s, Federal funds were made available for the formation of a Consumer/Survivor Research and Policy Workgroup to help develop a consumer/survivor-driven research and policy agenda. In 1993, consumer/survivors were included in the development of the Mental Health Statistics Improvement Program (MHSIP) Consumer-Oriented Mental Health Report Card, a SAMHSA/CMHS project.

By the end of the 20th century, consumer/survivors were pushing the envelope on many fronts. They were recognized as being able to bring a unique and valuable perspective to the understanding and treatment of people with mental illness. Emerging from their beginnings in protest, consumer/survivor

activists found themselves considering the gains they had made, and what would be the next steps.

The Consumer/Survivor Movement at the Beginning of the 21st Century

The impact of consumer/survivor organizations and individual consumer/survivors on mental health services, legislation, and research is undeniable. The U.S. Surgeon General's report on mental health (U.S. Department of Health and Human Services, 1999) states, "One of their greatest contributions has been the organization and proliferation of self-help groups and their impact on the lives of thousands of consumer/survivors of mental health services. The opportunity to participate in self-help has provided hope and stability where there was none, and empowered the once hidden to become participating worthwhile members of society."

President Bush's New Freedom Commission on Mental Health report (2003) recommends that mental health service systems move beyond merely managing symptoms toward a consumer-centered, recovery-oriented system. The report states, "Because recovery will be the common, recognized outcome of mental health services, the stigma surrounding mental illnesses will be reduced, reinforcing the hope of recovery for every individual with a mental illness" (p. 4). The report further states that consumers should be significantly involved in everything from planning to choosing providers to delivering services.

Not very long ago, if you were a consumer/survivor and were seeking a job in the community or attempting to return to college, you had to be very creative in explaining the gap in your resume. Revealing your psychiatric history was almost certain to block entry into your chosen field. Being open about your background was an invitation to discrimination. With the passage of the Americans with Disabilities Act of 1990 (ADA), consumer/survivors had new protection against discrimination, along with the right to reasonable accommodations, but the ADA was only one step in alleviating the stigma associated with mental disability. The most meaningful challenge to stigma has to come from consumer/survivors themselves, and the first priority has to be changing the way "mental patients" tend to denigrate their own abilities and prospects. This internalized stigma, whereby one passively accepts the "good patient" role with its requirement of compliance and the need for lifelong care, is disempowering. Sensitizing more consumers to the meaning and value of the popular movement sayings, *I am more than my diagnosis, I speak for myself,* can be a powerful weapon against stigma.

Stigma and discrimination were greatly diminished when consumer/survivors became open about their experiences, when they became coworkers on the job and fellow students in the classroom, and when they lived next door and socialized with their neighbors. When your friend is a consumer/survivor, the fear and mystery surrounding mental illness begins to dissolve. Inspiring others by telling their stories, sharing their successes on the job and in the community made recovery real for consumer/survivors. It was self-help in action. Refusing to be silent, consumer/survivors wrote and told their stories. Consumer/survivors returned to colleges, attained their degrees, became mental health professionals (psychologists, social workers, psychiatrists, lawyers), administrators, and researchers and proved the value of their experience. What was once a liability became a credential signifying a special, lived expertise.

Today, consumer/survivors are ubiquitous in the field of mental health. They direct their own organizations. Clubhouses, drop-in centers, crisis respite, warm lines, peer advocates, peer specialists, peer educators, peer counselors, and peer benefits specialists are the places and people through which consumer/survivors are working to empower themselves and other consumer/survivors. Consumer/survivors sit on local, State, and Federal boards and advisory councils. They review mental health grants and participate in funding and policy decisions. Several States have recognized the important contributions of consumer/survivors by creating career paths for Peer Specialists with certification, credentialing, and civil service status attached to the jobs.

In 1992, the first national Technical Assistance Center (TAC), directed by and for consumer/survivors, was funded by CMHS to assist in the transformation of the mental health system by providing consumer/survivors with skills to develop and sustain peer-run programs. Recognizing the value of self-help, these programs were created to maximize consumer/survivor self-determination and recovery. An important feature of the TAC programs is promotion of infrastructure development of self-help groups at the State and local levels. Following the initial grant to the National Mental Health Consumers' Self-Help Clearinghouse, the National Empowerment Center (NEC) and the Consumer Organization and Networking Technical Assistance

Center (CONTAC) were awarded similar grants. Joining the three TACs, two Consumer-Supporter Technical Assistance Centers received TAC grants, the Support Technical Assistance Resource Center (STAR) and the National Consumer-Supporter Technical Assistance Center (NCSTAC). STAR, a program of the National Alliance for the Mentally Ill, and NCSTAC, a program of the National Mental Health Association, were created to provide support, technical assistance, and resources to help improve and increase the capacity of consumer/survivor operated programs and self-help.

The anti-elitist attitude of the 1960s, with its emphasis on self-determination and self-reliance, was a driving force for the early consumer/survivor groups (Dain, 1989). Changes in Federal laws, policy, and funding encouraged and empowered consumer/survivor groups. How would the movement remain true to the fight for rights and social justice when funding and support came from government sources? Just as consumer/survivors were making sure that leadership arose from among their own ranks, difficult decisions had to be made about how accepting government funding would affect the ideals emerging from the organizations' origins as a human rights movement. Managed care presented another challenge to the consumer/survivor movement. Private sector behavioral health care companies embraced the efficacy and cost savings of peer support services. As more consumer/survivors became paid mental health workers, they faced the challenge of maintaining their special perspective while adapting to the credentialing and reporting requirements of more traditional service providers. Consumer/survivors who did not accept the medical model were in danger of losing their funding. Would they be able to maintain their identities as peers, or would they be absorbed into the larger mental health provider community as quasi-professionals?

Opportunities for consumer/survivor empowerment were occurring on several fronts as the 21st century began:

1. The *Olmstead* Supreme Court decision mandated States to plan for community placement of all individuals residing in inappropriate institutional settings. *Olmstead* would provide a lever for various disability groups advocating against unnecessarily restrictive and costly congregate housing arrangements. Full community integration is the goal.

2. In 2001, the U.S. Department of Health and Human Services proposed privacy regulations for all medical records under the Health Insurance and Portability and Accountability Act of 1996 (HIPAA). These regulations, which went into effect in 2003, became an important foundation for protecting the privacy of patients. The privacy standards empower consumer/survivors to be more involved in determining their care and treatment by exercising access to and control of their patient records as well as providing a check on their accuracy.

3. In 2001, the Institute of Medicine issued *Crossing the Quality Chasm,* a report that promotes patient control as a core attribute of re-invented health care systems. The challenge for consumer/survivors is in making sure that mental health receives a similar push to move the person to the center of services, with all the comparable transparency and decisionmaking rights.

4. In 2002, President Bush created the New Freedom Commission on Mental Health and selected a consumer/survivor member to serve on it. Consumer/survivors testified, and their stories and insights provided valuable input to the deliberations. The recommendations of the final report were a clear endorsement of a recovery-oriented system with individualized treatment planning and a heightened role for active consumer participation.

It is not a coincidence that the road to recovery for a person diagnosed with mental illness is far more accessible today than in the early 1970s when the consumer/survivor movement began. Yet, the consumer/survivor movement is fraught with challenges that must be addressed. The diversity of perspectives—the differing views on the medical model, on psychiatric medications, on forced treatment, and even on what name to use to identify oneself—prevents the formation of an effective, unified national consumer/survivor organization.

Examples of serious challenges that face mental health consumer/survivors are as follows:

- Self-determination is losing ground to a highly organized campaign to create forced outpatient commitment laws.

- Advanced mental health care directives as an affirmation of one's personal choices are underutilized and have not been consistently upheld in the courtroom.

- The use of physical and pharmaceutical restraints to control patient behavior remains problematic.

Consumer/survivors must still strive to attain equal participation in their care. Although consumer/survivors are now represented on most mental health committees and workgroups, they are rarely represented equally, with tokenism being more the rule than the exception. Too few organizations truly understand what it means to cultivate and support full consumer/survivor participation. However, consumer/survivors are encouraged by the Federal Government's efforts to move from tokenism to parity in representation on national workgroups involving mental health issues.

The consumer/survivor movement, despite its achievements, faces its greatest challenge from outspoken nonconsumer/survivor leaders representing well-financed special interest groups. Those powerful spokespersons have used their strong political bases to advance their views about the basis of mental illness and the role of psychiatric drugs, forced treatment, and behavior control. They have changed funding priorities to the detriment of consumer/survivor programs.

Other problems stifling the growth of the consumer/survivor movement are the following:

1. The underrepresentation of people of color
2. The difficulty engaging youth and mentoring new leadership
3. The compromises required to attain funding

Consumer/survivors who have struggled to be respected, who have recovered their dignity, and who have found paid jobs that have enabled them to start families are less able to be outspoken critics of those who pay their salaries. Perhaps it is only natural that when fewer egregious abuses are occurring, the uncompromising commitment and righteous anger of the early pioneers is less available to fuel activism.

Whereas once mental patient advocacy and reform was driven by the energy of a few creative and passionate reformers, only to fade when they passed away, today's critical mass of informed and active consumer/survivors may ensure that the movement continues to be influential. The consumer/survivor movement deserves to savor and relish its hard-fought gains, but a new momentum must be created to continue work that is far from finished.

Projecting the Hopes of the Consumer/Survivor Movement 25 Years into the Future

When the conflict surrounding the need and justification for forced treatment is resolved, progress will rapidly accelerate. The increase in complex questions emerging from the field of bioethics will create better strategies for resolving the dispute over self-determination in mental health.

Based on the National Council on Disability's recommendation, involuntary treatment will no longer be considered a viable mental health treatment service.

> Laws that allow the use of involuntary treatments such as forced drugging and inpatient and outpatient commitment should be viewed as inherently suspect, because they are incompatible with the principle of self-determination. Public policy needs to move in the direction of a totally voluntary community-based mental health system that safeguards human dignity and respects individual autonomy (National Council on Disability, 2000, p. 6).

With the conflict over forced treatment resolved, a national consumer/survivor membership organization will be created. Based on a vote of the membership, a newly agreed-upon name will replace consumer/survivor. This new group is now able to form an alliance with the National Alliance for the Mentally Ill, which has also changed its name. Joining to form coalitions with other disability groups, the multiple disability groups and their families have become a formidable advocacy force. All the disability organizations begin sharing mutually integrated advisory councils that promote communication and understanding of each other's issues.

Since consumer/survivors are no longer subject to de facto segregation, stigma and discrimination are weakened by their ubiquitous presence throughout the community. With this added exposure, there is a greater appreciation of the value of diversity and less fear of people who may look or act differently.

Knowledge of madness and other extreme states of emotion and consciousness expands exponentially when university programs integrate consumer/survivors into educational programs for mental health professionals. With regular exposure and new opportunities for dialog, creativity flourishes.

Consumer/survivors are offered an array of services with alternatives that enable them to make

informed decisions on how to reduce their emotional distress and pain without sacrificing their long-term health and goals.

Recognizing the long-range benefits and cost savings, the U.S. Government creates a program to provide safe, affordable housing where people can have the supports they need to live with dignity and to develop their strengths and abilities. New funding strategies enable consumer/survivors to choose the supports and services they find helpful and hire and fire those who provide them with services. Consumer/survivors have the opportunity to be fully integrated members of the community.

REFERENCES

Bateson, G., ed. (1974). *Perceval's narrative: A patient's account of his psychosis, 1830–1832.* New York: William Morrow and Company.

Beard, P. (2000). The consumer movement. In Menniger & Nemiah (Eds.), *American psychiatry after World War II (1944–1994).* Washington, DC: American Psychiatric Press, Inc.

Beers, C. W. (1908). *A mind that found itself.* New York: Doubleday.

Borkman, T. (1997). A selective look at self-help groups in the United States. *Health and Social Care in the Community, 5*(6), 357–364.

Brandon, D. (1991). *Innovation without change.* Basingstroke Hampshire, England: Macmillan.

Chamberlin, J. (1990). The ex-patients' movement: Where we've been and where we're going. *Journal of Mind and Behavior. 11(3–4),* 323–336.

Dain, N. (1989). Critics and dissenters: Reflections on 'anti-psychiatry' in the United States. *Journal of the History of the Behavioral Sciences, 25,* 3–25.

Frank, A. (1995). *The wounded storyteller: Body, illness and ethics.* Chicago: The University of Chicago Press.

Hayes-Collier, C. (2004). Personal communication.

Hervey, N. (1986). Advocacy or folly: The Alleged Lunatics' Friend Society 1845–1863. *Medical History, 30,* 245–275.

Hornstein, G. (2002, January 25). Narratives of madness, as told from within. *The Chronicle of Higher Education,* B7.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

McClean, A. (2003). Recovering consumers and a broken mental health system in the United States: Ongoing challenges for consumers/survivors and the New Freedom Commission on Mental Health. *International Journal of Psychosocial Rehabilitation, 8,* 47–68.

Mosher, L., & Burti, L. (1994). *Community mental health: A practical guide.* New York and London: W.W. Norton & Company.

National Association of State Mental Health Program Directors. (1989). *Position paper on consumer contributions to mental health service delivery systems.* Alexandria, VA: Author.

National Council on Disability. (2000). *From privileges to rights: People labeled with psychiatric disabilities speak for themselves.* Washington, DC: Author.

The President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America. Final report.* (DHHS Pub. No. SMA-03-3832). Rockville, MD: U.S. Department of Health and Human Services.

Scull, A. (1990). Deinstitutionalization: Cycles of despair. *The Journal of Mind and Behavior, 11*(3), 301–311.

U.S. Department of Health and Human Services. (1999). *Mental health: A Report of the Surgeon General.* Rockville, MD: Department of Health and Human Services: U.S. Public Health Service.

Chapter 5

Information Technology Can Drive Transformation

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Introduction to Modern Information Technology

From the perspective of 2004, it seems difficult to recall that practically all of what we consider to be modern information technology (IT) has been introduced and implemented broadly only during the past 10 years. In 1993, for example, fewer than 50 Web sites were operational, and President Clinton was attempting to introduce personal computers into schools! In the present era, probably no other technological innovation has diffused as rapidly or as broadly as IT has. Alvin Toffler predicted this almost 25 years ago (Toffler, 1980).

Principally through the medium of the Internet, modern IT has become ubiquitous in government, business, and personal communication. E-mail, online purchases, filing of tax forms, sharing of photos, transmittal of health information, student "library" research, and on and on, all occur with the lightening speed of an electron.

All of this gives rise to a need for reflection. What impact does this new IT have on our work life, our organizations, our social life, and our community life? Does it drive organizational change? Can we direct it toward positive social change? Depending on how we answer these questions, IT may be able to play a pivotal role in transformation—the continuous process of quality improvement required to achieve desired effects. This role may modify management and business processes within both government and the private sector; alter interorganizational relationships; and extend our concept of community, particularly around our people-oriented institutions, such as health care.

The purpose of this chapter is to explore these questions. Potential applications from the field of mental health are highlighted in hypothetical examples.

Characteristics of Modern IT

Unlike any other technology from the past, modern IT changes the essential nature of interpersonal communication. All previous technologies simply mitigated the space and/or time constraints of interpersonal communication. Originally, all human communication occurred on a face-to-face basis in real time. Writing allowed space/time constraints to be transcended in a narrow way; mail and the telephone allowed them to be transcended on a much broader basis. However, in earlier technologies, one communicated with others who were known to, and who generally shared a common language and culture with, the communicator.

Modern IT has introduced several essential changes into this traditional communication paradigm:

Acceleration. Because communication through IT is instantaneous, interpersonal communication using this technology is extremely rapid, and much more networking and interaction can take place per unit time. For example, in less than a minute, a person can broadcast e-mail to several thousand (or million) people, and they can read it and respond. As a result, interactions can proceed very rapidly, and negotiations and decisions can occur with equal speed. A sociologist would say that social time is being compressed. Norms governing propriety in such interactions are currently being developed through trial and error.

Equalization. Modern IT fosters communication through a network rather than a hierarchical structure. As a result, it has the capacity to eliminate social and rank distinctions among participants. With modern IT communication, a homeless person and a president of a large corporation are "equal." Traditional boundaries between people of different social ranks, cultures, and even societies simply do not exist. Organizational boundaries between private businesses, professional disciplines, governmental units, and countries can be reduced or eliminated

in favor of broader patterns of communication and interchange.

Disintermediation. Probably one of the most threatening features of modern IT is its capacity to eliminate intervening persons, groups, and organizations (i.e., "middlemen") from communication and decision loops in favor of direct communication between end users (e.g., purchaser and producer, constituent and elected official, or health care consumer and physician).

This chapter applies these concepts to different structures within the health care system, with particular attention to mental health services. "Pre"-IT and "post"-IT scenarios are described at the interpersonal, interorganizational, and sector levels.

Transforming Human Relationships

Context. Sociologically, all interpersonal interaction is "staged." This does not mean that interactions are duplicitous. Rather, it means that participants each play roles (albeit imperfectly), that they have expectations for the roles that others will play, that they usually enter and exit on cue, and they generally respect the cultural norms that define conduct appropriate to the situation.

Pre-IT. Previously, when one visited a physician (or other health care provider), one first made an appointment with a scheduler. Then, one arrived at an office several minutes before the scheduled time of the appointment, saw the physician for a very short period, tacitly agreed to follow the physician's advice or prescription, and usually arranged a follow-up visit with the scheduler before departing. The entire transaction was very sequential and orderly. (If you do not fully appreciate the cultural force of these everyday features, just try to deviate from them—for example, schedule an appointment on a Sunday morning.)

Post-IT. E-mail between health care consumers and physicians can circumvent the social structures and cultural norms that define the office visit. E-mails can be sent 24 hours a day; the recipient can respond anytime; and other physicians and health care consumers can be copied and made part of specific transactions. For example, health care information can be exchanged rapidly among caregivers. Professional associations are just beginning to evolve norms regarding appropriate electronic interactions between consumers and professionals.

At a slightly more complex level, the physician can incorporate modern IT into an office visit. A health care consumer may interact with a computer to answer a series of questions about personal symptoms and health status before seeing the health care provider. The physician may use computer programs to assist with diagnosis; the treatments given or the drugs prescribed may be monitored through IT; and the charge for the transaction may be generated and mailed automatically.

Other features of modern IT also can shape this service relationship. Tests, such as for blood pressure or depressed mood, can be self-administered at home and the results transmitted immediately via the Internet to a physician. E-mail can be replaced by video streaming that more closely approximates the features of human interaction. The physician can be replaced by a "smart system" programmed to interact with health care consumers and to "learn" how to react and impart advice depending upon the pattern of consumer responses.

It is immediately obvious from these examples that modern IT can change dramatically the relationship between health care consumer and provider. The scope of the relationship can be broadened, better tools can be used for diagnosis and treatment, and treatment plans and these effects can be monitored more closely and accurately.

One of the major deficits of modern mental health care, the failure to develop and to follow carefully a recovery-oriented individualized treatment plan for every mental health consumer, can be overcome with modern IT. The mental health consumer, the mental health provider, and all other professionals who provide allied services (e.g., housing and job training) can jointly develop the plan through a series of interactions on the Internet, and modern IT can be used to check milestones, progress, and effects.

Transforming Interorganizational Relationships

Context. Interorganizational relationships are typically governed by elaborate boundary maintenance efforts designed to preserve the integrity of each organization. In terms defined by the sociologist Talcott Parsons more than 50 years ago (Parsons, 1951), these efforts can be described as pattern maintenance functions. With economic globalization, organizations are forced to hire more part-time, temporary, and contract employees to remain competitive. As these people enter an organization,

it becomes progressively more difficult to define organizational boundaries. Yet, paradoxically, as organizations feel more threatened by globalization, they are likely to devote relatively more of their total effort to boundary maintenance. This results in the classic problem of "stovepipe" organizations—the inability to effectively interact with the environment or to effectively protect boundaries.

Pre-IT. Previously, interorganizational communication occurred according to a hierarchical protocol based on norms that dictated the appropriate persons to engage in such interaction. For example, a staff person in company A would generate an inquiry for company B. The inquiry would be prepared in the form of a letter (or memorandum) from the president of company A to the president of company B. Subsequently, the president of company B would pass the inquiry down to the appropriate staff person who would prepare an answer. Then the communication process would be reversed. It seems very clear that such communication sacrificed efficiency for control and boundary maintenance. It was also very time-consuming, burdensome, and costly.

Post-IT. How does this pattern change with modern IT? The staff person in health care organization A can communicate directly by e-mail with a staff person in health care organization B. This communication could be about a health care consumer the two organizations share in common, about a common billing problem, or a myriad of other issues that could arise between either collaborators or competitors. In fact, many dyadic (or larger group) electronic interactions may exist simultaneously between health care organizations A and B. Acceleration, equalization, and disintermediation can all be in play. Usefully described as a "web" of communication, such patterns can progressively blur interorganizational boundaries and loyalties.

In 2003, President Bush's New Freedom Commission on Mental Health found widespread fragmentation in mental health services that leads consumers to "fall through" interorganizational "cracks" (New Freedom Commission on Mental Health, 2003). As a result, consumers do not receive appropriate care, positive health outcomes are diminished, and overall care costs are high. The development of electronic interorganizational linkages to permit all mental health, health, and social service organizations in a local area to constitute a "virtual" system of care could go far to overcome this fragmentation. Initially, this might be as simple as crafting an Internet-based electronic information source on all services available in a local area. At a slightly more sophisticated level, it could take the form of identifying a single electronic point of entry into a virtual system of care, so consumers are not confused by a complex interorganizational environment. It would also be possible to link physicians, other providers, and consumers, so they can consult electronically about the consumer's individualized recovery plan, or maintain consumer records in a single electronic health record, so that care is coordinated across organizations.

Simultaneously, mental health consumers could develop Web sites that provide information to help them negotiate complex systems of care. Such information as where to go (physically or electronically), whom to see, and how to seek reimbursement is fundamental. Electronic evaluations by consumers of the services provided by different organizations and consumer-operated therapeutic chat rooms also could and should be developed in the short term.

Transforming Institutional Sectors

Context. Institutional sectors, such as the national health care system, are sustained by several key interrelated components. These are longstanding patterns of financing, human resource deployment, routine practices and services, and accountability mechanisms to control deviation. The reverse is also true. Signifcant change in any one of these components could result in sector change and transformation.

The Institute of Medicine (IOM) of the U.S. National Academy of Sciences has issued a series of landmark studies between 2001 and the present, the *Crossing the Quality Chasm* series (IOM, 2001). This series calls for the transformation of health care in America. In IOM's view, the quality of most health care in the United States is suboptimal because it is fragmented and based on outdated knowledge.

Pre-IT. Antiquated financial practices, use of clinical practices with undocumented effects, failure to use modern IT, and lack of accountability have all contributed to poor-quality health care and suboptimal outcomes for consumers. IOM has identified transformation of each of these factors as crucial to achieving true reform. These factors, plus the existence of many thousands of "stovepipe" health care delivery organizations that do not collaborate, have also caused very rapid escalation in health care costs. The United States has the most costly health care system on earth, as measured by expenditures per capita, yet only mediocre effects are being achieved.

Post-IT. Clearly, modern IT can be an essential ingredient in implementing the necessary transfor-

mation strategies identified by IOM. High-quality practices and services are contingent upon the successful deployment of well-trained human resources. The only economical way to train the mental health workforce, which currently numbers about one million providers ranging from psychiatrists to pastoral counselors to consumers, is to employ distance training strategies over the Internet. Similarly, transforming financial practices in mental health care will require moving away from encounter-based claim systems to medical savings and spending accounts that span all institutional sectors necessary for successful care. In mental health, these sectors may include mental and physical health care, psychosocial and vocational rehabilitation, housing, employment, and self-care strategies, among others. The only feasible way to create medical savings accounts across these diverse programs is to employ modern IT, which could be used to record the accounts and to issue vouchers to consumers for needed care. In addition to spanning diverse institutional sectors, this approach could have the advantage of promoting empowerment for mental health consumers, who could control how the vouchers are spent. Finally, modern IT seems to be ideally suited to promote accountability through electronic submission of program performance measures and online evaluation of care by consumers.

Some Observations

Lest we get too far afield, I would like to return to the questions that prompted this chapter in the first place. It seems very clear that *modern IT can be a major force for transformation* at the interpersonal, interorganizational, and sector levels. This means that it can foster and promote needed changes in behaviors and norms, which can lead to larger scale social and cultural change. I have explored these notions within the context of health and mental health care; similar analyses could be prepared for other institutional sectors, including business and education.

It also follows that this technology can be used to solve problems that were previously intractable, such as fostering communication and collaboration between two or more competing "stovepipe" organizations. Examples of this type of positive adaptation have been presented for each of the three levels analyzed here.

Acceleration, equalization, and disintermediation can have salutary effects if modern IT is applied in a thoughtful manner. The health care system, including the mental health care system, will require the thoughtful application of modern IT if it is to be transformed in accord with the vision for the future articulated by the President's Commission and IOM. An urgent need exists to apply modern IT to these problems. Our future health may well depend on it.

Because of the potency of modern IT, executive and managerial training and practice will, as a matter of course, need to include consideration of its role in organizational leadership and operations. Because many current American executives and managers were educated in the pre-IT era, distance training will need to be implemented to overcome current deficiencies in knowledge. Anecdotal information suggests that the public sector lags far behind the private sector in integrating modern IT into leadership and operations.

Finally, a major secondary effect of such applications of modern IT is fostering interpersonal relationships that take shape and grow through communication mediated by technology. In this sense, modern IT also extends our concept of community far beyond the local workplace or neighborhood. Such broader communities are required in order to narrow the differences among us as humans.

REFERENCES

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press. (Also available at www.iom.edu.)

Parsons, T. (1951). *The social system.* New York: Free Press.

The President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America. Final report.* DHHS Pub. No. SMA-03-3832. Rockville, MD: U.S. Department of Health and Human Services. (Also available at www.mentalhealthcommission.gov.)

Toffler, A. (1980). *The third wave.* New York: Morrow.

Section II.
Measures to Improve Quality

Chapter 6

Promoting Self-Assessment and Accountability: Introduction to Quality Improvement Measures

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Quality mental health services cannot exist without accurate measures of quality that provide reference points for action. Hence, as the mental health community undertakes the very important transformational task of developing recovery-oriented care that is consumer and family driven, good measures will be a critical aspect of the enterprise. Considerable work has already been undertaken to develop appropriate measures. This chapter serves as an introduction to these measures.

Some may ask why quality improvement measures are necessary. Without common measures for benchmarking and assessing performance, there can be no common, independent unit of value, such as octane for gasoline. When there are no common measures, cost is used as a surrogate (a process frequently called commodification), and the price typically falls, as it has in the mental health field. Independent performance measures are necessary to document quality.

In 1996, SAMHSA's Center for Mental Health Services (CMHS) and the Mental Health Statistics Improvement Program (MHSIP) introduced the Consumer-Oriented Report Card. In subsequent years, most States adopted the Consumer Survey included as a key component of this report card. Like the report card itself, the Consumer Survey assesses care access, care quality, and care outcome from the consumer's point of view. Subsequently, versions of the Consumer Survey were developed for adolescents and for their parents. CMHS has adopted these consumer surveys, and they are available at www.ds2kplus.org.

The Forum on Common Performance Measures, a joint endeavor spanning SAMHSA's CMHS, the Center for Substance Abuse and Treatment (CSAT), and the Center for Substance Abuse Prevention (CSAP) has also adopted the access-quality-outcome framework. The principal goal of the forum is to develop and implement a small set of common performance measures for the mental health and substance abuse fields that can be used jointly by both fields for benchmarking to improve quality of care. Like the earlier work on the Consumer-Oriented Report Card, this work includes both administrative measures and a consumer survey. The consumer survey is called a Modular Consumer Survey because it contains a small set of items to be shared across fields and age groups, across fields within age groups, and within fields and age groups. Field-testing was underway at the end of 2004, with hoped-for initial implementation in 2005.

The work on report cards and common performance measures has focused on actual care delivery. Parallel work has also been underway to develop performance measures for systems of care. In CMHS, this work has taken the form of a Uniform Reporting System (URS), developed collaboratively with the States, for self-assessing and reporting the performance of the State mental health agency sys-

tems. Initial Basic Tables have been collected for fiscal years 2002 and 2003, and Developmental Tables have been added to the Basic Tables for fiscal year 2004. Data for 2002 and 2003 can be accessed at www.samhsa.gov, and data for 2004 will be added shortly.

In FY 2004, the Substance Abuse and Mental Health Services Administration (SAMHSA) administrator defined 10 National Outcome Measures (NOMs) for the mental health and substance abuse service systems (see table 6.1). Eight of these measures were already part of the URS. The remaining two, functioning/symptoms and social connectedness, are being added in FY 2005.

The work on the URS and the NOMs has been facilitated greatly through the State Data Infrastructure Grant program operated by CMHS. A first cycle of these grants was completed in FY 2004; the second cycle will be completed in FY 2007. By the end of FY 2007, all States are expected to report all URS and NOM performance measures.

New work is also underway to facilitate transformation. A recovery measure that will reflect the positive and negative features of mental health services is being developed. A parallel recovery measure that will reflect self-agency is also being developed. Finally, a second-generation MHSIP Quality Report Card is due to be released shortly.

Table 6.1. Substance Abuse and Mental Health Services Administration national outcome measures

Outcome	Treatment		Prevention
	Mental Health	**Substance Abuse**	**Substance Abuse Prevention**
Abstinence from Drug Use/Alcohol Abuse	Not applicable	Change in percentage of clients abstinent at discharge compared to the number/proportion at admission[2]	30-day substance use (non-use/reduction in use)[2] Availability of alcohol and tobacco. Availability of other drugs[1] Percentage of program participants and percentage of population who perceive drug use as harmful[2] Attitude toward use among program participants and among population at large
Decreased Mental Illness Symptomatology[1]	Decreased symptomatology[1]	Not applicable	Not applicable
Increased/Retained Employment or Return to/Stay in School	Profile of adult clients by employment status, increased school attendance (children)[1]	Change in percentage of clients employed at discharge compared to the percentage at admission	Increase in school attendance[1]; Decrease in ATOD-related suspensions/expulsions[1]; Decrease in drug-related workplace injuries[1]
Decreased Criminal Justice Involvement	Profile of client involvement in criminal and juvenile justice systems[1]	Change in percentage of clients with criminal justice involvement at discharge compared to the percentage at admission	Reduction in drug-related crime[1]

Table 6.1. Substance Abuse and Mental Health Services Administration national outcome measures (Continued)

Outcome	Treatment		Prevention
	Mental Health	**Substance Abuse**	**Substance Abuse Prevention**
Increased Stability in Family and Living Conditions	Profile of clients' change in living situation (including homeless status)	Percentage of clients in stable living situations at discharge compared to the number/proportion at admission (i.e., housing)[1]	Increase in parent participation in prevention activities[1]
Increased Access to Services (Service Capacity)	Number of persons served by age, gender, race and ethnicity[2]	Unduplicated count of persons served[1,2] Penetration rate—Numbers served compared to those in need[1]	Number of persons served by age, gender, race and ethnicity
Increased Retention in Treatment—Substance Abuse	Not applicable	Length of stay[1] Unduplicated count of persons served[1,2]	Not applicable
Reduced Utilization of Psychiatric Inpatient Beds—Mental Health	Decreased rate of readmission to state psychiatric hospitals within 30 days and 180 days[1,2]	Not applicable	Not applicable
Increased Social Supports/Social Connectedness[3]	TO BE DETERMINED (Initial indicators and measures have not yet been identified)	TO BE DETERMINED (Initial indicators and measures have not yet been identified)	TO BE DETERMINED (Initial indicators and measures have not yet been identified)
Client Perception of Care[2]	Clients reporting positively about outcomes[2]		
Cost Effectiveness[2]	Number of persons receiving evidence-based services[1,2] Number of evidence-based practices provided by State[2]	Percentage of States providing substance abuse treatment services within approved cost per person bands by the type of treatment[1,2]	Increase services provided within cost bands[1,2]
Use of Evidence-Based Practices[2]			Increase services provided within cost bands[1,2]

[1] Developmental
[2] Required by OMB PART Review
[3] For ATR, "Social Support of Recovery" is measured by client participation in voluntary recovery or self-help groups, as well as interaction

Chapter 7

Update on Decision Support 2000+

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Overview

Decision Support 2000+ (DS2000+) is an initiative of SAMHSA's Center for Mental Health Services (CMHS) designed to improve the quality of information in behavioral health and, as a result, the quality of behavioral health care. The DS2000+ initiative seeks to advance the public health model, ensure stakeholder input, support quality improvement and accountability, and collaborate with allied fields (Substance Abuse and Mental Health Services Administration, undated). It provides tools and services to support national, State, county, and local informational and clinical activities.

DS2000+ involves a number of projects and activities that fall within two domains: standards for collecting and reporting behavioral health data and an online information system for collecting, analyzing, reporting, and disseminating data. DS2000+ Data Standards provide uniform criteria for defining, collecting, and reporting data that are both Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliant and behavioral-health specific. DS2000+ Online provides tools for conducting surveys, recording health and personal data, finding services, measuring outcomes, evaluating performance, enhancing communication, sharing data, and disseminating information. These tools will make available data to describe the mental health system in the United States; evaluate the accessibility, appropriateness, and quality of care; facilitate stakeholder decision-making; and guide transformation efforts across the Nation (Powers, 2005). This chapter provides an update on DS2000+ activities, with a special focus on information technology.

Background

The intense debate over the past decade regarding problems in the financing and delivery of health and behavioral health care services has produced not only trenchant summaries of the problems, but also specific recommendations for improvement. Among these, there is clear consensus on two issues: First, improvement in quality of care involves substantial changes in the way the Nation handles health-related information; second, all health-related care should be consumer- and family-driven. For behavioral health, there is, in addition, growing agreement on a recovery-oriented approach to care.

Mental Health: A Report of the Surgeon General (U.S. Department of Health and Human Services, 1999) noted, for example, that "many who seek treatment are bewildered by the maze of paths into treatment; others in need of care are stymied by a lack of information about where to seek effective and affordable services." Moreover, "public and private agencies have an obligation to facilitate entry into treatment, [but to do so, they need] to know what resources exist." Among the six rules and ten goals for the new health system outlined in *Crossing the Quality Chasm* (Institute of Medicine, 2001), the Institute of Medicine (IOM) called for a consumer-centered system in which knowledge is shared and information flows freely. The President's New Freedom Commission on Mental Health (2003) further affirms the special complexities, needs, and problems of behavioral health in its report *Achieving the Promise: Transforming Mental Health in America* (2003). The commission not only reinforced the IOM's position that "mental health is consumer and family driven" (Goal 2), but also, in its sixth goal, asserted that technology should be used to access mental health care and information. Two specific objectives were set for the field: to use health technology and telehealth to improve access and coordination of mental health care, especially for Americans in remote areas or in underserved populations, and to develop and implement integrated electronic health record and personal health information systems (Objectives 6.1 and 6.2). Indeed, as Daniels and Adams (2004) showed, an integrated electronic health and

personal record (EHPR) fulfills not only the commission's goals but also the IOM's aims of efficiency and equitability.

The National Committee on Vital and Health Statistics (NCVHS) addressed the issue of information from the perspective of data content and standards in its report *Shaping a Health Statistics Vision for the 21st Century* (2002). The committee made the case that decision-making of all kinds could be improved with better coordination of data collection and analysis; more information on factors influencing population health; more timely access to data; and data standards that ensure comparability across regions, programs, and populations. NCVHS employed a person-centric and recovery-oriented approach, recommending that data be collected not only on disease, but also on functional status, well-being, and community and cultural characteristics; and that data be reported in ways that make the information easily accessible to all. The health statistics model for the 21st century, then, is one in which data collection, analysis, and reporting are coordinated, collaborative, standards-driven, timely, and relevant, with clearly enunciated policies and procedures for protecting privacy and ensuring data security and confidentiality. To this end, HIPAA has provided standards for transmission of electronic health data and regulations for ensuring privacy and data security.

The vision of a National Health Information Infrastructure (NHII) that will "connect all health decision-makers [including consumers] to sound information and to each other" is beginning to take shape through development of "technologies, standards, applications, systems, values, and laws that support all facets of individual health, health care, and public health; [that will] deliver information to individuals—consumers, patients, and professionals—when and where they need it, so they can use this information to make informed decisions about health and health care" (NCVHS, 2000 and 2002). For example, through Connecting for Health (2004a, 2004b, 2005), public and private stakeholders have reached initial consensus on a set of health care data standards and recommended strategies to promote electronic connectivity in health care; the departments of Health and Human Services, Defense, and Veterans Affairs have agreed upon standards for exchanging clinical health information electronically for surveillance and health care at the Federal level (the Consolidated Health Informatics [CHI] initiative); the Centers for Medicare and Medicaid Services (CMS) are developing standards for electronic prescribing and interoperability of electronic health records and are piloting the Medicare Beneficiary Portal for secure access to health information; the Centers for Disease Control and Prevention (CDC) are working toward electronic laboratory reporting and information exchange; Health Level 7 (HL7) has created standards and a functional model for electronic health records (EHRs); the Health Resources and Services Administration (HRSA) is supporting regional health information organizations (RHIOs) to develop information exchange at the community level; and the National Coordinator for Health Information Technology is developing a strategic plan for nationwide implementation of interoperable health information technology (HIT) (Thompson & Brailer, 2004).

The NHII plan for "consumer-centric and information-rich" health care is taking shape through four goals and attendant strategies: (1) to inform clinical practice by incentivizing adoption of EHRs, reducing investment risk, and promoting use in rural and underserved areas; (2) to interconnect clinicians by fostering regional collaborations, developing a national health information network, and coordinating Federal health information systems; (3) to personalize care by encouraging consumers to use personal health records, enhancing informed choice, and promoting telehealth; and (4) to improve population health by unifying public health surveillance architectures, streamlining quality and health status monitoring, and advancing research and dissemination (Thompson & Brailer, 2004). Implicit in the plan is collaboration between the public and private sectors; across Federal, State, and local governments; and among stakeholders.

Model programs exist to guide vision and planning. For example, the Veterans Health Administration's (VHA's) fully integrated EHR connects all VHA medical facilities and provides beneficiaries with access to information on benefits, services, and Web-based enrollment; supports electronic provider credentialing and education; enables telemedicine visits and consultations; and can be used for screening, prevention, and quality measurement. Similarly, the Department of Defense (DOD) has developed an EHR, telehealth services, personal health records, and online provider education. In San Diego, the Network of Care for Mental Health program has a user-friendly, replicable Web site to help consumers and families find services and other community-based resources and information about conditions, insurance, and other mental health-related matters.

The Decision Support 2000+ Initiative

DS2000+ is another of these model programs. Informed and driven by the same vision, DS2000+ can provide the NHII with a critical behavioral health perspective through its data standards and online information system.

DS2000+ Data Standards

Building on a long tradition in the development of data standards for mental health (National Institute of Mental Health, 1989), DS2000+ recommends standards for collecting, recording, and reporting population, person/enrollment, encounter, financial, human resources, and organizational data as well as standards for measuring fidelity to evidence-based practices at the clinical and systems levels, outcomes of person-level treatment and interventions, and performance at the system level. For each substantive area, there are core and stakeholder-specific data standards. The core standards reflect the common data requirements of all behavioral health stakeholders—consumers, family members, public mental health agencies, providers, and managed behavioral health organizations—and incorporate applicable HIPAA standards. The stakeholder-specific standards were designed to meet the needs of particular stakeholder groups for specialized information. Since the data standards have been described previously (Manderscheid & Henderson, 2004), this chapter focuses on the online DS2000+ decision support tools.

DS2000+ Online

DS2000+ Online is a Web-based information system that began with a requirements analysis derived from information provided by multistakeholder focus groups, expert panels, and site visits to public and private entities with exemplary behavioral health information systems (Minden et al., 2000). On the basis of this input, the development team specified the key functionalities for a second-order distributed information system (Phillips, Mindent, & Dunworth, 2002) and built a functioning prototype, DS2000+ Online, to facilitate data collection, analysis, and reporting.

Following a positive response from the field, the team added functionalities and capacity to transform the prototype into a fully functional system based on four basic principles: (1) development is guided by the expressed needs of consumers and other stakeholders; (2) security and privacy are ensured because users retain control over their own data; (3) user-friendly tools are in the public domain; and (4) the architecture is modular and expandable.

Stakeholder-driven Development

Throughout the development of DS2000+ Online, consumers, family members, and other stakeholders—public mental health agencies, providers, managed behavioral health care organizations, behavioral health software vendors—shaped the overall design of the system and the content of its modules by participating in focus groups, work groups, and expert panels and by responding to numerous requests for feedback. As a result, DS2000+ Online is easy to navigate and its modules serve the needs of a wide and diverse user community.

Security and Privacy

DS2000+ Online is a secure distributed network through which users control, analyze, and report their own data and design and manage their own operations within the site. As figure 7.1 shows, data remain "outside" the system and beyond its "control."

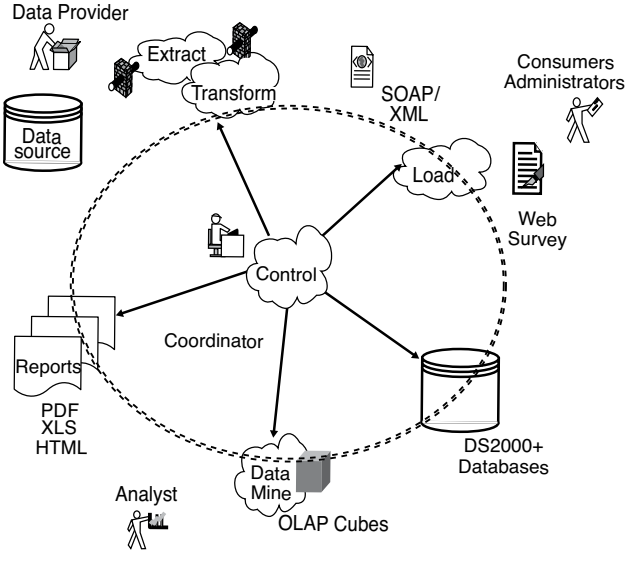

Figure 7.1. DS2000+ Concept of Operations.

Those who "own" the data choose whether to provide any of their data and whether to provide an entire data set or an extract. To protect privacy, data owners remove identifiers before providing data and assign any new identifiers that might be required; they keep the "keys" to identifying their own data. Data are transformed according to Simple Object Access Protocol (SOAP) and Extensible Markup Language (XML) standards, loaded into analytic databases with customized online analytic processing (OLAP), ready for analysis and reporting in various formats.

User-friendly Tools

DS2000+ Online has a number of generic tools. They are listed in table 7.1 and include a Web page builder with a document upload tool and text editor; extraction, transformation, and loading (ETL) software; a survey builder with survey-specific databases and automatic scoring; database-specific OLAP; report builder; and a database mapper. These tools can be used for a wide variety of purposes as summarized in table 7.2 and described in detail in the descriptions of the DS2000+ Online modules.

Table 7.1. DS2000+ Online tools

Tool	Uses	Examples
Web page builder, document upload and download tools, text editor, data upload and download tools	Users can design and operate their own secure Web pages to make information available to the general public or private work groups. They can upload and download text documents, fixed data tables, and pictures; edit text online; create document libraries; host blogs and discussion groups. Work groups can use these tools to exchange and revise documents and data, post events, and manage workflow.	Adolescent Wellness Web page OneMHSIP Data Sharing Project DS2000+ Document Library (e.g., DS2000+ Data Standards, newsworthy and historical articles and reports, links to relevant Web sites) DS2000+ Data Library (e.g., fixed Medicare, Medicaid and Private Insurance Data Tables)
Extraction, transformation, and loading (ETL) software	ETL software extracts, transforms, and loads into DS2000+ Online anonymous molar or aggregated data from first-order systems. Key to a distributed second-order system, the ETL software enables automated receipt, storage, and posting of data for sharing, analysis, and reporting.	New Jersey Association of Mental Health Agencies (NJAMHA) pilot study on transfer of encounter data from first-order administrative databases
Survey, questionnaire, and psychometric instrument builder	Easy-to-use, low cost, Web-based software to build and edit surveys, questionnaires, and psychometric instruments for online submission by respondents or online data entry of completed paper surveys by staff.	Mental Health Statistical Improvement Project (MHSIP) consumer surveys for adults, youth, and children and families Employee Assistance Program Administrator and Consumer Surveys National Association of County and Behavioral Health and Developmental Disability Directors (NACBHD) Survey Human Resources Workgroup Survey* Consumer Outcomes Measures* Recovery Oriented Survey Instrument (ROSI)* Recovery Measurement Tool (RMT)*
Databases	Databases are populated by completion of online surveys, questionnaires, and psychometric instruments; data transfer via automated ETL software; and ad hoc data uploads from various sources. Scoring algorithms are incorporated into all applicable databases to provide automatic, real-time summary, domain, and item scores.	MHSIP consumer surveys for adults, youth, and children and families Consumer Outcomes Measures Recovery Oriented Survey Instrument (ROSI)* RMT*

* Under development

Continued

Table 7.1. DS2000+ Online tools (Continued)

Tool	Uses	Examples
OLAP and report builder	All data can be analyzed online to produce frequency distributions, cross-tabulations, and simple statistics. As data become available, benchmarks can be constructed for multiple parameters. Users can create tabular and graphic reports in a wide variety of styles and colors.	
Permission granting tool	Access to data is controlled by approved administrators within agencies, organizations, and workgroups. Administrators specify for each user what information can be seen, modified, entered, or removed.	
Database mapper	The mapper enables users to compare two databases to identify concordant and discordant elements. This tool can be used to facilitate compliance with data standards including HIPAA, DS2000+, and the Uniform Reporting System.	HIPAA Mapper

Architecture Is Modular and Expandable

DS2000+ Online has a modular and expandable framework that begins with a stable, basic platform and allows rapid addition of new components at users' request; expansion of capacity as user interest and participation increases; and prototyping, piloting, and refinement of components without disruption of the basic system. Taken together, the modules listed in table 7.2 will help users understand the mental health care service system and evaluate its performance; measure outcomes to improve individual care and recovery and contribute to the evidence base for determining best practices; record and access health and personal data through standardized, uniform, and distributed processes; find and give feedback on local services; share information across and among clinical and administrative systems; and disseminate information. In the following section, we describe selected modules that are in operation or development.

Table 7.2. DS2000+ Online modules

Consumer Assessment of Care
- MHSIP-DS2000+ Consumer Surveys

Description and Evaluation of the Mental Health Care System
- Client/Patient Sample Survey (CPSS)
- Survey of Mental Health Organizations (SMHO)
- Federal Employee Assistance Program (EAP) survey
- NACBHD Survey
- Human Resources Workgroup Survey*

Consumer Outcomes Measurement and Reporting
- Consumer Outcomes Measures*
- RMT*
- ROSI*

Recording Health and Personal Data
- Prototype for an electronic health and personal record

Finding Local Services
- Software for navigating and evaluating local services

Enhancing Communication and Sharing Data
- ETL for transfer of encounter data (NJAMHA pilot study)
- State Uniform Reporting System (URS) data sharing project
- Tool for managing clinical and administrative communication

Disseminating Information
- DS2000+ Document Library
- DS2000+ Data Library
- DS2000+ Data Standards
- Links to relevant Web sites
- User-designed and -operated Web pages

DS2000+ Modules

This section describes in detail selected modules.

The presentation of modules is organized by the general purpose they serve. Modules were selected to demonstrate particular characteristics of the DS2000+ Initiative and DS2000+ Online:

- Anticipating field needs: the MHSIP-DS2000+ Consumer Survey module created to help consumers voice their concerns about mental health services and help States report URS

data in fulfillment of their data infrastructure grant responsibilities;

- Responding to users' requests: the Federal EAP and NACBHD surveys developed in response to requests by these programs to survey their constituencies and improve their services;

- Meeting government mandates: The CPSS, designed to provide more complete, reliable, and continuous data collection than possible with traditional paper surveys;

- Facilitating quality improvement: The consumer outcomes and the system performance measurement and reporting modules intended to make widely and economically available instruments that will produce uniform and comparable data on treatment outcomes and system performance;

- Supporting mental health service delivery: The modules for recording health and personal data, finding local services, and managing clinical and administrative communication fashioned to support providers, consumers, family members, and administrators in their efforts to improve the quality of care;

- Supporting the field's need to know: The document and data library structured to help users find the information they need quickly and accurately;

- Piloting new technologies and procedures: The NJAMHA pilot study to test software and processes needed by a distributed network of agencies to share de-identified data from claims and other administrative databases.

A Module for Consumer Assessment of Care and State Reporting

MHSIP-DS2000+ Consumer Survey Module

With the Idaho Department of Health and Welfare (IDHW), the DS2000+ team built and pilot tested the MHSIP-DS2000+ Consumer Survey Module. This module provides tools for administrators to set up and manage survey processes for their State or organization; respondents to complete the adult, youth, or child and family surveys online; staff to enter data from surveys completed on paper; and users to see item and domain scores for an individual or a group and to compare them to appropriate benchmarks (see figure 7.2).

The DS2000+ team used the survey builder tool to construct the basic online questionnaires (see figure 7.3) as well as the database and scoring procedures; the IDHW staff then used it to customize the surveys by adding questions of local interest (see figure 7.4).

IDHW also used the Web page builder to host the surveys on an Idaho-specific site and create a private area where administrators could assign permissions to their staff to perform various functions (e.g., enter data, change the survey) or access certain

MHSIP-DS2000+ Consumer Survey Module

Purpose

- Improve ease, response rate, and cost-effectiveness of MHSIP consumer surveys
- Enhance utility and value of MHSIP consumer survey data

Tools

- Web page builder
- Survey builder (with database and scoring software)
- Data upload tool
- Online analytical processing
- Report builder
- Permission granting tool

Products

- Web-based MHSIP consumer surveys for direct online entry by adults, youth, and families
- Web-based MHSIP consumer surveys for data entry by staff from paper surveys
- Database for storing MHSIP consumer survey data entered by respondents, data entry staff or uploaded in aggregate format
- Automatic scoring to produce domain and item scores
- System-generated benchmarks and data tables
- User-generated ad hoc analyses and data tables
- Fixed data tables from system and/or users

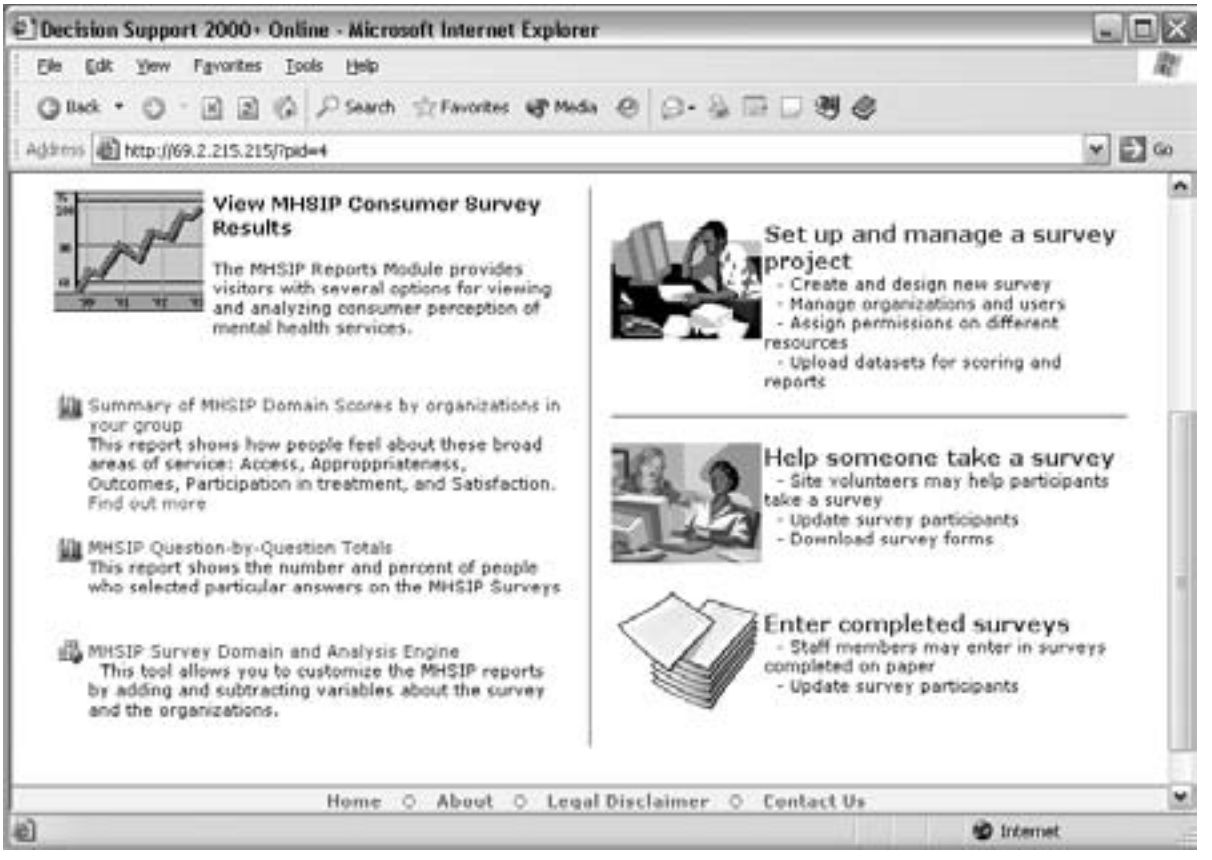

Figure 7.2. Home Page for MHSIP-DS2000+ Consumer Module.

information (e.g., anonymous raw data, item and domain scores, summary reports).

When consumers took a survey online or staff entered data from paper surveys, responses were immediately encoded in a database, scored, and available for viewing as item and domain scores for each individual or aggregated across many individuals.

Individual scores could be compared to previously established benchmarks for respondents with similar characteristics (e.g., demographics, diagnoses, treatment, location, service site), and aggregated data could be sorted by the same characteristics to produce a wide range of reports.

The IDHW-DS2000+ pilot study had two goals: first, to test the DS2000+ survey, scoring, report building, and OLAP tools; second, to evaluate the capacity of IDHW staff, local providers, and consumers to use the survey module. IDHW set up computers in three private provider organizations, which, in turn, invited consumers to complete online surveys when they came for their appointments. IDHW trained a consumer advocate to provide technical assistance to consumers. The study showed that the survey, scoring, OLAP, and reporting tools worked well and that having consumers complete the surveys online reduced the burden and cost of data entry and analysis. IDHW also learned that access to the scoring software and a database made it cost-effective to use the module to enter data from paper surveys.

The pilot demonstrated the logistical challenges associated with providing Internet access in clinical settings and the technical challenges involved in tracking survey completion while maintaining privacy. Methodological challenges, such as sampling strategies, respondent tracking, and service site identification, exist whether the surveys are administered on paper or online.

MHSIP Survey For Adults

The Official MHSIP Adult Survey - 28 items (version 1.2 November 2003)

PREVIEW MODE

Paper Survey Tracking ID: * (max 50 symbols)

	Strongly Disagree	Disagree	I am Neutral	Agree	Strongly Agree	No Response
1. I like the services that I received here.	○	○	○	○	○	⊙
2. If I had other choices, I would still get services from this agency.	○	○	○	○	○	⊙
3. I would recommend this agency to a friend or family member.	○	○	○	○	○	⊙
4. The location of services was convenient (parking, public transportation, distance, etc.).	○	○	○	○	○	⊙
5. Staff were willing to see me as often as I felt it was necessary.	○	○	○	○	○	⊙
6. Staff returned my call in 24 hours.	○	○	○	○	○	⊙
7. Services were available at times that were good for me.	○	○	○	○	○	⊙
8. I was able to get all the services I thought I needed.	○	○	○	○	○	⊙
9. I was able to see a psychiatrist when I wanted to.	○	○	○	○	○	⊙
10. Staff here believe that I can grow, change and recover.	○	○	○	○	○	⊙
11. I felt comfortable asking questions about my treatment and medication.	○	○	○	○	○	⊙
12. I felt free to complain.	○	○	○	○	○	⊙
13. I was given information about my rights.	○	○	○	○	○	⊙

Figure 7.3. Section of MHSIP-DS2000+ Adult Consumer Survey.

How long did you receive services from this center?

- ○ a. Less than 1 month
- ○ b. 1-2 months
- ○ c. 3-5 months
- ○ d. 6 months to 1 year
- ○ e. More than 1 year

Are you still getting services from this center?

- ○ Yes
- ○ No

In the last year, did you see a medical doctor (nurse) for a health check up or because you were sick?

- ○ Yes
- ○ No

Are you on medication for emotional/behavioral problems?

- ○ Yes
- ○ No

If Yes, did the doctor or nurse tell you what side effects to watch for?

- ○ Yes
- ○ No

In the last month, did you get arrested by the police?

- ○ Yes

Figure 7.4. Idaho-Specific Questions.

Federal Employee Assistance Programs Module

Purpose

- Determine the organizational characteristics, types of services, and utilization of Federal EAPs
- Evaluate satisfaction among users of EAP services

Tools

- Web page builder
- Survey builder (with database and scoring software)
- Data upload tool
- Online analytical processing
- Report builder
- Permission granting tool

Products

- Web-based surveys for direct online entry by EAP administrators and service users
- Web-based surveys for data entry by staff from paper surveys completed by EAP administrators and service users
- Database for storing survey data entered by respondents or data entry staff
- Automatic scoring
- System-generated benchmarks and data tables
- User-generated ad hoc analyses and data tables
- Fixed data tables from system and/or users

NACBHD Module

Purpose

- Define the network of entities delivering behavioral health and developmental disabilities services at the county and local levels
- Describe the services, and the county resources and expenditures for these services
- Supplement State-level and national surveys to provide a national picture of county behavioral health care delivery to help Federal and State governments target resources to counties

Tools

- Web page builder
- Survey builder (with database and scoring software)
- Data upload tool
- Online analytical processing
- Report builder
- Permission granting tool

Products

- Web-based survey for county commissioners and executive directors of county or local government sponsorship authorities
- Database for storing survey data
- System-generated benchmarks and data tables
- User-generated ad hoc analyses and data tables
- Fixed data tables from system and/or users

Three Modules for Describing and Evaluating the Mental Health Care System

Client/Patient Sample Survey Module

CMHS's CPSS produces national estimates on treatment satisfaction and outcomes for adult consumers who receive services in specialty mental health outpatient programs (State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, multiservice mental health organizations, and freestanding outpatient clinics and partial care organizations). The DS2000+ and CPSS project teams worked closely together to create a module that could host the survey through the DS2000+ portal and provide a seamless interface with all other CPSS operations.

Federal Employee Assistance Programs Module

This module was developed at the request of SAMHSA/CMHS to collect data from administrators and counselors of Federal EAPs and users of EAP services to guide efforts to improve program management and quality of care. The administrator survey will address utilization by Federal employees and their families of individual services, support groups, workshops, and educational programs; extent of information seeking and participation in online services; proportion of mental health and alcohol/drug problems; percentage of referrals by supervisors compared to percentage of self-referrals; and demographic characteristics of service users compared to eligible beneficiaries.

The data will be reported at the system level (the Federal Government), department level (Health and Human Services), and division level (SAMHSA). Both administrators and service users will be able to compare their own department's data to the system-level data that includes all departments, although individual departments will not be identified. Similarly, they will be able to view division-level data within the departments—again, with the identity of the division protected.

NACBHD Module

NACBHD has begun to use the DS2000+ survey-building and reporting tools to periodically canvass county commissioners and executive directors of county or local government sponsorship authorities. The survey will define the network of government entities overseeing, managing, and financing behavioral health and developmental disability services; characterize the services provided; and map these services, resources, and expenditures of county communities to the populations served. Currently, no national picture captures delivery of county or local government-sponsored behavioral health and developmental disability service. With data produced by this survey, NACBHD will be able to supplement Federal and State data to create a more complete understanding of the current system of care.

Modules for Measuring Consumer Outcomes and System Performance

Outcomes Measurement and Reporting Module

Development of the Outcomes Measurement and Reporting Module is guided by an Oversight Group consisting of representatives of organizations with experience and interest in outcomes measurement and reporting, with a small steering committee of experts. The module will consist of recovery-oriented questionnaires and rating scales completed by consumers and clinicians at specified points in time to determine current status and change over time associated with treatment and other interventions. The module will reflect and can be used to collect data on SAMHSA's National Outcome Measurement (NOM) system. The core set of measures can be supplemented to address the assessment needs of particular groups. With built-in scoring programs, individual scores, comparison with benchmarks, and comparison with previous scores will be available immediately to users.

Outcomes Measurement and Reporting Module

Purpose

- Build, test, and implement a recovery-oriented outcomes measurement and reporting module
- Analyze person-level and aggregated data to determine outcomes associated with treatment interventions and consumer characteristics

Tools

- Web page builder
- Survey builder (with database and scoring software)
- Online analytical processing
- Report builder
- Permission granting tool

Products

- Outcome measurement and reporting software
- Database for storing outcomes data
- System-generated benchmarks and data tables
- User-generated ad hoc analyses and data tables
- Fixed data tables from system and/or users

Stakeholder work groups recommended the content (i.e., domains and data elements) of the measurement system, and a technical expert work group advised on methodology, instruments, and technological approaches. Both groups offered suggestions for implementation.

The domains shown in table 7.3 as well as the data elements and instruments to measure them are under consideration for inclusion in the module. Following psychometric refinement and field testing of ROSI and RMT, these instruments along with others will be piloted in several States to evaluate consumer and clinician responses to measuring outcomes, the feasibility of incorporating outcome measurement

Table 7.3. Draft domains for the DS2000+ outcomes measurement and reporting module

- Self Care: General Health and Comorbidity
- Self Care: Alcohol and Substance Use/Abuse
- Psychological Functioning and Symptoms
- Behavior and Functioning
- Relationships and Social Support
- Family Functioning
- Adverse Events and Negative Outcomes
- Engagement in Treatment
- Quality of Life
- Recovery

into customary clinical practices, and the technological features of the module. It is anticipated that the final module will allow users to add instruments of their own choosing. Reports will show current status and change over time in both item and summary scores. Basic demographic and treatment data will be collected to allow for analysis of independent and dependent variables.

Modules to Support Mental Health Service Delivery

Electronic Health and Personal Record

There is a plethora of EHR systems, ranging from simple software that enables one practitioner to record limited clinical data, perhaps with some scheduling and billing capability, to comprehensive systems that serve large numbers of providers distributed over many different clinical and administrative settings. EHRs may be text-or image-based and may or may not provide processable data to assist decision-making and guide improvements in the processes of care.

EHRs typically contain the following kinds of information: identification numbers (e.g., medical record number, social security number); personal information (e.g., name, address, demographic characteristics, emergency contact information); health insurance and billing information; historical data (medical/surgical history, family history, social history, past treatments and procedures); current clinical data (dates of and reasons for visits/admissions, problem lists, clinic and operative/procedure notes, hospital summaries, laboratory tests, radiological and other procedure results, medications, allergies, immunizations); clinical management tools (reminders and alerts, computerized order entry and prescribing, clinical practice guidelines); provider identification and contact information; and treatment plans and instructions. EHRs may also have correspondence, instructions concerning and an audit log of access, advance directives, and other legal documents (NCVHS, 2000; President's New Freedom Commission on Behavioral Health, 2003).

However, there are additional special requirements for behavioral health records based on the unique needs of mental health consumers and their families. For example, a behavioral health electronic record should include information about functioning and recovery and accommodate data sharing across various provider types (e.g., health and behavioral health professionals, peer providers, and staff of programs in allied fields), service settings (e.g., outpatient or inpatient, partial hospital, residential, peer-run, home), and health care delivery systems (e.g., general health care, corrections, housing, child welfare, education). Furthermore, behavioral health care requires a multifaceted record that incorporates not only the standard data collected in the general health care system but also the personal, functional, social, and interpersonal data critical to comprehensive, coordinated, long-term care. Access to and sharing data must also be determined by the role of the user to ensure appropriate levels of security and confidentiality.

In addition, a behavioral health record should have tools for mental health assessment that are both generic and condition-specific and that can be used to record a consumer's status at the beginning, middle, and end of treatment. These tools should fit seamlessly into providers' and consumers' customary activities and automatically generate information on how the consumer has changed over time. Other tools should help providers and consumers develop, monitor, and modify treatment plans; access evidence-based practices; and measure fidelity of treatment to these standards. Finally, since a behavioral health record is a *personal* as well as a medical record, it should be accessible to consumers and those to whom they permit access and include personal progress logs and other consumer-maintained trend monitoring tools as well as a clearly defined permissioning system.

As with other modules, the DS2000+ team is collaborating with initiatives that have already faced many of the functional and technology challenges of a distributed intra-organizational health care system to define the standards and specifications for a behavioral health and personal record.

Tools for Managing Clinical and Administrative Communication and Navigating and Evaluating Local Services

High-quality care requires effective communication between and among clinicians and administrators. Tools developed for other modules, such as the ETL, document and data upload and download tools, and permissioning mechanisms will be adapted to streamline data sharing in clinical and managerial settings. Quality care also depends on easy access to appropriate services in the community. Existing technology will be tailored to the needs of consumers, family members, and providers to identify local services and make decisions based on feedback provided by their peers.

Modules for Enhancing Communication and Sharing Data

ETL for transfer of encounter data: A Pilot Study of the Distributed System with the New Jersey Association of Mental Health Agencies

A partnership consisting of the NJAMHA, individual provider agencies, behavioral health software vendors, and the DS2000+ team is pilot testing the ETL device that lies at the heart of the DS2000+ Online distributed system (see figure 7.1). The ETL software will be installed on the agencies' computer systems and transfer to DS2000+ Online anonymous data in selected fields from the agencies' HIPAA Health Care Claim: Professional Transactions (837) for Medicaid beneficiaries. Agencies that do not submit HIPAA-formatted electronic claims will submit data collected on Health Care Finance Administration (HCFA) 1500 claim forms. The agencies will provide additional race and ethnicity data not available through either claim format.

The data will be stored in an analytic database that can also be populated by uploads of de-identified aggregated data. The data will be used to determine the number of people served by the agency over a specified period of time, their demographic characteristics and diagnoses, the services provided, and the types of clinicians providing services. Comparisons across agencies and within an agency over time will be made to address issues of access, appropriateness, and quality of care.

State Uniform Reporting System Data Sharing Project

States with CMHS Data Infrastructure Grants (DIGs) are required to submit data annually as specified in the URS. Data are received, cleaned, analyzed, and reported by the DIG Coordinating Center. States in the northeast region asked CMHS for permission to share data among themselves to define analyses, benchmarking procedures, and sharing rules. The DS2000+ team created a module for the private use of these States, and data were transferred from the Coordinating Center. Once feedback is received from these States, the module will be finalized and made available to others who wish to share data.

NJAMHA Data Transfer Pilot Study

Purpose

- Test the extraction, transformation, and loading device to transfer data routinely from local providers to DS2000+ Online
- Transfer administrative data and use them to determine key characteristics of service provision by NJAMHA providers

Tools

- Web page builder
- ETL software
- Online analytical processing
- Report builder
- Products
- ETL
- Database for HIPAA health care claim: professional transactions (837)

Modules for Disseminating Information

Document and Data Library Modules and Links to Relevant Web Sites

Through the Document and Data Library Modules and links to many relevant Web sites, DS2000+ Online offers users easy access to the information they need to remain up-to-date and make critical decisions. The Document Library stores articles and reports on the DS2000+ Initiative, its components, and on topics of more general interest to the field (see figure 7.5). Documents can be downloaded as Portable Document Format (PDF) files, printed, or e-mailed.

The links to relevant Web sites are continually expanded to give users a growing body of information. The links are shown in figure 7.6; the last link is to a Web site that provides numerous fixed data tables on Medicare, Medicaid, and private insurance information. The Web site is configured to look like DS2000+, although it is housed on another organization's server (see figure 7.7).

Figure 7.5. Document Library.

Figure 7.6. Links and Data Library.

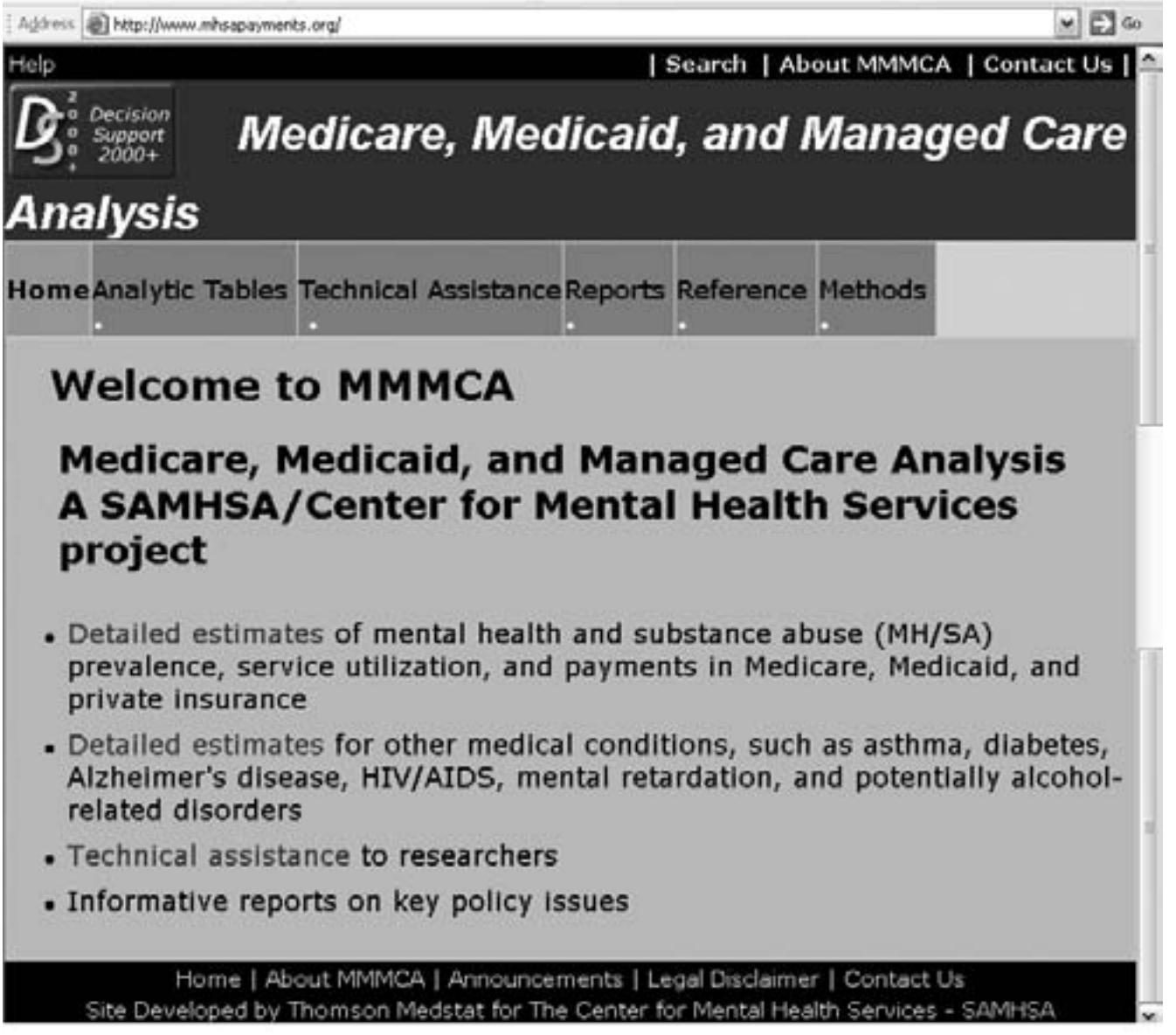

Figure 7.7. Medicare, Medicaid, and Managed Care Analysis.

The Adolescent Wellness Portal

Purpose

- Facilitate communication and information sharing
- Work group builds its own private, secure Web page for posting, downloading, reviewing, and revising documents

Tools

- Web page builder

Products

- Customized private Web pages

User-Designed and Operated Pages: The Adolescent Wellness Portal

The Adolescent Wellness Portal (see figure 7.8) was created to help schools and parents find resources related to adolescent mental health and wellness: a guide for parents when a child is referred for psychiatric hospitalization; a starter kit for school leaders to implement a preventive mental health program for students in grades 7 through 12. The Adolescent Wellness Program is a collaborative effort of Children's Hospital and McLean Hospital in Boston, and the Sidney A. Swensrud Foundation. The module was developed and is maintained entirely by a consumer and family advocate volunteer using DS2000+ tools and minimal technical assistance from the DS2000+ team.

Address http://www.ds2kplus.org/?pid=2878siteID=31 Go

Hello
Guest User (guest)
Sign In

www.AdolescentWellness.org

Home
About
View or print manual
Surveys without paper
Announcements
FAQ
News
Blog area
Contacts
Tracking
Links

How does managing stress in the classroom reduce the number of students going to the emergency room?

Understanding the mood continuum from stress to depression helps a student:

- identify symptoms of stress or depression and
- communicate that observation to an adult.

These are steps toward improving resilience - the balance between the demands of ones daily life and the resources one brings to bear to manage those demands. Improved resilience is a major goal of our school based program, a universal preventive intervention for adolescents.

The first school to pilot this program reduced the number of students going to the emergency room during the school year from 20 down to 6.

The program is titled *An Adolescent Mental Health & Wellness Curriculum / A Starter Kit For Schools*. It was created by Children's Hospital Boston and McLean Hospital for grades 7-12. The materials provided through this site include the curriculum, implementation tools and related supplements. The materials are free of charge and may be reproduced.

Please review our Terms Of Use
Prototype developed by Abt Associates, Inc. for The Center For Mental Health Service - SAMHSA

Powered By Decision Support 2000+

Figure 7.8. The Adolescent Wellness Portal.

Conclusion

By empowering consumers and family members, working closely with other stakeholders, using and disseminating DS2000+ data standards, and collaborating with allied fields, DS2000+ Online provides comprehensive, accurate, and accessible information to assist decision-making for clinical, administrative, and policy purposes.

REFERENCES

Connecting for Health. (2004a). A preliminary roadmap from the nation's public and private-sector health care leaders. http://www.connectingforhealth.org/resources/cfh_aech_roadmap_072004.pdf. Accessed July 12, 2005.

Connecting for Health. (2004b). Connecting Americans to their healthcare. Final report. Working Group on Policies for Electronic Information Sharing Between Doctors and Patients. http://www.connectingforhealth.org/resources/wg_eis_final_report_0704.pdf. Accessed July 12, 2005.

Connecting for Health. Working Group on Actively Linking Information for Health Care Quality and Safety. (2005). Linking health care information: Proposed methods for improving care and protecting privacy. http://www.connectingforhealth.org/assets/reports/linking_report_2_2005.pdf. Accessed July 12, 2005.

Daniels, A., & Adams, N. (2004). *From policy to service: A quality vision for behavioral health. Using the Quality Chasm and New Freedom Commission reports as a framework for change.* Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

Leginski W. A., Croze C., Driggers J., et al. (1989). *Data standards for mental health decision support systems.* National Institute of Mental Health, Series FN No. 10, DHHS Pub. No. (ADM) 89-1589. Washington, DC: Superintendent of Documents, U.S. Government Printing Office.

Manderscheid, R. W., & Henderson, M. J. (2004). From many into one: An integrated information agenda for mental health. *Behavioral Healthcare Tomorrow, 13,* 38–41.

Minden, S. L., et al. (2000). *Requirements analysis for Decision Support 2000+.* Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration. Available at www.mhsip.org.

National Committee on Vital and Health Statistics. (2000). *Toward a national health information infrastructure. Interim report.* Washington, DC: U.S. Department of Health and Human Services.

National Committee on Vital and Health Statistics. (2002). *Shaping a health statistics vision for the 21st century. Final report.* Washington, DC: U.S. Department of Health and Human Services.

Phillips, J. C., Minden, S. L., & Dunworth, T. (2002). Decision Support 2000+ Prototype Functional Specification. Version 2.1.

President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America. Final report.* DHHS Pub. No. SMA-03-3832. Rockville, MD: U.S. Department of Health and Human Services.

Substance Abuse and Mental Health Services Administration. Transforming mental health care in America. The Federal action agenda: First steps. http://www.samhsa.gov/Federalactionagenda/NFC_TOC.aspx. Accessed July 12, 2005.

Thompson, T. G., & Brailer, D. J. (2004). The decade of health information technology: Delivering consumer-centric and information-rich health care. Washington, DC: U.S. Department of Health and Human Services.

U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General. (1999). *Mental health: A report of the Surgeon General.* Rockville, MD: Author.

Chapter 8

Finding Common Performance Measures through Consensus and Empirical Analysis: The Forum on Performance Measures in Behavioral Healthcare

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Why Performance Measures?

Over the past 15 years, the extensive changes in the structure and financing of health care in this country and the proliferation of new evidence-based approaches to the recognition and treatment of diseases, including behavioral health disorders, have made issues of quality and accountability of paramount importance (Institute of Medicine, 2001). During this time, traditional approaches to the definition of quality and level of performance based on structure and process standards (e.g., licensure and accreditation activities) have been complemented by a strategic commitment to the empirical measurement of performance along a wide range of domains. Therefore, nowadays a central component of all effective programs that monitor and improve quality and foster accountability in the delivery of appropriate health care services is the development and implementation of such empirical measures of performance, both financial and nonfinancial. However, whereas the measurement and comparability of financial results in the delivery of health care services, including behavioral health care, is more or less taken for granted, to date no similar widely accepted and implemented empirical measures of nonfinancial performance have existed.

Because of this lack of empirical and comparable information on issues of quality and service, discussions concerning the utility and value of behavioral health care services have often been reduced to discussions of financial results, with tragic consequences for behavioral health care. In fact, the Hay Group (1999) estimated that, over the past 15 years, behavioral health care lost approximately half of its annual percentage of the health care dollar expended. In light of such drastic reductions in funding, few could argue that only the fat had been cut from our field. In fact, many fear that overzealous cost containment has reduced behavioral health care to the economic status of a commodity (Bartlett, Cohn, & Mirin, 1998).

In light of these developments, the importance of empirical measures of nonfinancial performance has been strongly reemphasized. One example of this renewed interest is the recent attention being given to the establishment of standardized measures of nonfinancial performance by the Institute of Medicine (IOM), both in its 2002 *Leadership by Example* and in its current project to adapt the principles and recommendations of the *Crossing the Quality Chasm* report to behavioral health care. In addition,

The authors wish to acknowledge the contributions of all of the members of the Forum workgroups to the work described in this chapter, with special acknowledgement to Gregory Teague, Ph.D., Tom Trabin, Ph.D., Allen Daniels, Ed.D., Doreen Cavanaugh, Ph.D., and Ann Doucette, Ph.D.

performance measurement has been given a central role within the Substance Abuse and Mental Health Services Administration (SAMHSA), as evidenced by the establishment of key domains of performance for agency programs. Therefore, the need to develop and implement a set of widely accepted and widely implemented measures has only increased in the recent past.

In the face of this growing importance, in March 2001, representatives of a variety of groups from the treatment and prevention fields met at the Carter Center in Atlanta to assess progress on the development and implementation of *field-specific* (e.g., adult mental health) common performance measures. The meeting highlighted both the shortcomings and the progress made by a variety of groups, both public and private, in developing empirical measures of access, appropriateness, and outcomes of care.

Employing a process that alternated between working groups and plenary sessions, the meeting made explicit the tremendous overlap in both content and process that had guided the efforts of the various groups working in this field. It was the consensus of the attendees in the final plenary session that such a forum constituted an important and worthwhile venue for the coordination and mutual support of the various individual efforts already underway in the field. Therefore, a recommendation was made that the group take on a unique and ongoing identity as the Forum on Performance Measures in Behavioral Healthcare and Related Service Systems. SAMHSA charged the Forum to become the vehicle for coordinating the various efforts at identifying and specifying field-specific common indicators and measures.

Why Is Commonality Important?

Within the individual fields of behavioral health care, there has been tremendous recent growth in measurement of outcomes and other aspects of performance (Trabin, 2001). Much of this work is of very high quality in technical, clinical, and policy terms, using rigorously developed tools to improve services and systems in relevant ways. Some of it also incorporates the important perspective of those receiving care. This orientation to performance measurement is becoming an unquestionable strength of the field. However, the diversity and resulting fragmentation has also limited the capacity of the field as a whole to speak with clarity and authority on the issue of quality.

As pointed out above, cost, rather than quality, often dominates behavioral health care resource decisions, in part because the field lacks consensus on how to demonstrate the quality of care. Quality is much more difficult to define and demonstrate than cost. Diversity in indicators and measures impedes comparability. There are significant areas of agreement and overlap at the more conceptual levels, but often little agreement on the operational definitions and administrative protocols to be employed in collecting the data. Without commonly used operational measures of these indicators, the performance of organizations and systems of care cannot be effectively or meaningfully compared.

In the absence of generally accepted evidence of quality, it is difficult to counter the proposition that cheaper is better, and resources continue to drain from behavioral health care. To be significantly more effective in advancing quality as a legitimate, central factor in decisions, the field must work in concert to establish, accept, and implement methods for measuring quality.

In addition to strengthening the position of quality in behavioral health care policy decisions, adoption of common performance indicators and measures will do the following:

- Generate compatible and mutually supportive performance measurement efforts across the fields
- Provide a platform for the facilitation of appropriate comparisons of nonfinancial performance for consumers and purchasers, leading to more informed decision support for consumers and purchasers selecting treatment and/or health plans
- Provide guidance on critically important dimensions of performance to behavioral health care organizations that are in early stages of measuring performance
- Encourage collaboration in data-sharing for benchmarking and quality improvement purposes
- Reduce redundancy in requirements for performance data by accreditation, regulatory, and purchaser organizations, thereby increasing efficiency and reducing costs.

Unfortunately, performance measurement efforts in behavioral health care have, until recently, often lagged behind efforts made in physical health care. Despite the best efforts of many organizations

and individuals, and considerable support through the various centers within SAMHSA for the performance measurement (including support for the Mental Health Statistics Improvement Project (MHSIP) survey, the *Proposed Set of Consensus Indicators for Behavioral Healthcare* of the American College of Mental Health Administrators, the first Forum on Common Performance Measures at the Carter Center in 2001, and the consistent support provided by the Center for Substance Abuse Treatment (CSAT) to the Washington Circle since 1998), these initiatives have, at best, only partially succeeded in establishing standard measures for their respective fields. One major problem has been the inability of both the individual fields and behavioral health care as a whole to reach any consensus around a small but strategically important set of nonfinancial metrics. By acting in an often uncoordinated fashion and advancing a large number of measures, instead of concentrating on a limited number of metrics of true strategic value and importance to the field, these initiatives have tended to dilute their individual and collective impact. In addition, most often, development efforts have stalled at the domain and indicator level, with no agreement on standardized and common specifications for measures that would support comparability and aggregation.

Why Common Measures?

In discussing performance measurement, it is important to maintain the distinction between in-

Table 8.1. Operational definitions

Domain	**The most global category**—A major area or category for which there is more than one parameter of results (sometimes thought of as program goals). A group of issues, elements, or components that have some important aspects in common. Examples include access, quality/appropriateness, and outcomes (such as child functioning, family functioning, child safety).
Concern/ Construct	**The most salient issues to be addressed by measurement strategies**—Typically used to indicate a topic of experience, behavior, etc., that has been theoretically defined and empirically measured, typically through use of several more narrowly defined variables. Higher order, general concerns/constructs may incorporate a number of lower order specific constructs. For example, depending upon results of empirical testing of proposed quality/appropriateness items in a consumer survey, "relationship with provider" may be defined and measured as a higher order construct incorporating more specific constructs of "responsiveness," "recovery orientation," etc.
Performance Indicator	**Something important to measure; the markers that could identify an outcome target**—An operational and measurable quantitative specification of a domain, for which data exist, which helps quantify the achievement of a desired outcome. It is a specification of how well something is performing, typically expressed as a ratio (e.g., the percentage of clients who report a certain level of satisfaction). This includes both common and core indicators. Common Indicators represents an aspect of performance that is of widespread, even universal interest or concern across different organizational contexts and populations. Core Indicators represents one of the most central and critical aspects of performance of interest or concern to a particular stakeholder perspective. Noncommon core indicators for one stakeholder group typically differ from the core indicators for other stakeholder groups.
Performance Measure	**Mechanisms used or data elements identified to support a judgment on the indicator**—The specific methodologies that derive and calculate quantitative results by defining the numerator and denominator, which are used to compute the value for the performance indicator.
Specification	**Details pertaining to the collection of data for measures**—For example, sampling, frequency, instrumentation.

dicators and measures. In fact, one of the earliest activities of the Forum was to constitute a workgroup under the leadership of Allen Daniels, Ed.D., to develop a set of operational definitions to inform the work of the Forum and its workgroups. Under the approach developed by Dr. Daniels and his group (see table 8.1), an ***indicator*** is a quantitative specification, typically expressed as a ratio (e.g., percentage), of a selected aspect of performance. A ***measure*** represents the methodology for deriving and calculating quantitative results that may be used in an indicator. There may be many different ways to define and collect data to be used in calculating an indicator. Thus, indicator is a more general concept than measure, and this distinction is important to maintain in order to determine the potential for comparability between individual indictors and measures.

Any call for the development of common measures, therefore, cannot be taken lightly: the inertia of existing investments in practices and information systems creates a significant challenge to change in most settings. It has traditionally proved far easier to achieve consensus about indicators, leaving to implementers the detailed decisions about how performance would actually be measured. Most earlier initiatives for shared indicator sets have stopped short of recommending common measures. Although this approach allows wide participation in a general report-card framework by minimizing the amount of adaptation required, results produced by different measures cannot be compared with adequate precision. Variation in instrumentation across settings or populations makes any comparisons between groups largely speculative; performance measurement systems using unique measures are inevitably local systems. In reality, initiatives that stop short of defining measures cannot serve as the foundation for either comparing performance or building aggregated databases for benchmarking. Despite the challenges to implementing common measurement, therefore, the adoption of common measures is a crucial, corollary component of a common indicator strategy.

Why a Forum on Common Measures?

Following the recommendation of the attendees at the first Forum on Common Performance Measures, in late 2001 SAMHSA created a vehicle to facilitate and coordinate the traditionally isolated performance measurement activities going on within the three centers. Called the Forum on Performance Measures in Behavioral Healthcare and Related Service Systems, its charge was to coordinate and facilitate these efforts across initiatives, with the goal of establishing consensus that moved the field toward the implementation and adoption of a concise, national set of performance measures.

The mission of the Forum is to improve the delivery of behavioral health treatment and prevention services by supporting the development and adoption of broadly applicable indicators and measures to assess organizational performance and consumer outcomes. These indicators and measures should be designed to serve the needs of external accountability as well as internal quality improvement. The Forum provides an ongoing venue for collaboration, coordination, and communication among the various initiatives, both public and private, that are already working separately to measure service access and delivery, quality, and outcomes. The Forum also fosters the sharing of information and experiences of provider, government, employer, consumer, and accreditation groups in implementing performance and outcome measurement practices and initiatives.

Functions

The functions of the Forum include the following:

- ***Identification and synthesis*** of common issues faced by the field of performance measurement, irrespective of area of focus (e.g., a common vetting process for measure development; model database architectures; cross-cultural implementation)
- ***Coordination and communication*** of efforts and progress among the various separate initiatives already working in the field
- ***Representation*** of the overall Forum and the field of performance measurement to the field of behavioral health care at large and to other audiences
- ***Focus*** of the overall efforts of the field on the development and implementation of performance measures within delivery systems, both public and private

Goals

- Within each major area of behavioral health treatment and prevention, the Forum seeks to identify, develop, and implement common indicators and measurement specifications that are applicable to both public and private organizations and service delivery systems.

- Across the major areas of behavioral health care, the Forum seeks to promote the broad use of common approaches to performance and outcome measurement that will be useful for decisionmaking through the provision of empirically sound and meaningful information on key points in the process and outcome of care or service delivery.

- Across the fields of behavioral health care, the Forum seeks to promote the development and sharing of knowledge about methodologically sound measurement practices that support the cost-effective implementation of performance measurement and the efficient, meaningful, and effective use of information (data) to improve care.

- Across the fields of behavioral health care, the Forum seeks to provide a vehicle for the identification and elaboration of emerging and strategic issues in the area of performance measurement for organizations and systems of care.

Initially, the Forum was intended to focus on common issues of the *process* of common measures development—issues such as what constitutes an appropriate pilot test design or how to deal with rate-based measures in populations where the denominator is not clear. However, over its first 2 years of existence (2002–2003), as the workgroups and their leaders worked within the Forum process, the goals expanded to include consideration of not just common *process* issues but also common *content.* In fact, over the past 2 years (2003–2004), consensus has been reached on a small set of measures. These have been considered and adopted for further testing by all the treatment fields represented within the Forum—constituting in effect a potential initial set of common measures for behavioral health care. Within the Forum this set of common measures is referred to as the "downpayment set," since it represents both a significant advance for the field and, at the same time, a limited and initial effort in terms of scope (see table 8.2). In order to be included in this initial set of common measures, any given measure needed to be approved as meaningful, measurable, and feasible *for each respective field* by all the treatment workgroups represented within the Forum. This requirement in effect established consensus support for each of the measures from the four treatment workgroups, comprised of over 70 national experts in measurement, policy, and consumer advocacy. Most important, this consensus on the "downpayment" set of measures is now being subjected to empirical analysis and improvement based on the results of that analysis. In effect, we are moving beyond consensus to empirical support for the common measures or, at the least, to their adaptation or modification based on sound empirical analysis.

Initially, the Forum structure included workgroups representing child/adolescent mental health, adolescent substance abuse, adult mental heath, adult substance abuse, and adolescent substance abuse prevention. Individuals chairing these work-

Table 8.2. The "downpayment" set of common measures

Administrative Data-Based Process of Care Measures

- Identification
- Initiation of treatment
- Engagement in treatment

Consumer Survey-Based Perception of Care Measures

Quality/Appropriateness of Treatment/Services

- My calls were returned within 24 hours.
- When I needed services right away, I was able to see someone as soon as I wanted.
- The people I went to for services spent enough time with me.
- I helped to develop my treatment/service goals.
- The people I went to for services were sensitive to my cultural background (race, religion, language, sexual orientation, etc.).
- I was given information about different services that were available to me.
- I was given enough information to effectively handle my condition.

Perceived Outcomes of Treatment/Services

- My symptoms are not bothering me as much.
- I am better able to cope when things go wrong.
- I am better able to accomplish the things I want to do.
- I am less likely to use alcohol and other drugs.
- I am doing better in work/school.

groups formed a Forum executive committee, which continues to provide overall strategic direction and operational coordination to the efforts to develop and implement the common measures set. Recently, the Forum has been restructured to include an adult treatment (mental health and substance abuse) workgroup, a child and adolescent treatment (mental health and substance abuse) workgroup, a prevention (substance abuse, with ongoing discussions with mental health promotion) workgroup, and a methods workgroup. These changes have been made based on the success in many areas of pursuing an integrated approach to measure conceptualization and specification, as well as the development of empirical evidence through pilot testing in some areas that supports such an integrated approach (Cavanaugh & Doucette, 2005).

Over the past 3 years, a six-phase process has been developed within the Forum for measure development and vetting. The process begins within the various treatment fields to evaluate the utility and meaningfulness of a particular measure for that specific field (the conceptualization phase of measure development) and then to review the feasibility and evidence-base for the specification of that measure (the specification phase). The development of specifications for the particular field is then followed by empirical evaluation of the feasibility and validity of the proposed measure and the specifications *for that field* (the pilot testing phase). Based on the empirical results of the pilot testing, appropriate changes or modifications are made to the specifications, and additional pilot testing is completed, as indicated.

Only after a measure has been demonstrated to be feasible and valid within a single field is it offered to the other fields for consideration as a common measure (the commonality phase). As a measure moves beyond its field of origin within the Forum process, the other fields are given the opportunity to evaluate the conceptual validity of the measure for those fields, as well as to develop and pilot test field-specific specifications. It is obvious to even the casual observer that some specifications must differ between fields; adult substance abuse and adult mental health will look, after all, at different diagnostic clusters in their specific performance measures. However, even in the development of field-level specifications, there is considerable opportunity for coordination and consensus development. Why, for example, should age bands be defined differently between fields? Why should clean periods, used to demarcate between episodes of care, be different? Within the Forum process, these kinds of questions are subjected to empirical analysis. The standard within the Forum is that, absent empirical evidence to the contrary, specifications should converge wherever possible to decrease noise and increase comparability.

The first of the two final phases is the implementation phase, where measures are actually adopted within a field or, in theory, for behavioral health care in general. The final phase is the improvement phase, where the Forum workgroups review local adaptations generated by individual organizations or initiatives during the implementation phase. The intent of this review process is to distinguish adaptations that are required for local implementation from adaptations that actually improve the feasibility or utility of a measure. The latter should be considered for incorporation into a respecified measure and wide dissemination.

Using this process, the Forum effort has resulted in the development, specification, and pilot testing of a small set of performance measures based on both administrative and consumer perception of care data common to all the treatment fields within behavioral health care. Some of the measures have already been adopted at the field-specific level by major organizations such as the National Committee for Quality Assurance (NCQA) and the Department of Veterans Affairs (VA), and these measures and others are under active consideration by additional major national organizations, like the National Quality Forum and MHSIP. These "downpayment" common measures, defined as feasible, meaningful, and actionable across all the fields, represent a significant step forward for the field. Following their introduction at the second Forum on Performance Measures at the Carter Center in April 2004, this set of common performance measures is now being pilot tested and refined based on input and feedback from that meeting.

The development and implementation of common measures is important for a number of reasons. First, common measures with standardized operational definitions are more useful in promoting quality and accountability, since they potentially allow for meaningful comparisons of performance and also for the aggregation of results into cross-organizational databases for the purposes of establishing appropriate standards and benchmarks. Comparability is essential in order to establish the standards of care and develop *benchmark* objectives needed to initiate a performance measurement approach that would be adopted across behavioral health care systems. Second, through the identification and development of common performance measures, the current complexity of measurement requirements across programs with its attendant administrative bur-

den can be greatly reduced. Third, the development and adoption of common measures of nonfinancial performance sends powerful strategic messages to the field about what stakeholders consider to be the most important components of performance. In the initial set of measures identified by the Forum, two such strategic messages are clear. One is the importance of linking measures to process of care; the second is the importance of consumer input to program oversight and development through the collection of consumer perception of care data.

Administrative Data-Based Process of Care Measures

Within the initial set of "downpayment" measures are three originally developed by the Washington Circle, a group convened by the Center for Substance Abuse Treatment in March 1998. The initial focus of the Washington Circle's efforts was the development of performance measures to promote accountability and improvement in the recognition and treatment of addiction at the level of delivery systems (managed care organizations, State Medicaid programs, etc.). As a strategic framework, the Washington Circle linked its development work to an overarching evidence-based and clinically appropriate process of care defined by the domains of prevention/education, recognition, treatment, and maintenance (Bartlett, Cohn, & Mirin, 1998).

Originally seven measures, some based on widely available administrative data elements and some based on planned consumer surveys, were conceptualized across these four domains. Early specification and pilot-testing work focused on the four administrative data-based measures, three of which quickly proved to be not only feasible and measurable but also quite meaningful in the field of adult substance abuse (Garnick et al., 2002). The fourth (linkage of detoxification to rehabilitation) proved impractical to measure at that time because of limitations in the available procedure codes. Subsequent work within the Forum has established the following three feasible measures as having similar characteristics across the other treatment fields (adolescent substance abuse, child and adolescent mental health, and adult mental health):

- ***Identification rates,*** defined as the number of cases per 1,000 members who were diagnosed or who received treatment services for a range of specified diagnoses (the exact diagnoses depending, obviously, on the field being measured)
- ***Initiation of treatment services,*** defined as the percentage of individuals with an index diagnosis within the appropriate range of diagnoses who receive at least one additional service within a specified time range (e.g., 14 days for adult substance abuse)
- ***Treatment engagement,*** defined as the percentage of clients with an index diagnosis that receive additional services beyond that required for initiation within a specified time frame (e.g., at least two additional services within 30 days after initiating treatment for adult substance abuse)

At the second Forum on Common Performance Measures meeting in April 2004, the exact specifications for these measures (e.g., diagnostic ranges and time frames for the various covered populations) were distributed and the rationales and evidence base for the specifications were addressed. Since then, empirical testing of both the feasibility and validity of the measures beyond the adult substance abuse field is being conducted within the Forum in order to empirically establish their value as truly common measures in behavioral health care. Through the analysis and discussion of data from a variety of pilot tests, issues such as the optimal duration of "clean" periods to separate episodes of care and the inclusion or exclusion of both mental health and substance abuse services in the specifications for the initiation and engagement measures for various age groups and fields are under examination. Decisions will be made by the individual workgroups based on the analysis of the empirical data from the field tests. Again, because the exclusive focus of the Forum is on the development and implementation of meaningful and feasible common measures for all of behavioral health care, the guiding principle for these decisions will be to support commonality of specifications *except where the empirical data do not support common specifications.*

Consumer Survey-Based Perception of Care Measures

In addition to the administrative-based measures just described, the "downpayment" common set contains measures using primary data from consumers about their perception of their care. Re-

gard for the consumer point of view has been long established as an important policy direction within the fields of both adult and child/adolescent mental health, as evidenced by the prominence of a variety of nationwide survey-based initiatives such as the MHSIP survey and the Experience of Care and Health Outcomes (ECHO™) survey. The importance of the consumer point of view in evaluating the quality of care is increasing in the substance abuse field as well; the recent establishment of the Network for the Improvement of Substance Abuse Treatment (www.niatx.org) is an example of the growing influence of consumer input to program development and improvement.

Using the ECHO survey as its major source, in 2002 the Forum's Adult Mental Health Workgroup (AMHW) identified both key concerns and indicators from the adult mental health consumer perspective and specific items that could measure them. Building on that work, in April 2003 representatives of the AMHW joined with representatives from the other Forum treatment workgroups and the MHSIP Report Card Workgroup, as well as outside experts, to form the Modular Survey Initiative. The goal of this initiative was to identify a small set of concerns and related items that could be considered meaningful across a broad range of consumers (child, adult, and adolescent) within both mental health and substance abuse treatment settings.

The intent of the initiative was to generate broadly applicable groups of items (modules, hence the name of the initiative) addressing perceptions of care along the domains of access, quality/appropriateness, and outcome/improvement. This modular design allows the initiative to be both applicable across respondent groups and service and payer settings and specific to each. This is accomplished by architecting and building a linked cascade of modules that moves from the most broadly applicable (i.e., common to consumers of all ages from mental health or substance abuse treatment settings) to relatively less common (i.e., for specific age groups and treatment settings such as adult mental health) to more respondent-specific (i.e., for consumers with serious mental illnesses or from inpatient psychiatric units only). It is not intended to be a comprehensive survey of the target domains, but rather to be comprised of item measures of concerns that meet the test of commonality at the appropriate level.

The work of the Modular Survey Initiative began with the identification of current thinking on the important domains and key consumer concerns related to consumer perception of care experience. Two workgroups, one for adults and one for children/adolescents, then linked the consumer concerns with relevant items, and grouped these items into modules. The items were derived from established national behavioral health consumer surveys (e.g., MHSIP, ECHO, YSS), chosen because they were in relatively wide usage (and therefore had data available for the secondary analysis of item characteristics and performance) and were in the public domain. Linkage to such well-established survey measures is important not just for efficiency and effectiveness of item selection, but also to provide the opportunity to benchmark performance in common areas across behavioral health and health care consumer surveys. Each workgroup identified items from the group of candidate items; these item lists were then pooled and subjected to a modified Delphi process led by Ann Doucette, Ph.D.

At the second Forum meeting, both the details of this development process and its initial results were presented and discussed. In brief, the initiative identified 11 items at the highest level of commonality (items common for all age groups of consumers and for all treatment fields within behavioral health care). In addition, items at the next highest level of commonality (those common within but specific to either the adult population or the children/adolescent population) were identified—five for adults and a separate five for children and adolescents. During the summer and fall of 2005, these 21 items were pilot-tested in Cincinnati under the direction of Dr. Ann Doucette, using the United Way agencies that provide behavioral health services as pilot sites. Over 1,000 individual respondents participated in the pilot test, representing a wide range of diagnoses and levels of severity across mental health and substance abuse. These results were analyzed in conjunction with data from an additional 20,000 respondents from the MHSIP initiative (many of the items in the Modular Survey are derived from MHSIP items), Los Angeles County survey data, and a small set of substance abuse-only respondents, using item response analyses conducted by Dr. Doucette. As a result of the pilot testing, Dr. Doucette's technical group made a number of recommendations to the Modular Survey Steering Group, the coordinating body for the initiative. These recommendations included retaining only 12 items (seven for quality, five for perceived outcomes) and collapsing the two levels into a single level common to all ages and all fields (see figure 8.1). In fact, Dr. Doucette's analysis of the pilot test results showed that the selected items worked equally well for both mental health and substance abuse, allowing for a small set of truly common items to be advanced with strong empirical support for their commonality.

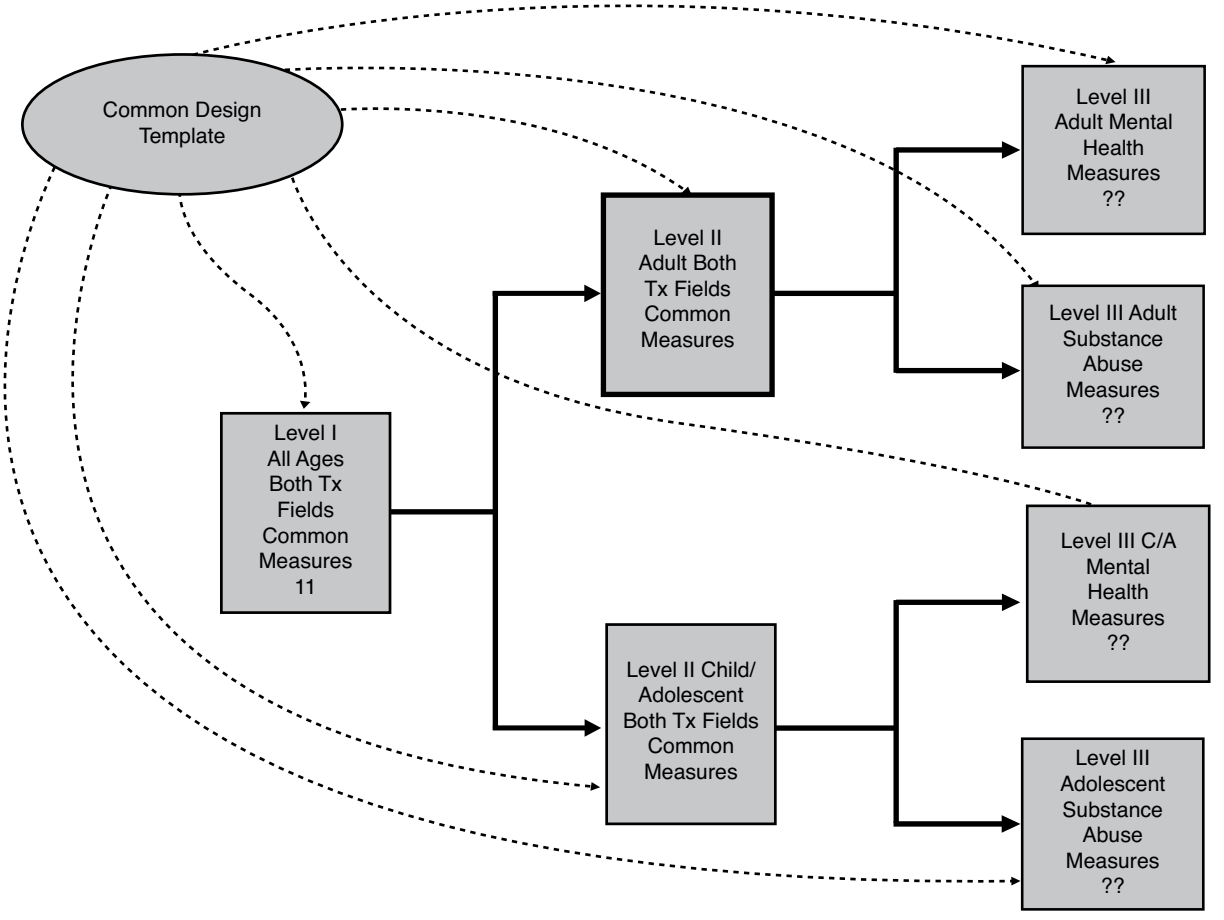

Figure 8.1. The Modular Survey—Levels I, II, and III.

Once again, as with the administrative process of care measures, the Modular Survey shows how, with appropriate support and commitment, decisions reached through expert consensus can be improved and refined through empirical analysis. In fact, over the last 2 1/2 years, the Forum has moved the field of performance measurement in behavioral health care a great distance. Its achievements include the following:

- The Forum has demonstrated significant and successful collaboration between the fields of mental health and substance abuse treatment and to a lesser extent, between the fields of treatment and prevention.

- It has been a model of collaboration between the various centers within SAMHSA, including CMHS, CSAT, and CSAP.

- Through a formal consensus process between the treatment workgroups, it has identified a small set of measures common to both mental health and substance abuse.

- It has developed highly detailed specifications for each of the measures and managed the convergence of these specifications to the greatest extent possible.

- It has subjected these specifications to rigorous pilot testing of both feasibility and validity and, where opportunities for improvement and convergence have been identified, has carried out the appropriate modifications. In doing so, it has raised the standard of empirical support for measure development in behavioral health care.

- It has supported the dissemination of the measures to a wide variety of organizations and initiatives and will continue these efforts in the future.

Next Steps and the Future

Despite the progress that has been made since the Forum's work began, much remains to be done to accomplish the goals outlined earlier in this article. This work falls into six general categories:

- Continued development and pilot testing of downpayment set
- Extension of downpayment set into new measurement environments
- Continued dissemination of downpayment measures
- Management of adoption and adaptation of downpayment set
- Identification and development of additional common measures
- Facilitation and coordination of benchmarking efforts based on downpayment measures

Following the introduction to the field of the downpayment set of common measures at the second Forum, some development work remained to be completed on the original set, including expanded pilot testing of the child/adolescent specifications in the enrolled population environment (e.g., health plans and Medicaid programs) and development of additional field-specific (i.e., mental health or substance abuse only) modules for the Modular Survey. In addition, feedback from the attendees at the April 2004 meeting generated the need for additional specification and pilot testing work. For example, the adult mental health representatives raised issues about the range of diagnostic categories within the field suitable for inclusion in the specifications of the measures. This issue was referred to a technical advisory group under the leadership of Tom Trabin, Ph.D., during late 2004 and early 2005, and the recommendations from that group will be pilot tested during the remainder of 2005.

Another area of continued development for the Forum and its workgroups is the extension of the downpayment measures into new measurement environments. One of the guiding principles for the organization of the April 2004 meeting was that measurement initiatives are implemented in three different environments: programs with accountability for a defined set of enrollees (e.g., health plans and Medicaid programs), programs with accountability for a population (e.g., States and counties), and programs with responsibility for individuals who have received services (e.g., providers). Each of these "accountability environments" has unique characteristics and challenges. For example, the administrative measures were originally developed for implementation in the enrolled environment, where the denominator for rate calculation is known. For these measures to be extended to the other environments, different specifications for the generation of the denominator need to be developed and pilot tested.

Another important area for the Forum in the near future is the continued dissemination of the downpayment measures to new organizations. At the April 2004 meeting it was pointed out that a number of organizations, including the NCQA, the MHSIP, and the VA, had already adopted some of the downpayment measures for their own measurement initiatives. Building on this success, the Forum plans to reach out to other organizations and initiatives, such as the National Quality Forum, to push the adoption of the downpayment measures. In addition, as some of the issues related to the extension of the original measures to new accountability environments are resolved, new areas for dissemination (e.g., State-level initiatives such as the Performance Partnership Grants) become accessible.

As the downpayment set of common measures is adopted by organizations and initiatives outside the Forum, the specifications of the measures are adapted to the needs and requirements of the individual efforts. This adaptation requires ongoing management of the specifications, because some modifications generate noise and divergence while others represent improvements to the original specifications that should be endorsed and adopted by the Forum itself. Ongoing management of the adoption and adaptation of the downpayment common measures will more and more become a focus of the Forum's work.

In addition, the Forum through its constituent workgroups will continue to identify and develop a small number of additional common measures. Currently, work on the Modular Survey is focused on field-specific items and measures, but it is clear from past experience that some items originally developed in a field-specific context will prove, when subjected to appropriate empirical analysis, to be more common than field-specific. There is also interest among some of the workgroups in exploring the development of additional administrative data-based measures looking at other points in the process of care, such as screening and retention in treatment beyond engagement.

And finally, as the common measures are adopted and data are collected from a variety of organizations and initiatives, an ongoing discussion within the field about the challenges and opportunities for benchmarking and quality improvement will be required. The Forum intends to provide a platform for such a national discussion.

In the future, then, the Forum plans to build on its initial success at creating consensus within the various fields of behavioral health care on a small set of common measures. It will do so by facilitating and coordinating the work of various field-specific initiatives and by providing an ongoing venue for the identification and resolution of issues common to the process of measure development and implementation regardless of content. In so doing, it should continue to serve as a model of cost-efficient and effective measure development and implementation for the field.

REFERENCES

American College of Mental Health Administration & Accreditation Organization Workgroup. (2001). *A proposed consensus set of indicators for behavioral healthcare.* Pittsburgh, PA: American College of Mental Health Administration.

Bartlett, J., Cohn, C., & Mirin, S. (1998). Can quality survive continued downward price pressures? *Behavioral Healthcare Tomorrow, 7*(2), 49–53.

Cavanaugh, D. A., & Doucette, A. (2004). Using administrative data to assess the process of treatment services for adolescents with substance use disorders. *Journal of Psychoactive Drugs, 36*(4), 483–488.

Doucette, A. (in press). *Development of a modularized consumer behavioral healthcare survey: Addressing psychometric issues and ensuring precision.*

Garnick, D. W., Lee, M. T., Chalk, M., Gastfriend, D. R., Horgan, C. M., McCorry, F., et al. (2002). Establishing the feasibility of performance measures for alcohol and other drugs. *Journal of Substance Abuse Treatment, 23,* 375–385.

Hay Group. (1999). *Health care plan design and cost trends, 1988–1998.* Washington, DC: National Association of Psychiatric Health Systems and the Association of Behavioral Group Practices.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

Institute of Medicine. (2002). *Leadership by example: Coordinating government roles in improving healthcare quality.* Washington, DC: National Academy Press.

McCorry, F., Garnick, D. W., Bartlett, J., Cotter, F., & Chalk, M. (2000). Developing performance measures for alcohol and other drug services in managed care plans. *Journal on Quality Improvement, 26,* 633–643.

Trabin, T. (2001). From 30,000 feet to ground level and back up: Quality management in the real world. In N. Cummings, V. Follette, S. Hayes, & W. O'Donohue (Eds.), *Integrated behavioral health care* (pp. 149–182). New York: Academic Press.

Chapter 9

The MHSIP Mental Health Quality Report: The Next Generation of Performance Measures

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Introduction

In April 1996, the report of the Mental Health Statistics Improvement Program (MHSIP) Consumer-oriented Report Card Task Force was published and released at a widely attended press conference held in Washington, DC. This event was the culmination of a 3-year effort initiated by the MHSIP Advisory Group to develop a prototype consumer-oriented report card that could be used to compare and evaluate the quality of mental health services on the basis of concerns identified by mental health consumers.

The development of the MHSIP Report Card was a seminal event providing the foundation for a wide range of national performance measurement activities that have had an important impact on the mental health field over the past 10 years. The Report Card has provided the basis for performance measurement initiatives implemented by the National Association of State Mental Health Program Directors (NASMHPD), the American College of Mental Health Administration (ACMHA), the American Managed Behavioral Healthcare Association (AMBHA), the National Committee on Quality Assurance (NCQA), and the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Mental Health Services (CMHS). CMHS initiatives include the Five-State Feasibility Study, the 16-State Performance Indicator Pilot, the Data Infrastructure Grants, the Forum on Performance Measurement, and the SAMHSA National Outcome Measures (NOMs).

New instruments and measures developed through various performance measurement efforts have also refined and enhanced the original MHSIP Report Card. Instruments related to children's measures, the measurement of recovery, and measures developed for inpatient settings are currently under development or being tested. As a result of these efforts, the behavioral health field has learned many lessons about implementing performance measurement systems and using performance measures to evaluate the quality of mental health services. Recognizing the need to document and consolidate the lessons learned by the field to improve and enhance MHSIP Report Card measures and indicators, in the fall of 2001 the MHSIP Policy Group convened a task force to revise and update the MHSIP Report Card.

The purposes of the revision are as follows:

1. Incorporate the lessons learned from the development and implementation experiences of MHSIP Report Card 1.0.

2. Incorporate refinements to existing measures, add new measures, and delete measures that did not work.

3. Propose analytical and data presentation reports that could be adapted for various uses, including systems accountability, quality improvement, contract management, and consumer choice.

This chapter describes the process undertaken to revise the MHSIP Report Card, the framework and the indicators and measures comprising the revised Report Card, the relationship of the MHSIP revision to other performance measurement initiatives, and the testing plan for the new indicators and measures.

During the course of its work on the MHSIP revision, the task force decided to change the name of the Report Card to reflect the quality orientation of the initiative more directly. Thus, the MHSIP Report Card was renamed the *MHSIP Mental Health Quality Report.*

Historical Context for the MHSIP Report Card

During the mid-1990s, the focus on national health care reform led to the development of a number of health-related report cards aimed at measuring the cost and effectiveness of care. Report cards were envisioned as a vehicle for comparing health care plans along these dimensions. However, these efforts focused primarily on developing reports related to physical health care. As a means of developing a comparable vehicle for comparing mental health services using quality and effectiveness measures, the CMHS MHSIP Ad Hoc Committee convened a task force to develop a mental health report card. The MHSIP approach to this task was groundbreaking in the following respects:

1. The focus of the report card was on consumers of mental health services. As stated in the overview of the Task Force Report, "the domains, concerns, indicators and measures of the MHSIP report card are specifically designed to assess consumer concerns with various aspects of mental health treatment, not merely global satisfaction with mental health services" (Report of the Task Force of the MHSIP Consumer-oriented Report Card, 1996).

2. The Report Card's value was that it "explicitly addressed issues of consumer choice, empowerment and involvement." The focus of the indicators and measures that were adopted included the expectation that "appropriate services will be available, easily accessible, developed with and by consumers, and offered in the least restrictive setting." (Report of the MHSIP Report Card Task Force, 1996).

3. Consumers of mental health services were involved in all aspects of the design and development of the Report Card.

4. The Report Card was outcome-focused. None of the report cards developed during the mid-1990s in the context of national health care reform systematically addressed, or focused on, the outcomes, and certainly none focused on the outcomes of mental health treatment. The MHSIP task force developed specific indicators and measures to evaluate the outcome of treatment from both the consumer's and the clinician's perspectives. While it was acknowledged that there were difficulties associated with this focus (e.g., additional costs and the burden associated with collecting outcome data across time), the task force noted that the ability to assess outcomes was a crucial element of the Report Card framework.

5. Other key features of the Report Card included its focus on individuals with serious mental illnesses and the research base upon which its measures and indicators were built.

Report Card Framework

The framework adopted for the MHSIP Report Card was composed of four broad domains: Access, Appropriateness/Quality, Outcomes, and Prevention. Each domain addressed consumer-identified concerns. The performance indicators and performance measures developed by the task force reflected these concerns.

Use of the Report Card

The MHSIP Report Card Task Force recommended that the next phase of work focus on pilot testing the proposed indicators and measures. Further, it recommended that CMHS issue a specific Request for Applications (RFAs) for pilot sites to test the Report Card. Shortly afterward, CMHS developed a grant program for States to implement mental health performance measurement systems using the indicators and measures in the Report Card as a model. The adoption of Report Card measures by States for testing varied considerably. However, some instruments and measures, such as the MHSIP Consumer Survey, were used extensively across the States and were adopted by others working in the mental health field. Several indicators directly derived from the MHSIP Survey form the basis for current national SAMHSA initiatives, such as the State Data Infrastructure Grants, NOMs, and the Forum on Performance Measures Modular Survey. Some have been incorporated into many performance measurement initiatives, while others have been abandoned be-

cause of difficulties associated with implementation, or because they were deemed not to be useful. Some measures have been modified.

The Revision

Principles

The major impetus for the revision of the Report Card is to maintain the momentum to build a consumer-centered system that helps consumers move toward recovery. The objective of this effort is to provide useful information for consumers, their families, authorities who oversee mental health services, providers, and other stakeholders in promoting evidence-based recovery, quality of care, accountability, and system improvement.

Elements of the revision are as follows:

- It is consumer-focused, reflecting consumer goals and priorities. Consumers participated in a workgroup, feedback was sought and obtained from a consumer expert panel, and the report incorporated feedback from 270 consumers across the country. Some of the measures are based on the work of consumer-researchers in the area of recovery measurement.

- It is recovery-oriented. Recovery as a concept has received recognition both in the *Surgeon General's Report on Mental Health* and in the more recent report of the President's New Freedom Commission on Mental Health. Designed in collaboration with a group of consumer-researchers, the *MHSIP Quality Report* includes measures of a system's recovery orientation. While recovery is often considered a concept related primarily to adults with serious mental illnesses, this document considers recovery orientation as a universal concept and applies it to both adults and children. In fact, many of the indicators that were highly prioritized for children relate to recovery. (For example, some of the universal aspects of recovery orientation include choice, social relationships, and staff's strength-based attitudes.)

- It addresses Report Card requirements for both adults and children, and applies to the entire mental health field, both public and private sectors.

- It builds on the work of the key initiatives in the mental and behavioral health field, such as the Recovery Measurement Group, the Adult and Child Mental Health Performance Measurement Workgroup of the Performance Measurement Forum, and the Outcomes Roundtable for Children and Families.

- It emphasizes the implementation, reporting, and uses of performance measures.

- It emphasizes and focuses on cultural competence issues.

- It addresses the key issues in the report of the President's New Freedom Commission on Mental Health, including measures related to recovery, cultural competence, and children's mental health services.

- The *MHSIP Quality Report* has performance measures that address many concerns in the Institute of Medicine's *Crossing the Quality Chasm* report, such as safety, effectiveness, patient-centered services, access, and equity.

Values

Work on the MHSIP revision continues to be value-based. Implicit in its measures are the following key values and expectations of the mental health system:

- Consumers and their families will have quick and easy access to services.

- Consumers and their families will receive state-of-the-art services appropriate to individual needs and preferences.

- The treatment and support that consumers and family members receive will address the problems and concerns for which services were sought.

- Consumers and family members will receive services that do no harm, either directly through the services received or in the environment within which services are provided.

Framework

The framework for the revision retains its focus on the domains of access, quality/appropriateness, and outcomes. There is also a focus on the extent to which mental health services facilitate or hin-

der recovery of individuals, through the MHSIP collaboration with the Recovery Research Workgroup. To ensure that the field is prepared to implement the *Quality Report,* a toolkit has been released concurrently as a companion document to the *Quality Report* that discusses the methodological and implementation issues related to the proposed measures.

Differences Between the MHSIP Report Card and the MHSIP Quality Report

This second-generation effort is different from the original MHSIP Report Card in three important ways. First, this new effort recognizes that different sets of measures may be needed for different populations in different settings, but a major aspect is to develop consistency and commonality across these sets. Second, as noted above, the *Quality Report* builds on lessons learned from performance measurement initiatives that have been implemented over the last 6 years. In preparation for the revision, information was reviewed from the following organizations' initiatives: AMBHA, ACHMA, the National Alliance for the Mentally Ill (NAMI), the NASMHPD Research Institute (NRI) President's Taskforce on Performance Measures, CMHS 16-State Study, the Outcomes Roundtable for Children and Families, the Recovery Advisory Group and the Recovery Measurement Workgroup, the Performance Measurement Forum (Adult and Child Workgroups), the MHSIP Consumer-Oriented Report Card (Version 1), and the work of various accreditation agencies. Additional input was incorporated from representatives of the National Mental Health Association (NMHA), the National Council for Community Behavioral Healthcare (NCCBH), the Human Services Research Institute (HSRI), the National Association of Consumer/Survivor Mental Health Administrators (NAC/SMHA), and the National Association of Mental Health Planning and Advisory Councils (NAMHPAC).

A third difference between the two efforts is the emphasis on the use of the proposed measures and performance indicators. When the original Report Card was released, most mental health systems did not adopt the full set of Report Card Measures. The *MHSIP Quality Report* emphasizes that a range of measures across domains is needed to evaluate the quality and effectiveness of mental health services.

The Development Process

Indicator Selection/Development Process

Combinations of several methods were used to consider and select indicators for inclusion in Version 2 of the *MHSIP Mental Health Quality Report.* First, members of the Task Force were asked to describe "lessons learned" from the performance measurement initiatives in which their constituents had been engaged. They were also asked to identify performance measures that would be useful for inclusion in Version 2. Several Task Force members represented organizations that were actively working to develop performance measures (e.g., the Children's Outcome Roundtable and the Recovery Workgroup). These members were asked to discuss how their initiatives could relate to the goals of the *Quality Report* workgroup and to share information when interim products were developed.

The Task Force systematically reviewed a set of performance measures and indicators that are used across performance measurement systems. For this purpose, a matrix was constructed listing the performance measures currently used by each system or initiative. It was then possible to identify which measures have been adopted by multiple performance measurement systems. Based on this information, the Task Force selected initial measures and indicators to be considered for inclusion in the *MHSIP Quality Report.* It also decided to systematically review the concerns, rationale, and each individual measure and indicator from the MHSIP Report Card. The purpose of this review was to determine if the concerns were still relevant and if they had been adequately addressed over time and to discuss alternative ways to address the concerns.

The third method built on the previous two methods. Each individual in the Task Force was asked to identify additional measures for possible inclusion in the *Quality Report.* This brainstorming process generated additional measures and indicators, some of which were subsets of measures and indicators previously considered. Although the size of this pool of indicators was considerable, there was still concern that key issues of mental health consumers might have been excluded. To address this possibility, a consumer expert panel was established to review the set of indicators and measures developed by the Task Force. This review resulted in the inclusion of additional indicators, such as those related to safety, provider competence, availability of services, and peer support services. The Task Force then winnowed down the pool of indicators

into unique sets. Fifty-two indicators comprised the final set.

Finally, the Task Force reviewed this material and reached consensus on a proposed set of performance measures. To gather as much feedback as possible regarding these measures, the MHSIP Policy Group developed a Web-based survey that was posted on the MHSIP Web site for approximately 2 months. Invitations to comment on the proposed measures were sent to a wide array of stakeholders, including mental health consumers, family members, staff of State mental health authorities, researchers, local and county-level mental health providers, and other interested parties. Workgroup liaisons representing organizations to which invitations were sent helped facilitate the process.

The survey asked respondents to answer four demographic questions to identify their primary perspective. First they were asked which stakeholder group they represented (e.g., advocate, consumer, State mental health authority), then the organizational affiliation they might represent, then the primary population in which they were interested, and finally any particular treatment setting in which they had an interest. Respondents were then asked to rate each of the 52 indicators as high, medium, or low priority, based on their specific perspectives. The average rating for each indicator was calculated for each perspective and overall. The 52 indicators were then ranked by perspective. To further summarize the data, if an indicator was selected in the top 5 rankings of any perspective, the number of times this occurred was tallied.

A total of 982 respondents completed the Web-based survey. Of those who identified their perspective, 1 was from an accreditation organization, 117 were mental health advocates, 270 were consumers of mental health services, 283 were family members, 33 were from local mental health authorities, 8 were from managed care organizations, 132 were providers, 74 were from State mental health authorities, and 64 represented miscellaneous or unnamed groups. In addition, 6,953 comments from respondents were reviewed, indicator by indicator, and were incorporated in the final prioritization process.

To ensure that perspectives of people who had interests in particular populations or specific treatment settings were represented in the findings, the rating and ranking analysis described above was repeated for each reported population interest category and each setting category. These analyses were the basis for prioritizing the population-specific and setting-specific indicators. The results of these analyses were used to develop the final set of proposed indicators and measures.

MHSIP Quality Report Indicators and Measures

The indicators and measures proposed in the *MHSIP Quality Report* consist of a universal set (which applies to all population subgroups and settings) and additional indicators that apply to specific populations or specific settings. For example, quality of treatment or services is a concern that applies across populations and settings. Cultural competence is another universal concern. On the other hand, an indicator such as improvement in school functioning applies specifically to children. Similarly, a system's recovery orientation applies primarily to adults with serious mental illnesses. Some measures apply more to the settings in which services are delivered than to the population being served. For example, seclusion and restraint measures apply more to inpatient and residential settings than to community outpatient programs. Listed below are the indicators and definitions for each of the proposed sets.

Universal Indicators

- **Consumer Outcomes—**An indicator related to improvement in functioning (i.e., how consumers handle social roles and problems, address family and social situations, and cope with crises and psychological distress).

- **Active Participation in Treatment Planning—**An indicator of the degree to which consumers (or, for children, family members) participate in treatment decisionmaking.

- **Recovery Orientation—**An indicator focused on the degree to which an agency or organization is recovery-oriented.

- **Quality of Interaction Between Clinicians and Consumers—**An indicator of the degree to which consumers feel they are treated with respect and dignity and feel safe and involved in their treatment.

- **Quality of Treatment—**An indicator of what consumers think about the overall quality of the treatment they receive.

- **Safety—**An indicator related to patient safety, focused on medication errors.

- **Availability of Services—**An indicator of the range of service options and treatments that are available.

- **Availability of Information/Education—**An indicator of the degree to which consumers and family members receive information and education that helps them make informed choices about mental health services.

- **Initiation of Treatment—**An indicator of whether persons with mental illness have access to appropriate care.

- **Cultural Competence—**An indicator of the degree to which a consumer's needs related to language, culture, ethnicity, gender, sexual orientation, age, and disability are taken into account.

- **Co-occurring Problems/Screening—**An indicator of how often screenings are performed to detect substance abuse problems.

- **Reduction of Symptoms—**An indicator of whether mental health treatment results in a reduction of a consumer's symptoms and an improved ability to function.

- **Social Support/Connectedness—**An indicator of whether social support/connectedness is facilitated and supports recovery.

Population-Specific Indicators

1. All Adults

- **Peer Support—**An indicator reflecting the availability of consumer-operated or peer support services, including drop-in centers, peer case management, peer professional services, and social clubs.

- **Improvement in Work Functioning—**An indicator of how much consumers recently entering the workforce think their ability to do paid work has improved.

2. Adults with Serious Mental Illness

- **Adults with Schizophrenia—New Generation Medications—**An indicator of how available "new generation" medications are in the mental health care system.

- **Illness Self-Management—**An indicator of how available illness self-management training is in the mental health care system.

3. All Children (Including Children with Serious Emotional Disturbances)

- **Improvement in School Functioning—**An indicator of improvement in children's attendance and school performance.

- **Social Relationships—**An indicator related to how social and personal relationships play important roles in facilitating recovery.

- **Involvement with Juvenile Justice System—**An indicator of a consumer's contact with the criminal justice (or juvenile justice) system.

- **Illness Self-Management—**An indicator of how available illness self-management training is in the mental health system.

Setting-Specific Indicators

(Note: The only settings identified as having specific measures were hospitals and comprehensive community systems. The proposed universal measures applied to all other settings.)

1. Hospitals/Inpatient

- **Seclusion and Restraints—**An indicator of how often restrictive therapies are used or that treatment providers lack training or respect for client autonomy and dignity.

2. Comprehensive Community Systems

- **Perception of Access—**An indicator of how consumers feel about access to services—are they available at times that are convenient, is location convenient, etc.

MHSIP Consumer Surveys

The revision of the MHSIP surveys reflects the general approach undertaken in the development of the *MHSIP Quality Report.* That is, there are universal items, as well as items for specific populations and specific settings (e.g., recovery orientation).

Changes to the MHSIP Adult Consumer Survey have been based on three strands of work: (1) recommendations from the February 2000 consumer survey workgroup; (2) recommendations from the consumer survey workgroup convened under the umbrella of the *MHSIP Quality Report;* and (3) feedback obtained from the Web-based survey that was used for the *MHSIP Quality Report.* The work on the Youth Services Surveys has begun with the formation of a task force that will be reviewing the current survey forms to ensure "fit" with the *Quality Report* framework. Similar work will be conducted on the Inpatient Survey.

In addition to items on consumer perceptions of care, MHSIP Youth Services Surveys contain a separate section for self-report items related to involvement in the juvenile justice system, school attendance, access to primary health care, and medication prescribed for emotional/behavioral problems. It has been recommended that the use of self-report items be expanded and used as a source of information on several performance measures that may be more difficult to obtain, though perhaps less reliable than using alternative sources, such as cross-system data matching. The *MHSIP Quality Report* Workgroup has recommended that the testing of the revised MHSIP surveys incorporate a section focusing on self-report items—thus several measures, such as involvement with the juvenile justice system and school attendance, will be included as part of the survey testing plan.

Implementation of the Quality Report

The intent of the *MHSIP Quality Report* performance measures is that they be used to reflect critical domains of an organization's performance. When the original MHSIP Report Card was proposed, many organizations selected a few of the measures. This could happen again, but the goal of any performance measurement system is to obtain a systemic view of an organization's operation. Use of individual indicators precludes a systemic view. At a minimum, performance measures from all the domains must be obtained to reflect the intent of the *MHSIP Quality Report.*

The *MHSIP Quality Report* can be used for various purposes: management, planning, quality improvement, and providing information to consumers and family members regarding an organization's performance. To reflect such performance accurately, attention must be given to data completeness and quality; the methodologies for sampling, analysis, and benchmarking; and the types of reports produced for different audiences and different uses. The *MHSIP Quality Report* Toolkit developed by the Human Services Research Institute, Cambridge, Massachusetts, for the *MHSIP Quality Report* Task Force addresses these issues.

Testing of Indicators

The next step of the *MHSIP Quality Report* Task Force is to coordinate efforts to test the newly proposed measures and indicators individually and as a set. In fall of 2004, CMHS and the MHSIP Policy Group convened a Technical Workgroup composed of representatives of various national testing initiatives, including the Forum on Performance Measures, the Data Infrastructure Grant initiative, the Recovery Measurement Work Group, SAMHSA's Co-Occurring Disorder Infrastructure Grant (CODIG) initiative, NCQA, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the Washington Circle. The goal of this meeting was to develop parameters for testing the *MHSIP Quality Report* indicators and to coordinate testing efforts with the groups represented at the meeting.

The proposed testing plan that was developed is composed of two phases:

- **Testing of individual indicators** in which the objective is to examine operational definitions for new measures (i.e., measures not previously implemented) and to evaluate differences in multiple definitions for existing measures.

- **Testing the set of performance measures in the *MHSIP Quality Report*** in a subsequent phase in which the focus is on evaluating the entire set of measures in different settings. The objective is to test whether the set of measures can be implemented to reflect the performance of the system and be used effectively for quality improvement. An integral value of the *Quality Report* is that multiple

domains must be monitored simultaneously to be useful for management, quality improvement, and planning purposes. To measure some performance indicators and not others undermines the systemic nature of these indicator sets. This phase of testing seeks to understand the relationships and potential redundancy across the proposed measures. This phase will also test the measures for use with various populations and settings.

While these are proposed as two distinct phases, they could occur simultaneously. The plan is to test measures derived from both administrative databases and from surveys under development. The measures will also be tested in different settings and, if possible, for different uses.

The secondary goal of the Technical Workgroup, focusing on the coordination of testing efforts of *Quality Report* measures with other performance measurement testing efforts, was addressed through the development of a set of recommendations specific to this goal. These recommendations and the specific testing plan may be accessed on the MHSIP Web site at www.mhsip.org.

Next Steps

The *MHSIP Quality Report* and the *MHSIP Quality Report* Toolkit were published in May 2005 and have been disseminated widely. Both documents are also posted at www.mhsip.org. The MHSIP Policy Group is currently recruiting organizations to participate in testing proposed *MHSIP Quality Report* indicators and measures. Some testing is being initiated through the CMHS Data Infrastructure Grants for Quality Improvement. Other organizations have indicated an interest, and negotiations are under way.

The development of the *MHSIP Quality Report* has occurred at a propitious point in time. The report of the President's New Freedom Commission has led many organizations to focus on developing strategies to transform mental health care so that recovery is the expected outcome. Implementing change that leads to a transformed mental health system, one that is consumer-driven and recovery focused, requires the use of quality tools to assess progress toward transformation and the outcomes of system transformation. *The Mental Health Statistics Improvement Program (MHSIP) Mental Health Quality Report* provides a cutting-edge framework composed of performance measures and strategies for assessing and measuring transformation.

REFERENCE

Task Force on a Mental Health Consumer-oriented Report Card. (1996). *The MHSIP Consumer-oriented Mental Health Report Card.* Rockville, MD: Center for Mental Health Services.

Chapter 10

The Uniform Reporting System

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Introduction—The Uniform Reporting System

The Uniform Reporting System (URS) is a Federal reporting system used by State mental health agencies (SMHAs) to compile and report annual data from each State as part of the Substance Abuse and Mental Health Services Administration (SAMHSA)/Center for Mental Health Services (CMHS) Federal Community Mental Health Block Grant (CMHBG). The URS is part of an effort to use data in decision support and planning in public mental health systems, as well as to support program accountability. The URS effort began in 2001, and three rounds of State and national reporting have been completed. This reporting effort demonstrates that, as of 2004, the State public mental health systems are providing mental health services to 5.7 million persons each year. Persons served by the SMHA systems are more likely than those who receive private services to be unemployed and receiving Medicaid assistance, and many are children or young adults. Persons served by SMHAs are most often served in community mental health settings and generally rate their access, appropriateness, and outcomes of services as positive. State mental health agencies expended more than $26 billion to provide mental health services in FY 2003.

The URS comprises a set of 21 tables developed by the Federal Government, in consultation with SMHAs, that compiles annual State-by-State and national aggregate information, including numbers and sociodemographic characteristics of persons served, the outcomes of care, use of selected evidence-based practices, client assessment of care, and insurance status. In addition, the URS tables compile information on the expenditures of SMHAs, local programs that receive CMHBG funds, uses of those funds, and general questions on the SMHA system status. SAMHSA is now using these tables to calculate the 10 recently announced mental health National Outcome Measures (NOMs) for State and national reporting. The URS also includes prevalence estimates of need for mental health services in the States.

The CMHBG is the largest single Federal funding source dedicated to mental health services. Each year, over $440 million has been distributed to SMHAs in 50 States, the District of Columbia, and eight territories to organize and deliver mental health services to adults with serious mental illnesses (SMI) and children with serious emotional disturbances (SED). As part of their Block Grant activities, each State is required to develop a plan to develop comprehensive mental health services and to report to CMHS on its progress in implementing this plan. Every SMHA develops a unique plan that takes into account its organizational structure, the resources and needs of the State, and the priority populations and services. Each State reports on the priorities it has established and the consumers served, with data tailored to its Block Grant priorities. Until the development of the URS, SAMHSA/CMHS had been hampered by the lack of a common framework for reporting services States provided under the Block Grant, which made it difficult for SAMHSA/CMHS to summarize the activities across all the States.

SAMHSA's National Outcome Measures

In 2004, SAMHSA announced a set of National Outcome Measures (NOMs) for mental health and substance abuse (figure 10.1). The NOMs will be measured across all SAMHSA-funded programs and will focus on using information to improve services

DOMAIN	OUTCOME	MEASURES		
		Treatment		Prevention
		Mental Health	Substance Abuse	Substance Abuse
Abstinence	Abstinence from Drug/Alcohol Use	NOT APPLICABLE	Reduction in/no change in frequency of use at date of last service compared to date of first service ▶	30-day substance use (non-use/reduction in use) ▶ Perceived risk of use ▶ Age at first use ▶ Perception of disapproval
	Decreased Mental Illness Symptomatology	Under Development	NOT APPLICABLE	NOT APPLICABLE
Employment/ Education	Increased/Retained Employment or Return to/ Stay in School	Profile of adult clients by employment status and of children by increased school attendance ▶	Increase in/no change in number of employed or in school at date of last service compared to first service ▶	ATOD suspensions and expulsions; workplace AOD use and perception of workplace policy
Crime and Criminal Justice	Decreased Criminal Justice Involvement	Profile of client involvement in criminal and juvenile justice systems	Reduction in/no change in number of arrests in past 30 days from date of first service to date of last service ▶	Drug-related crime; alcohol-related car crashes and injuries
Stability in Housing	Increased Stability in Housing	Profile of client's change in living situation (including homeless status) ▶	Increase in/no change in number of clients in stable housing situation from date of first service to date of last service ▶	NOT APPLICABLE
Access/Capacity	Increased Access to Services (Service Capacity)	Number of persons served by age, gender, race and ethnicity ▶	Unduplicated count of persons served; penetration rate - numbers served compared to those in need ▶	Number of persons served by age, gender, race and ethnicity
Retention	Increased Retention in Treatment - Substance Abuse	NOT APPLICABLE	Length of stay from date of first service to date of last service ▶ Unduplicated count of persons served ▶	Total number of evidence-based programs and strategies
	Reduced Utilization of Psychiatric Inpatient Beds - Mental Health	Decreased rate of readmission to State psychiatric hospitals within 30 days and 180 days ▶	NOT APPLICABLE	NOT APPLICABLE
Social Connectedness	Increased Social Supports/Social Connectedness[2/]	Under Development	Under Development	Under Development
Perception of Care	Client Perception of Care[1/]	Clients reporting positively about outcomes ▶	Under Development	NOT APPLICABLE
Cost Effectiveness	Cost Effectiveness (Average Cost)[1/]	Number of persons receiving evidence-based services/number of evidence-based practices provided by that State	Number of States providing substance abuse treatment services within approved cost per person bands by the type of treatment	Increase services provided within cost bands within universal, selective, and indicated programs
Use of Evidence-Based Practices	Use of Evidence-Based Practices[1/]		Under Development	Total number of evidence-based programs and strategies

Note: Prevention measures pending stakeholder approval.

[1/] Required by 2003 OMB PART Review.

[2/] For ATR, "Social Support of Recovery" is measured by client participation in voluntary recovery or self-help groups, as well as interaction with family and/or friends supportive of recovery.

Figure 10.1. Substance Abuse and Mental Health Services Administration National Outcome Measures (NOMs).

for persons with mental illnesses and addictive disorders. The NOMs were selected to provide data on program accountability, with recovery and resiliency as a focus for serving consumer populations.

> "Increasingly, policymakers and budget planners at all levels—Federal, State, local, and private—are basing funding decisions on outcome data," said SAMHSA Administrator Charles G. Curie, M.A., A.C.S.W. "Eventually, this Web-based tool—SAMHSA's National Outcome Measures (NOMs)—will provide the public and policymakers with the information to improve the management and performance of our programs and make the most of the limited dollars available to help people attain and sustain recovery" (*SAMHSA News,* 2005).

The mental health NOMs include measures that depict how well consumers are managing their illnesses and living and working in the community; improved functioning for persons receiving mental health services; obtaining and keeping a job or enrolling and staying in school; decreased involvement with the criminal justice system; securing a safe, decent, and stable place to live; and having social connectedness to and support from others in the community, such as family, friends, coworkers, and classmates. Two other measures directly address the treatment process itself in terms of services available and services provided: increased access to services for mental health, and decreased inpatient rehospitalizations for mental health treatment. The final three measures examine the quality of services provided: client perception of care, cost-effectiveness, and use of evidence-based practices in treatment.

As the URS already included eight of these ten domains in data collection with the States, SAMHSA, through discussions with the States, agreed to use the URS data system as its primary mechanism to compile data on the mental health NOMs from States. Five of the mental health NOMs can already be calculated from URS tables being reported by most States, while three other NOMs relate to URS Developmental Tables. The URS developmental tables are defined as needing development of uniform reporting guidelines, and the States and CMHS are testing alternative definitions and reporting mechanisms for these tables.

The URS/Data Infrastructure Grants process currently includes pilot testing measures for the two NOMs that were not an original part of the URS tables: improved functioning and social connectedness. The process also includes working to further refine the URS developmental tables that are used for additional NOMs: criminal justice contacts, school attendance, and use of evidence-based practices. The work of the URS to operationalize these measures is discussed in further detail later in this chapter.

History of Data Developments at CMHS

The development of State and national public mental health data standards and performance indicators has been addressed directly in the public mental health field in the past 25 years, demonstrating significant progress. Early recognition of the need for use of data for decision support in planning spurred the establishment of the Mental Health Statistics Improvement Program (MHSIP) in l979. MHSIP, a community of professionals and participants interested in use of data in the mental health field, initially focused on data standards and development and national policy issues related to data. An early product of MHSIP was the FN-10 document of mental health data standards for implementation by Public Mental Health Authorities (Leginski, Croze, Driggers, Dumpman, Geertsen, Kamis, et al., 1989). CMHS concurrently sponsored various State grant projects that supported development of data standards and data-driven decision support systems in State mental health systems. In l996, MHSIP developed the Mental Health Consumer-oriented Report Card, which identified the major domains of access, appropriateness, outcome, and prevention and included a set of 46 performance indicators recommended for use in mental health information systems. An essential component of the MHSIP Report Card was the development of the MHSIP Consumer-oriented Survey, which assessed consumer perceptions of care. In the 4 years following the publication of the MHSIP Consumer-oriented Report Card, CMHS funded 45 State Reform Grants to SMHAs to implement performance measures in State public mental health systems, using the MHSIP Report Card as a framework. Through these grants, 45 States implemented the MHSIP Consumer Perception of Care Survey and incorporated MHSIP Report Card indicators into their respective State systems.

In 1997, the National Association of State Mental Health Program Directors (NASMHPD) developed a Framework of Performance Indicators for Public Mental Health Systems (see figure 10.2). The NASMHPD Framework incorporated much of the MHSIP Report Card—in particular the MHSIP Consumer Perception of Care Survey—and added performance indicators related to public mental health

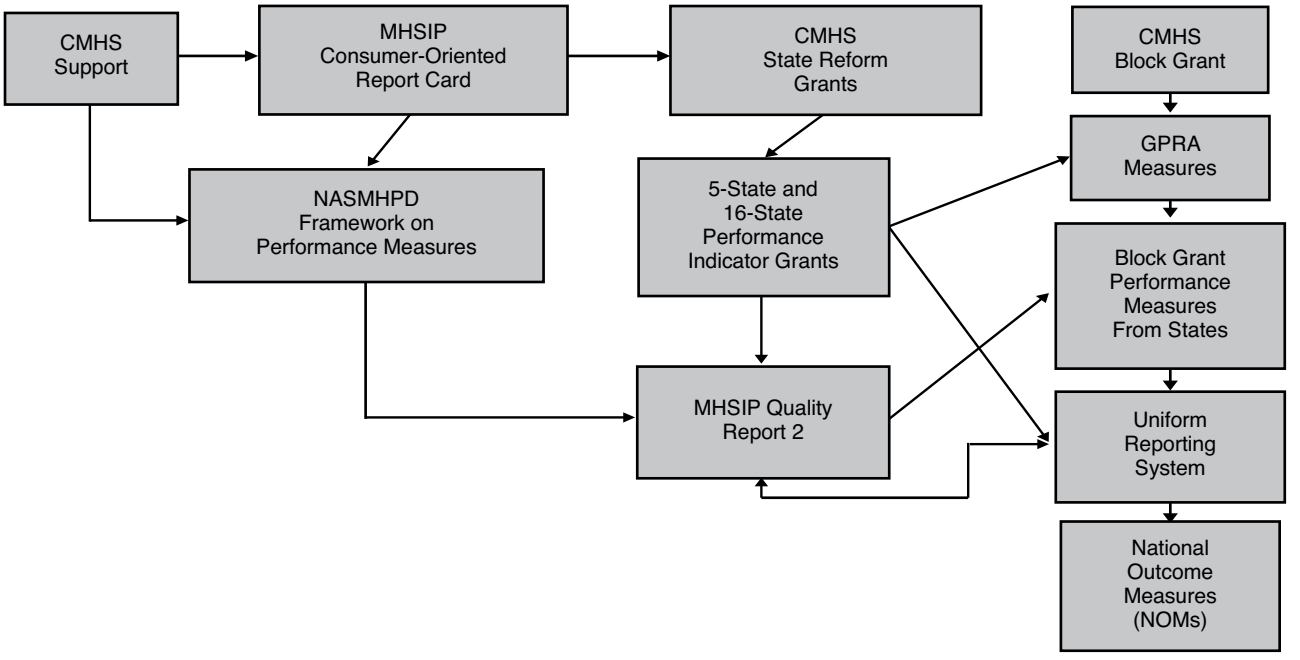

Figure 10.2. Relationship of MHSIP Consumer-oriented Report Card, NASHMHPD President's Task Force on Performance Measures, 5-State Feasibility Study, 16-State Indicator Study, and Uniform Reporting System and National Outcome Measures.

systems (including hospital readmissions, use of seclusion and restraints, and fiscal indicators).

In l997, CMHS further initiated a project with the data and Block Grant planning staff and the National Association of State Mental Health Program Directors Research Institute to pilot 32 performance indicators, contracting with five States for a year to assess State capability to record and report measures in a uniform manner. This work was the initial piloting that addressed uniformity of reporting in States. The 32 indicators were taken from the NASMHPD Framework and also built on the work of the States under the CMHS-funded State Reform Grants. While the CMHS State Reform Grants had focused on helping individual States to implement their own performance measurement systems, the Five-State Study (Ganju & Lutterman, 1998) focused on reporting a common set of 32 indicators.

This pilot effort was followed by a CMHS 3-year grant program, the 16-State Indicator Pilot grant, in which 16 States further piloted 32 performance measures for testing comparability and reporting data in a uniform manner. The data reports that were produced from this work confirmed that States could produce reports for many of the performance measures, but that support to modify or update their information systems infrastructure was crucial to facilitate uniform reporting. This project also initiated the collaborative work among States that continues in the piloting and refining of measures for uniform reporting. The work of MHSIP supports data-driven decision support in publicly funded mental health programs. CMHS and MHSIP has also supported DS2000+, an integrated set of mental health data standards designed to help stakeholders make critical decisions in areas of population, enrollment, encounter, financial, organizational, and human resources data sets; performance indicators, report cards, and outcome measures; and fidelity measures for clinical and systems guidelines. These initiatives, implemented over a period of years, have provided the foundation for State mental health reporting of URS measures utilized for planning in States and reported to the CMHS CMHBG program. Figure 10.2 summarizes the efforts discussed in this section.

Status of Current Mental Health Performance Initiatives

Released in 2005, the *MHSIP Quality Report* (MQR) is a set of proposed performance measures that lays the groundwork for the next generation of activities in mental health performance measurement (Ganju et al., 2005). These proposed measures represent a consensus of representatives of both private and public stakeholder organizations, including the American Managed Behavioral Health Associa-

tion (AMBHA), American College of Mental Health Administrators (ACMHA), National Alliance for the Mentally Ill (NAMI), National Mental Health Association (NMHA), the Federation of Families, National Association of State Mental Health Program Directors (NASMHPD), National Council for Community Behavioral Healthcare (NCCBH), National Association of Consumer/Survivor Mental Health Administrators (NAC/SMHA), National Association of Mental Health Planning and Advisory Councils (NAMHPAC), State mental health planners, CMHS representatives, the Recovery Measurement Group, and the Outcome Roundtable for Children and Families. The purpose of the MQR is to develop a set of indicators that will serve as the new standard for performance measurement in the mental health field. The MQR is discussed in detail in chapter 9 in this publication.

Building upon lessons learned from the development, testing, and implementation of mental health performance measures in both the public and private sectors, the MQR reflects the state of the art in the development of the next generation of mental health performance measures. The MQR consists of a universal set of performance indicators that apply across different populations and settings with additional population-specific and setting-specific indicators. It is especially designed to meet the needs and approaches of today's administrator. It is—

- Consumer-focused
- Outcome-focused
- Recovery-oriented
- Inclusive of children's issues
- Concerned with cultural competence
- Value-based
- Responsive to current national priorities and initiatives

At this stage, the indicators and measures in the MQR are proposed for selected testing and refinement.

The Federal Mental Health Block Grant Program

As part of State CMHBG activities, each State is required to develop a plan for comprehensive mental health services, and to provide annual progress reports to CMHS on implementing the plan. Every State mental health plan takes into account its unique organizational structure, the State's resources and needs, and the priority populations and services of the system. Each State reports on the priorities it has established and the consumers it serves, but States have tailored their data reporting to their Block Grant priorities. Although the CMHBG design allows States considerable flexibility to focus on services that are of high local priority, the decentralized focus of the CMHBG has historically resulted in States reporting implementation data to CMHS that are specific to each SMHA's system, making the data difficult for CMHS to aggregate to develop a national picture of public services related to the CMHBG. From its very initiation in the early 1980s, the CMHBG did not have a common set of reporting guidelines for the services provided by States under the Block Grant. This lack of uniform reporting standards hampered CMHS's ability to summarize and quantify the activities and performance across all the States.

In the late 1990s, in response to the need for more accountability and data on public mental health services, the SAMHSA/CMHS Division of State and Community Systems Development (DSCSD) and State mental health agencies and their national organizations (NASMHPD and NRI) collaborated to ensure that uniform data describing the public mental health system and the outcomes of its programs are available. Section V of the Community Mental Health Services Block Grant Application Guidance and Instructions for FY 2002–2004 contained guidance regarding reporting uniform data in a series of tables on public mental health services. The development of these reporting guidelines was built on the experiences of SAMHSA/CMHS and SMHAs in conducting the previous 16-State Study and other performance indicator initiatives. Section V includes the Uniform Reporting System of 21 reporting tables developed for States to submit as part of their CMHBG Implementation Report due to SAMHSA/CMHS every December.

Mental Health Data Infrastructure Grants for Quality Improvement

The Mental Health Data Infrastructure Grants (DIG) for Quality Improvement were 3-year grants funded in 2001 with the purpose of developing data infrastructure in State mental health agencies for recording and reporting of the URS tables. Forty-nine States, the District of Columbia, and seven U.S. territories were initially funded at $100,000 per year to States and $50,000 to territories. A full matching in-kind provision by each State was required. In the 3 years of the grant effort, the definitions and reporting guidelines for the basic measures were principally addressed and completed. The effort was collaborative in that State data representatives and State planners participated monthly in workgroups with CMHS to refine measures, address appropriate methodologies, and determine feasibility for State reporting. Monthly regional grantee conference calls and annual grantee meetings furthered work on issues related to developing data infrastructure and reporting State and national measures.

A second 3-year DIG cycle was initiated in 2004 in which 49 States, the District of Columbia, and eight U.S. territories received funding. CMHS increased the funding levels to $142,200 per year for States and $71,100 for territories, with continued full matching requirements. The goal of this second round is to continue work on recording and reporting of URS tables, with a focus on refining the developmental measures and the NOMs. The project will also address data infrastructure of local providers, Web-based reporting initiatives, and the DS2000+ standards and initiatives.

All States and territories that accepted a DIG agreed to submit the URS tables as part of their Block Grant Annual Implementation Report, due December 1 of each year. Any States that did not apply for the DIG were encouraged to submit data under Section V. States that cannot provide data in the URS tables may use a companion "State Level Data Reporting Capacity Checklist" to describe their plans for implementing and reporting these data elements in future reporting.

In 2004, SAMHSA announced the 10 NOMs that are the central focus for performance measurement and national reporting. Over the next few years, SAMHSA intends to move toward national reporting of outcomes and results of services for all SAMHSA programs through the NOMs initiative.

SAMHSA identified 10 mental health outcome measures to be reported at the national level and on a State-by-State basis. Information needed for calculating 8 of the 10 NOMs was already included in the URS measure list; decreased symptoms/increased functioning and social connectedness were not included. The SAMHSA NOMs and the URS tables used to generate them are listed in table 10.1. Work

Table 10.1. SAMHSA Mental Health National Outcome Measures

Outcome	Measure	URS Source
1. Client Perception of Care	Clients reporting positively about outcomes	Table 11
2. Increased Access to Services	Number of persons served by age, gender, race, and ethnicity	Table 2 and Table 3
3. Increased/Retained Employment	Profile of adult clients by employment status	Table 4
4. Reduced Utilization of Psychiatric Inpatient Beds	Decreased rate of readmission to State psychiatric hospitals within 30 days and 180 days	Table 20
5. Increased Stability in Family and Living Conditions	Profile of clients' change in living situation (including homeless status)	Table 15
6. Cost Effectiveness/Use of Evidence-Based Practices	Number of persons receiving EBP* services and Number of EBPs provided by State	Developmental
7. Increased Social Connectedness	Social connectedness	Developmental
8. Decreased Criminal Justice Involvement	Profile of client involvement in criminal and juvenile justice systems	Developmental
9. Return to/Stay in School	Increased school attendance (children)	Developmental
10. Decreased Mental Illness Symptomatology	(Changed to) Improved functioning	Developmental

* EBP = evidence-based practice.

has continued in the DIG effort to develop methods for implementation of the additional measures, and work will proceed in State recording and reporting of these NOMs.

SAMHSA has already begun using URS data to calculate the first five NOMs. NOMs calculated from the 2002, 2003, and 2004 URS data are available as State and national rates via the SAMHSA Web site, http://www.nationaloutcomemeasures.samhsa.gov/outcome/index.asp.

The Uniform Reporting System: Specific Purposes, Uses, and Content

The URS has several purposes:

1. The URS was developed by CMHS to meet the demands of Congress and advocates for more uniform information about how States were using the CMHBG to develop comprehensive community-based mental health systems.

2. The URS was developed as a central component of CMHS Block Grant reporting so that the accomplishments of individual States can be aggregated meaningfully at the national level. The URS now serves as the conduit for reporting the SAMHSA CMHS NOMs in the SMHAs for national reporting and program accountability.

3. The URS is part of the development of historical and current data initiatives that have included selecting, refining, and piloting measures that have been determined to be important in State and local decision support and planning of mental health service use. These measures will serve as a source for the SAMHSA mental health NOMs, and also as a component of the DS2000+ framework to develop performance and outcome data standards for the mental health field.

Principal uses of the URS data are to track the annual performance of all States and to produce national aggregate totals that provide information on service utilization and outcome of State mental health systems at the national aggregate level. As States vary in their programming and in the priority populations they are mandated to serve, it was determined that URS data would not be appropriate to make comparisons between States; however, it is anticipated that the URS information will assist State systems to monitor their own performance over time.

In summary, the CMHS URS consists of 21 standardized tables (12 basic tables and 9 developmental tables) that SMHAs report each year. The URS data tables and performance measures were mostly derived from the NASMHPD Framework of Performance Measures (NASMHPD, 1997) and the MHSIP Consumer-oriented Report Card (Task Force, 1996), and many were developed and tested in the CMHS-funded 16-State Indicator Pilot Study (Lutterman et al., 2003). Historically, these documents were the result of much collaborative work implemented through the MHSIP, NASMHPD Research Institute, and the States and CMHS through a number of grant programs beginning in l996 that piloted selected indicators. In the 21 URS tables, the domains of access, appropriateness, outcome, service utilization, and cost provide the framework in which indicators such as penetration rates, use of State hospitals, length of stay, employment, homelessness, major funding sources of services, evidence-based services, readmissions to State hospitals, living situations, criminal justice involvement, and school attendance are selected.

Development and Refinement of the Uniform Reporting System

The URS tables were published by SAMHSA/CMHS as part of the DIG application and were first included in the CMHBG application in 2001. Included in the URS tables was a set of specific data definitions for data elements identified in the tables. However, upon working with States, it was found that there was a need for further clarification of definitions, defining of sociodemographic categories and protocols for reporting, and refinements to the table design. CMHS, the contractor (SDICC/NRI), and the States decided to fully develop reporting guidelines for the tables, and a process of regular monthly, regional conference calls of all the States as well as topical workgroups was organized in response. Through this process, the URS tables have evolved through the first 3 years, with State as well as Federal input for developing common reporting elements.

Scope of URS Reporting

Based on the discussions by the State DIG grantee workgroups and the regional grantee conference calls, guidelines were developed for the scope of reporting of the URS tables. A basic tenet was that the "scope" of reporting should represent the mental health "system" that comes under the auspices of each State mental health agency. Persons are reported in the URS if they were considered part of the SMHA system and received services from programs funded or operated by the SMHA. Persons are counted in the URS if they could be identified in the system and if they received a face-to-face service during the reporting period.

Specifically, the following guidelines were determined for including people in the URS reporting:

1. Include all persons served directly by the SMHA (including persons who received services funded by Medicaid).

2. Include all persons in the system served within SMHA service contracts, including services funded by Medicaid.

3. Include any other persons who are counted as being served by the SMHA or come under the auspices of the SMHA system. This includes Medicaid waivers, if the mental health component of the waiver is considered to be part of the SMHA system.

4. Count all identified persons who have received a mental health service, including screening, assessment, and crisis services. Telemedicine services are counted if they are provided to identified consumers.

5. For States where a separate State agency is responsible for children's mental health, where feasible, attempt to unduplicate consumers between the child mental health agency and the adult mental health agency. If unduplication is not feasible, this potential duplication is reported to indicate that there is an overlap between the "age 0 to 17" group and the "18 and over" group, but that there is unduplication within each group.

The following are not included in the URS tables:

1. Persons who received only a telephone contact, unless it was a telemedicine service to a registered client. Hotline calls to anonymous consumers are not counted.

2. Persons who received only a Medicaid-funded mental health service through a provider who was not part of the SMHA system.

3. Persons who received only a service through a private provider or medical provider not funded by the SMHA.

4. Persons with a single diagnosis of substance abuse or mental retardation. All persons with a diagnosis of mental illness are counted, including persons with a co-occurring diagnosis of substance abuse or mental retardation.

The Data Infrastructure Grant and Refining the URS Data Tables

In the DIG process, CMHS developed a collaborative process to refine and operationalize the URS tables for State reporting. Every month, CMHS holds a set of regional conference calls to facilitate discussion between CMHS, the SDICC, and the State DIG project representatives. The conference calls started in October 2001 and have occurred regularly since then. The States are divided into three regions, each of which has a 1-hour conference call every month. A State mental health planner and State mental health data representative from each grant participates in each of these calls. These calls have been used to review the work of the SDICC and the grant effort in generating output tables, refining URS table definitions, and working on common and feasible reporting elements for the URS developmental and basic tables.

In addition to the three regional DIG calls held each month, CMHS established a series of topical workgroups. In the first year of the grant, the four workgroups were Scope of Reporting, Unduplication, URS Definitions, and Consumer Surveys. In year 2, a new set of URS topical workgroups was initiated: Living Situation, Evidence-Based Practices (EBPs), Hospital Readmissions, Outcomes, Unmet Need/ Untreated Prevalence, and Basic Tables Review. In year 3, topical workgroups on Outcomes and EBPs continued their work, and a new workgroup on two

new measures, Symptoms Reduction and Social Connectedness, was created. Each of these workgroups conducted its work by conference calls and communicating by Internet. Special listservs were set up for many of the workgroups to facilitate sharing drafts of reports. Four of the topical workgroups that are currently working on refinements to the URS tables are described below.

Unmet Need/Untreated Prevalence Workgroup

This workgroup is addressing the URS Developmental Tables 13: Unmet Need and 14: Profile of Persons with SMI/SED Served by SMHA System. In table 13, a standardized methodology for national mental health prevalence has been recommended to estimate the number of persons in need of public mental health services and the number not currently receiving such services. This methodology will involve combining information on the overall prevalence of mental illnesses, income or insurance benefit information on consumers, and the rates of mental health service utilization.

Table 14 requests that States report on the consumers served who met the Federal definitions of adults with serious mental illness (SMI) and children with serious emotional disturbances (SED). CMHS has developed a standardized methodology for estimating the prevalence of SMI in the general population. However, each State has developed its own unique definitions of adults with SMI and children with SED for reporting services and planning in the CMHBG. There is no current Federal methodology to determine if a person receiving State mental health services meets the Federal definition. The workgroup's task is to consult with epidemiological experts to develop and test methodologies that can determine if persons being served by the SMHAs meet the Federal definitions of SMI and SED.

Outcomes Workgroup

The Outcomes workgroup has focused on URS table 19 and is addressing three outcomes measures: extent of client involvement in the criminal justice system, extent of client involvement in the juvenile justice system, and levels of school attendance for children with SED. In 2003, the Outcomes workgroup designed a survey for table 19 to garner information on how States were measuring these outcomes, and it was found that States were compiling measures in several different ways. Several States were linking administrative data sets from the SMHA with other State agencies, such as corrections or education, to measure the extent to which consumers are arrested, jailed, or convicted. Other States compiled this information routinely through their client assessment records as reported by staff members, such as case managers. Finally, several States compiled this information by consumer self-report in consumer surveys.

In 2003, based on the experiences of States reporting on table 19, CMHS recommended that the Outcomes workgroup select consumer survey questions that would address these concerns and serve as the priority method for State reporting on table 19. These standardized questions are currently being pilot tested in several States. If the pilot test demonstrates that these questions work well, CMHS will ask all States to add these questions to their consumer surveys to allow uniform reporting. CMHS is encouraging States to continue to implement their original outcomes data approaches, as they continue to be useful to their programs. In 2005, the Outcomes workgroup is continuing to examine the results of the piloted consumer survey items and to refine the recommendations for reporting on table 19.

Evidence-Based Practices Workgroup

The Evidence-Based Practices workgroup has been working since 2003 to refine and revise URS tables 16, 17, and 18 on EBPs. The workgroup has expanded the number of EBPs to include all of the six SAMHSA/CMHS "toolkit" EBPs and additional child and adult services with strong research evidence. These include therapeutic foster care for children, multisystemic therapy for children, family functional therapy for children, supported housing services, and the use of new generation "atypical" antipsychotic medications for adults with diagnoses of schizophrenia.

The workgroup developed a standardized reporting format for the EBP tables, including sociodemographics of persons receiving EBPs (age, gender, race, Hispanic/Latino status) and information on the fidelity of the practices provided (how, when, and by whom fidelity is measured). In 2005, the EBP workgroup is working with CMHS to provide additional guidance to States regarding the parameters on what defines EBP practices for reporting in the URS.

Symptoms and Social Connectedness Workgroup

As indicated earlier, in 2004 SAMHSA announced the selection of 10 NOMs that were to be reported annually. While the URS already included eight of these measures, two were new to the DIG/URS process: symptom reductions/improvement in functioning and social connectedness. A new workgroup was created during the summer of 2004 to address these two new indicators.

The workgroup has surveyed States about how they are currently measuring these two outcomes measures, and has subsequently developed specific questions to be asked in modules and added to the consumer survey for piloting. In developing the module, questions proposed were reviewed by a focus group of consumers and family members and revised based on the group's recommendations. A number of DIG grantee States have piloted these questions as part of their 2005 consumer surveys, and it is anticipated that final questions will be selected for implementation in States by January 1, 2006.

State Submission of URS Data

CMHS has worked with the SDICC at the NRI to develop multiple options for States to submit their URS reports electronically each year. A database was developed with Web-based data entry screens and built-in data edits to allow States to enter URS data directly into a URS database at NRI. In addition, Microsoft Excel spreadsheets were developed for each of the URS tables. The Excel sheets also include some built-in edits and allow States to enter data within their State and then e-mail their URS data to CMHS. As a final option, States are still permitted to send the URS data to CMHS as a hard copy portion of their annual CMHBG Implementation Report.

Each year, before States report URS data, CMHS sends out a form to each of the SMHAs asking each SMHA commissioner to designate staff who would have access to the URS database to enter and edit data. This step was taken to meet the requirements that the SMHA commissioner approve data for the CMHBG Implementation Reports. All data entry and editing is controlled by a password-protected system.

States may submit their URS data to the SDICC via an Internet-based electronic data entry system, by completing a set of standardized Excel spreadsheets, or by sending in paper copies of the URS tables. URS data are checked by both electronic and visual edits to every State's data, and States are contacted to resolve data entry and quality issues. A set of draft output reports showing each State's data and the national averages are prepared and sent back to the States for their review. After a State has determined that its data are clean and adequate for reporting, the data are marked as final in the URS database.

URS Results

States are currently asked to report data for 19 of the 21 URS tables, as the two tables on State prevalence are provided by SAMHSA. During the first 3 years of the DIG process, States made substantial progress in developing the capacity to report the URS tables, as demonstrated by an annual increase in the number of tables reported and in the level of detail reported within the tables.

Increase in URS Tables Reported

Figure 10.3 shows the increase in reporting of URS Tables during the first three years of the DIG/URS process. The total number of tables reported by SMHAs has increased from 541 tables in 2002, to 600 tables in 2003, and 663 tables in 2004.

In the December 2004 cycle, every State, the District of Columbia, and four territories submitted at least one table, and 11 States submitted data for every URS basic table. The table that was reported the most by SMHAs was table 2, information on the total number of consumers served by age, gender, race, and ethnicity over the last year. Fifty-five

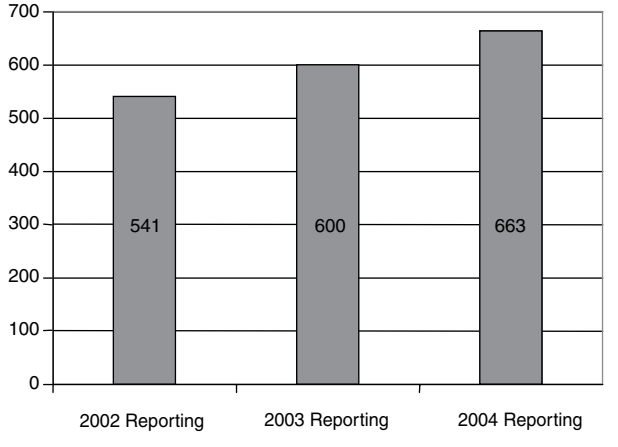

Figure 10.3. Number of URS Basic Tables by States: URS Year 2002 to 2004 Reporting.

States and territories reported this information in 2004, covering 5.7 million consumers. This was an increase from 50 States and territories reporting on 5.1 million consumers in 2003 and 51 States and territories reporting on 4.7 million consumers in 2002.

As figure 10.4 shows, the other tables with higher levels of reporting in 2004 included unduplicated counts of clients served in community mental health programs (table 3a), clients served in State psychiatric hospitals (table 3b), SMHA-controlled revenues and expenditures (table 7), employment status (table 5), consumer perception of care (table 11), and programs funded with CMHBG dollars (table 10).

States have also made major progress in reporting more detail about consumers served in the URS tables. For example, as shown in figure 10.5, the number of States able to report counts of clients served by age, gender, and race (table 2) have increased over the first 3 years of the DIG grants.

Some States continue to have difficulty reporting on specific client characteristics. For example, reporting on consumers served by race and age was consistently lower than reporting on total clients served. Fewer States reported specific client characteristics in areas of employment status, living arrangements, homelessness, and Medicaid status.

The URS includes several developmental tables (tables 13 to 21) that are still being refined and may require major changes in State data systems. As of 2004, fewer States were able to report on these tables. For example, only 18 States were able to report on the number of persons receiving EBPs. The developmental tables are now the focus of data infrastructure work by the States, and reporting on these tables is expected to improve.

		Year 1	Year 2	Year 3
T2:	Utilization by Age, Gender, and Race/Ethnicity	51	50	56
T3:	Community Services	40	47	54
T3b:	State Psychiatric Hospitals	40	45	50
T4:	Employment Status of Persons Served in Community MH	39	42	48
T5:	Medicaid Status of Persons Served	46	40	43
T6:	Admissions and Length of Stay	30	43	45
T7:	SMHA Expenditures and Funding	51	51	45
T8:	MHBG Expenditures for Non-Direct Services	42	42	47
T9:	Public MH System Service Inventory Checklist			51
T10:	Agencies Receiving MHBG Funds Directly from SMHAs	41	45	57
T11:	Adult Consumer Evaluation of Care	37	43	48
T11:	Child/Family Evaluation of Care	22	34	40
T11a:	Consumer Survey Results by Race	29	29	28
T12:	Co-occurring MH & Substance Abuse	34	38	40
T15:	Living Situation		30	42
T20:	30 and 180 day Readmissions to State Hospitals		32	40
T21:	Readmissions to Any Inpatient Psychiatric Bed		9	18

Figure 10.4. Number of States Reporting URS Tables.

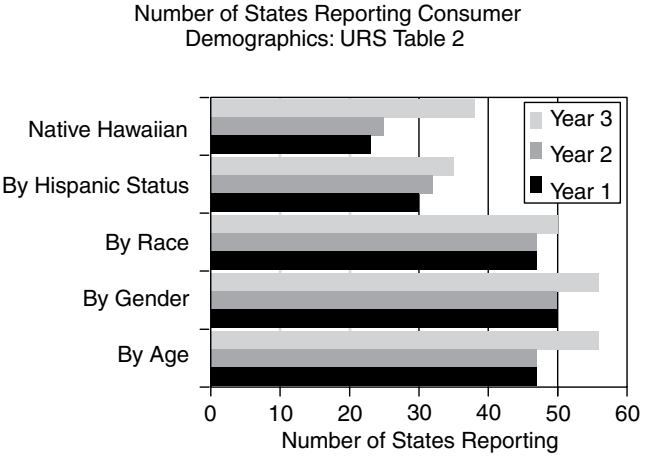

Figure 10.5. Reporting of URS Table Details.

URS 2004 Reporting Results

Access to Mental Health Services (SAMHSA NOM 1)

Fifty States, the District of Columbia, and four territories reported that they provided services to a total of 5.7 million persons during their latest fiscal year (2004 for most States). This means that approximately 1.93 percent of U.S. residents received mental health services from the public mental health systems in 2004. The numbers served by State ranged from 0.5 percent to over 3.98 percent. Several States were able to report only a "duplicated" count of clients—that is, some clients may be counted more than once. States that reported duplicated counts showed utilization rates of 2.2 percent of their State populations receiving mental health services, while States reporting unduplicated counts reported an average rate of 1.91 percent.

Thirty-two States were able to report all unduplicated client data; other States are still working on methods to appropriately unduplicate their clients. Sixteen States reported that their counts remain

duplicated in 2004. Four areas were a concern for States in duplication of client counts: (1) 15 States reported duplicated counts between State hospital and community services; (2) eight States reported that their community counts are duplicated, as county-based systems have unique client identifiers, so that consumers served in multiple counties are duplicated; (3) four States reported that they have duplicated reporting persons aged 17 to 18, as these age groups may be counted twice when they transition from child to adult mental health service systems; (4) some States relying on Medicaid managed care services may have difficulty in unduplicating clients across State and MHBG funding streams. Fourteen States report that they are using their DIG funds to achieve unduplication in their client counts.

Demographic Characteristics of Persons Served by SMHAs: The majority of persons served by the State mental health agency system were White (62 percent), but a sizable number were minorities, with Black (20 percent) being the largest single minority group served (see figure 10.6 and table 10.2).

Rates served by race (that is, dividing the numbers of minority persons served by their population) show that most minority groups were served at a higher rate than Whites (figure 10.6). However, caution must be exercised, because not all States have implemented the 2000 U.S. Census race categories. In particular, only 38 States were able to report on the numbers of Native Hawaiian/Pacific Islanders served, and 19 States are still reporting persons who are Hispanic using the old census grouping as a "race" instead of the new "Hispanic or Latino" origin.

The URS data also demonstrate that the rates of utilization vary by age. Children aged 13 to 17 had the highest rates of mental health service utilization at 3.54 percent, followed by children aged 4 to 12 (at 2.21 percent) and adults aged 21 to 64 (at 2.09 percent). Rates were lowest for older adults (over age 65 were .83 percent and age 75 and over were .68 percent) and very young children (aged 0 to 3 had a rate of 0.27 percent) (figure 10.7).

Females (51 percent) represented a slightly higher proportion of the population served by SMHAs than males (48 percent) (see table 10.2). The rates of persons served by gender reflect similar results, with 1.96 percent of females and 1.91 percent of males receiving mental health services.

Overall service utilization rates were higher in the Northeast (2.45 percent) and West (1.94 percent) than in the South (1.8 percent) and Midwest (1.8 percent) (see table 10.2).

Utilization of Community Mental Health Services and State Psychiatric Hospitals: The vast majority of persons who receive SMHA-sponsored mental health services receive them from community-based mental health providers. Fifty-four States and territories reported that 5.2 million persons were served in community-based programs. Ninety-six percent of all clients were reported as having received community mental health services. Persons receiving services in State psychiatric hospitals numbered 166,929 (3.2 percent of clients), and 259,948 persons received inpatient services in settings other than State hospitals (5.2 percent of clients). Some clients were served in multiple settings during the year.

Community mental health programs served 2.6 million new consumers during the year, and had over 2.2 million persons under care at the start of the year. This finding shows that many of the persons being

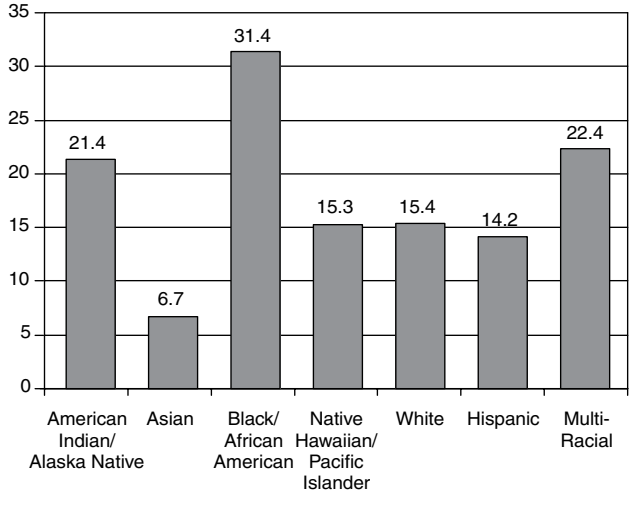

Figure 10.6. Number of Persons Served by State Mental Health Agency Systems, by Race (Rate per 1,000 Population), 2004.

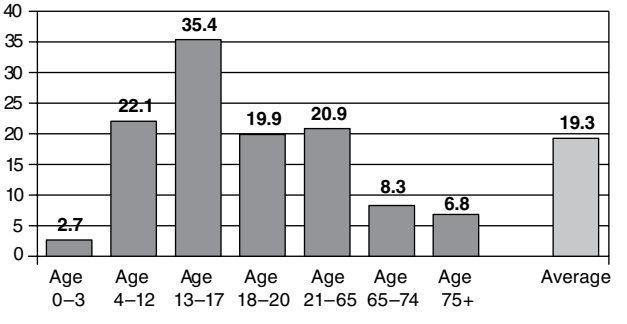

Figure 10.7. Number of Persons Served by State Mental Health Agency Systems, by Age (Rate per 1,000 Population), 2004.

Table 10.2. URS table 2: URS year 3 reporting

Age	Number Receiving SMHA Mental Health Services	Per-cent	Percent of Population Receiving SMHA-Supported Mental Health Services				
				Region Average			
			US	North	South	Mid-west	West
0 to 3	42,025	1%	0.27%	0.2%	0.3%	0.3%	0.4%
4 to 12	797,267	14%	2.21%	2.5%	2.1%	2.0%	2.2%
13 to 17	731,705	13%	3.54%	4.2%	3.4%	2.9%	3.9%
18 to 20	244,538	4%	1.99%	2.5%	1.8%	1.9%	2.0%
21 to 64	3,538,772	62%	2.09%	2.7%	1.9%	1.9%	2.0%
65 to 74	152,805	3%	0.83%	1.5%	0.7%	0.6%	0.7%
75 and over	117,183	2%	0.68%	1.3%	0.4%	0.5%	0.6%
Not Available	72,231	1%					
TOTAL	5,696,526	100%	1.93%	2.5%	1.8%	1.8%	1.9%
Gender							
Female	2,895,074	51%	1.96%	2.4%	1.8%	1.7%	1.9%
Male	2,738,204	48%	1.91%	2.5%	1.7%	1.7%	1.9%
Not Available	63,248	1%					
TOTAL	5,696,526	100%	1.93%	2.5%	1.8%	1.8%	1.9%
Race/Ethnicity							
American Indian/Alaskan Native	59,431	1%	2.14%	2.9%	1.1%	3.5%	2.2%
Asian	79,054	1%	0.67%	0.6%	0.3%	0.5%	0.9%
Black/African American	1,163,849	20%	3.14%	4.2%	2.7%	2.7%	4.4%
Native Hawaiian/Pacific Islander	6,588	0%	1.53%	3.4%	1.8%	2.2%	1.0%
White	3,559,251	62%	1.54%	1.8%	1.5%	1.5%	1.4%
Hispanic	251,204	4%	1.42%	3.4%	0.7%	1.0%	1.3%
Multi-Racial	66,632	1%	2.24%	4.1%	3.3%	1.4%	1.8%
Not Available	510,517	9%					
TOTAL	5,696,526	100%	1.93%	2.5%	1.8%	1.8%	1.9%
Hispanic Origin							
Hispanic or Latino	399,627	10%	1.66%	3.8%	0.9%	0.9%	1.0%
Not Hispanic or Latino	3,212,843	80%	1.86%	2.1%	1.6%	1.8%	2.2%
Hispanic Status Unknown	402,121	10%					
TOTAL	4,014,591	100%	1.93%	2.4%	1.6%	1.8%	2.2%

served by the public mental health system remained in care for over a year. For children (under age 18), SMHA community mental health systems reported many more additions (new consumers served) during the year (826,000) than consumers who were already on the rolls at the start of the year (573,000).

State psychiatric hospitals showed much more turnover than community mental health services. At the start of the year, approximately 51,000 persons were in State psychiatric hospitals, while 170,000 persons were admitted to State psychiatric hospitals during the year. Thus, on average, several consumers use each State hospital bed during each year.

Forty-five States reported information on the length of stay characteristics of patients in their State psychiatric hospitals. For patients who were discharged during the year, the median length of stay was 55 days for children and 54 days for adults. For patients who were still in the hospital at the end of the reporting period, children had been there a median of 76 days, and adults a median of 266 days.

Twenty-nine States reported on the use of other psychiatric inpatient beds as part of their public mental health systems (beds in private psychiatric hospitals or general hospitals). These States reported that almost 260,000 persons received inpatient services from either general hospitals or private psychiatric hospitals during the year. States reported over 233,000 admissions to these other inpatient settings during the year. Thus, the data show that during 2004, many more consumers receive inpatient psychiatric services in alternatives to State psychiatric hospitals than in State hospitals.

Consumer Perception of Care (NOM 2)

The CMHS State Reform Grants in the late 1990s and the current Data Infrastructure Grants have greatly facilitated the SMHAs' implementation of annual consumer perception of care surveys, resulting in reports on how consumers evaluate their access to services, the appropriateness of the services they receive, their level of participation in treatment planning, and the outcomes that result from the services they receive.

Through the MHSIP program, CMHS supported the MHSIP Adult Consumer Survey that more than 44 States are now using to gather annual information on how consumers assess their care. The MHSIP Adult Consumer Survey was tested by prior work with States (Five-State Study and 16-State Study) and has demonstrated reliable results and validity on consumer perceptions of care. A factor analysis developed for the CMHS-funded Five-State and 16-State efforts led to the development of five domains of performance that are currently in the MHSIP Adult Consumer Survey:

1. Perception of access to services
2. Perception of appropriateness of services
3. Perception of outcomes as a result of services
4. Rating of participation in treatment planning
5. Overall satisfaction

During the 16-State Study, the need for a child- and adolescent-oriented survey was addressed. Based on the Adult MHSIP Survey, the Youth Services Survey-Families (YSS-F) was developed to focus on families' perceptions of the care their children received from the mental health systems. The development of the survey was Molly Brunk, Ph.D., and a workgroup of collaborators led to a final version of the YSS-F with scoring algorithms to generate five domains:

1. Perception of access to services
2. Perception of appropriateness of services
3. Perception of outcomes as a result of services
4. Rating of participation in treatment planning
5. Perception of the cultural sensitivity of providers

CMHS strongly recommended that the MHSIP Adult Consumer Survey and the YSS-F Child Survey be implemented for URS reporting, as there is benefit in using common survey instruments for benchmark performance that can be calculated on data from States using the same instruments. States, however, may submit data on their own consumer surveys, as the primary purpose of the URS reporting system is to support within-State data comparisons over time.

Adult Consumer Evaluation of Care: In 2004, 48 States and territories reported consumer survey results in their URS data (see figure 10.8). Of these States, 26 used the official 28-item version of MHSIP and 18 used a State variation of the MHSIP survey (where the State deleted one or more items or substituted unique State questions). Four States reported consumer survey results using their own unique (non-MHSIP-based) surveys. For the calculations of national rates, only data from the 44 States that submitted data using a MHSIP survey (official or State variation) are included.

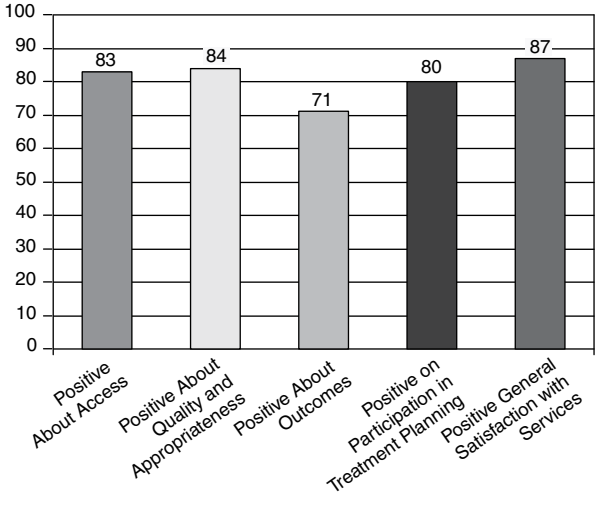

Figure 10.8. Adult Consumer Evaluation of Care: 2004 (States Using a MHSIP Survey).

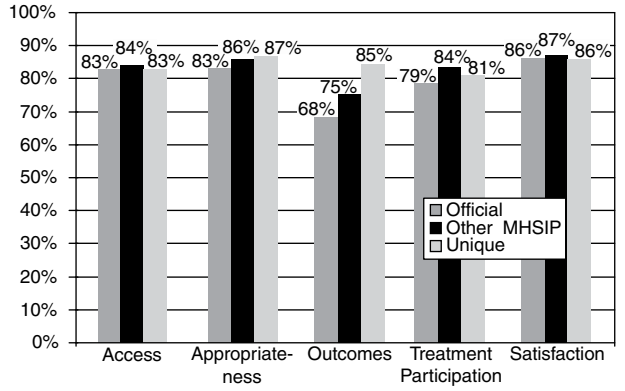

Figure 10.9. Adult Consumer Evaluation of Care: 2004, by Survey Used.

The 44 States that conducted the MHSIP survey reported on 99,531 responses, with a response rate that averaged 57 percent. As figure 10.8 shows, survey responses demonstrate that consumers rate access and quality/appropriateness of services higher than they rate the outcomes of services. Seventy-one percent of consumers rated the outcomes of the services they received as positive or very positive.

States that conducted the official MHSIP survey (68 percent) and/or a variation of the MHSIP survey (75 percent) tended to have lower ratings of outcomes than States that used their own unique consumer surveys (85 percent). This pattern of the official MHSIP survey resulting in lower ratings of care than other surveys appears to be consistent across most of the domains covered by the consumer surveys. Thus, comparisons need to be made with caution and between States that used similar survey instruments.

In addition to differences in the survey instrument used (see figure 10.9), States varied in regard to survey administration methodologies, survey sample methods, and populations surveyed. Because of these variations, comparisons of survey results between States remain problematic.

Five States and territories reported that they sent surveys to all consumers served by the public mental health system. Forty States reported that they surveyed a sample of consumers. Sampling methods were as follows:

- 14 States conducted a random sample
- 10 conducted a stratified sample
- 12 conducted a convenience sample
- 13 conducted another type of sample

Most States (21) sampled from all consumers served, regardless of diagnosis, while 15 States focused their adult consumer surveys on adults with serious mental illnesses. Seven States focused on consumers in a Medicaid managed care program or other Medicaid program.

States also used a variety of survey methodologies to conduct the surveys. Twenty-one States conducted face-to-face interviews, often using mental health consumers to conduct the interviews; 21 States conducted mail surveys, and 12 used telephone interviews. Several States used combinations of these methods to increase response rates. No States reported using Web-based surveys in 2004.

Children/Family Evaluation of Care: Family evaluations of the care their children received showed a pattern similar to the adult consumer survey results: Parents rated the access to care (83 percent positive) and the quality of care (81 percent positive) higher than the outcomes that result from services (65 percent positive) (figure 10.10).

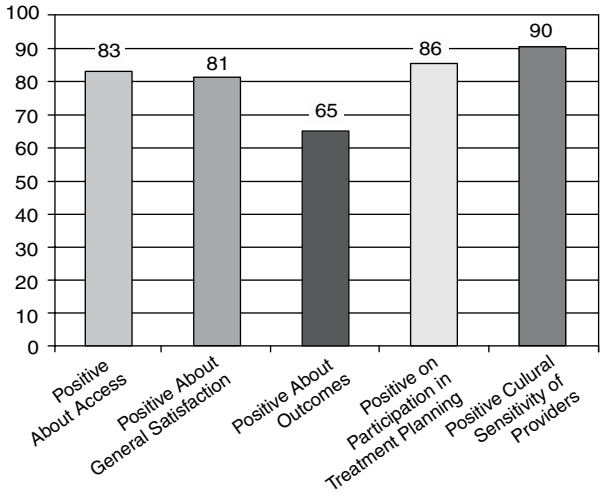

Figure 10.10. Family Member/Child Consumer Evaluation of Care: 2003.

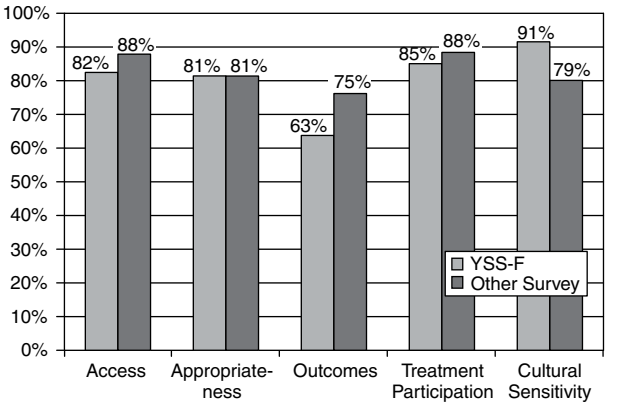

Figure 10.11. Family Perceptions of Care Received by Children, 2004.

Most States (29 of 41) reported on family evaluation of the care their children received using the recommended Youth Services Survey-Family survey, but 12 States used a different children's mental health survey.

States that used the YSS-F survey generally reported lower percentages of families responding positively about access, outcomes, and treatment participation than States that used a different survey (figure 10.11).

Employment of Persons With Mental Illness (NOM 3)

Serious mental illnesses often hamper the ability to obtain and retain employment. As a result of the low rates of employment among mental health consumers and the importance of obtaining and keeping a job as a part of many consumers' recovery process, increasing the employment status of consumers is often a goal of mental health services and is one goal of the SAMHSA NOMs.

While calculating the impact of the provision of mental health services on employment status of consumers is very difficult, the URS/DIG States are working with CMHS to identify and test methods to measure and monitor this impact. In the meantime, the URS data provide the first comprehensive picture of the current employment status of consumers in the public mental health systems.

The number of persons reported as receiving mental health services and being competitively employed in 2004 was 522,307, a slight increase from 519,352 reported in 2003. The number of persons with employment status information increased to 2.45 million from 2.35 million people in 2003 (no employment status data were available for 29 percent of consumers).

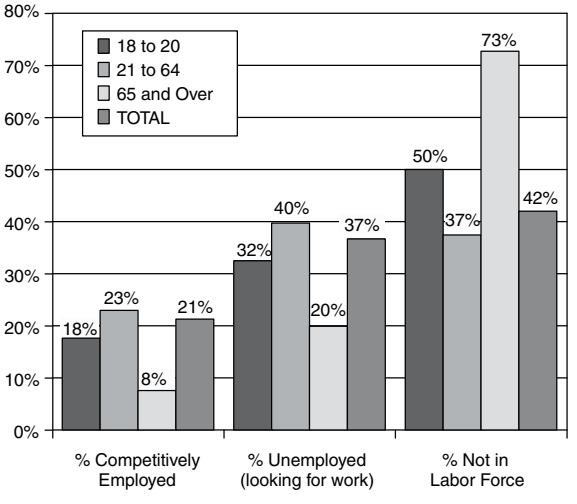

Figure 10.12. Employment Status of Mental Health Clients, by Age, 2004.

Two sets of employment rates were calculated for persons in the public mental health system (figure 10.12). The first calculation uses the U.S. Department of Labor approach to calculating employment rates. It measures what percentage of consumers were competitively employed relative to those "in the labor force" (both employed and unemployed, but excluding those persons "not in the labor force" who are not actively looking for work). The second calculation includes all persons with a known employment status in the denominator (employed + unemployed + not in labor force). The second approach yields much lower employment rates, since many mental health consumers are not in the labor force.

Measure 1: U.S. Department of Labor approach: Thirty-seven percent of mental health consumers (as a percentage of those in the labor force) were competitively employed in URS 2004.

Measure 2: Employment rates among consumers with known employment status: Twenty-one percent of consumers with known employment status were competitively employed in URS 2004.

The 2004 data show little or no difference in the employment status of mental health consumers by gender, but age does make a large difference, with lower rates for young adults (age 18 to 20) and much lower rates for older adults (age 65+) (table 10.3).

Living Situation of Mental Health Consumers (NOM 4)

The URS/DIG started compiling information about the living situation of consumers as a developmental table in URS year 2. States report on the last recorded living situation for consumers—either their living situation at discharge, or the last living situation in the consumer's record for clients still receiving mental health services.

In URS 2004 reporting, 39 States reported on the living situation of over 4 million consumers (table 10.4). States reported on nine different living situations for consumers and on the demographic characteristics of consumers living in each setting.

Overall, 74.9 percent of consumers were living in a private residence. About 3 percent of consumers were homeless or living in a shelter, and 2.6 percent were in jail or other correctional settings.

The living situation of consumers varies by age: Children (under age 18) are more likely to live in

Table 10.3. Employment status of SMHA system mental health consumers: 2004 Uniform Reporting System

	Mental Health Consumers Employed	MH Consumers Who Were Unemployed	Adults Served in Labor Force	Adults Served, Not in Labor Force (Retired, Disabled)	Adults Served with Known Employ-ment Status*	US MH Consumers Employed As % of those in Labor Force	US MH Consumers Employed as % of Served in Community	States Report-ing
Age								
18 to 20	23,081	42,666	65,747	65,635	131,382	35%	18%	41
21 to 64	461,994	796,345	1,258,339	754,018	2,012,357	37%	23%	43
65 and Over	12,775	33,583	46,358	123,695	170,053	28%	8%	42
Not Available	24,457	27,683	52,140	90,584	152,724	47%	17%	21
TOTAL	522,307	900,277	1,422,584	1,033,932	2,456,516	37%	21%	48
Gender								
Female	291,933	506,922	798,855	609,741	1,408,596	37%	21%	47
Male	228,697	387,204	615,901	423,078	1,038,979	37%	22%	47
Not Available	1,677	6,151	7,828	1,113	8,941	21%	19%	22
TOTAL	522,307	900,277	1,422,584	1,033,932	2,456,516	37%	21%	48

* Known Employment Status includes Employed, Unemployed, and Not-in-Labor Force

Table 10.4. Living situation of consumers served by SMHAs: 2004

All Consumers	Living Situation	Percent in Living Situation	Percent with Known Living Situation	States Reporting
Private Residence	2,379,818	57.9%	74.9%	39
Foster Home	157,330	3.8%	5.0%	31
Residential Care	143,515	3.5%	4.5%	37
Crisis Residence	8,550	0.2%	0.3%	16
Children's Residential Tx	11,406	0.3%	0.4%	22
Institutional Setting	158,128	3.8%	5.0%	39
Jail/Corectional Facility	83,168	2.0%	2.6%	35
Homeless or Shelter	93,656	2.3%	2.9%	38
Other Living Situation	140,132	3.4%	4.4%	30
Living Situation NA	936,539	22.8%		33
TOTAL	4,112,242	100.0%	100.0%	42

Table 10.5. Living situation of consumers served by state mental health agency systems, by age: 2004

Children under age 18	U.S. Living Situation	U.S. Percent in Living Situation	U.S. Percent with Known Living Situation	States Reporting
Private Residence	647,380	63.7%	82.1%	34
Foster Home	42,825	4.1%	5.3%	28
Residential Care	14,639	1.4%	1.9%	28
Crisis Residence	2,144	0.2%	0.3%	11
Children's Residential Tx	10,142	1.0%	1.3%	22
Institutional Setting	18,892	1.9%	2.4%	31
Jail/Correctional Facility	18,253	1.8%	2.3%	26
Homeless or Shelter	6,434	0.6%	0.8%	31
Other Living Situation	28,905	2.8%	3.7%	27
Living Situation NA	228,319	22.5%		29
Total	1,016,933	100.0%	100.0%	34

Adults over age 18	U.S. Living Situation	U.S. Percent in Living Situation	U.S. Percent with Known Living Situation	States Reporting
Private Residence	1,729,199	58.0%	75.6%	39
Foster Home	21,163	0.7%	0.9%	28
Residential Care	128,648	4.3%	5.6%	37
Crisis Residence	6,400	0.2%	0.3%	15
Children's Residential Tx	1,247	0.0%	0.1%	15
Institutional Setting	138,343	4.6%	6.1%	39
Jail/Correctional Facility	64,878	2.2%	2.8%	35
Homeless or Shelter	85,567	2.9%	3.7%	38
Other Living Situation	111,148	3.7%	4.9%	30
Living Situation NA	696,383	23.3%		33
Total	2,982,976	100.0%	100.0%	39

private residences (82.1 percent), foster care settings (5.3 percent), or children's residential treatment centers (1.3 percent) than adults (table 10.5). Children were less likely than adults to be homeless or in shelters (0.8 percent), in institutional settings (2.4 percent), or in jail/correctional facilities.

Adults are most likely to be in private residences (75.6 percent), institutional settings—including psychiatric hospitals (6.1 percent), in residential care (5.6 percent), homeless or in shelters (3.7 percent), or in jail/correctional facilities (2.8 percent).

No living situation data were available for more than 22 percent of children and adults (table 10.6). States are using their DIG funds to improve their recording of consumers' living situations, and a new DIG/URS workgroup is exploring measuring changes in living situation over time.

Where mental health consumers live also varies by race: African American and Hispanic consumers were more likely to be living in jail and other correctional settings than other consumers. African Americans were also more likely than other groups to be homeless or living in institutional settings (figure 10.13).

Readmissions to State Psychiatric Hospitals Within 30 and 180 Days (NOM 5)

Readmission rates were added to the URS as a developmental table in URS year 2. This indicator compiles data for readmissions that occur within 30 days and 180 days of discharge to a State psy-

Table 10.6. Living situation of State mental health agency consumers, by age, gender, and race, URS 2004

	Living in Private Residence		Foster Home		Residental Care		Crisis Residence		Children's Residential Tx		Institutional Setting		Jail/ Correctional Facility		Homeless or Shelter		Other Living Situation		Living Situation Not Available		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	Total
Age																					
0 to 17	647,380	64%	41,825	4%	14,639	1%	2,144	0%	10,142	1%	18,892	2%	18,253	2%	6,434	1%	28,905	3%	228,319	22%	1,016,933
18 to 64	1,618,725	58%	18,590	1%	111,978	4%	6,128	0%	1,247	0%	110,610	4%	64,160	2%	82,964	3%	101,975	4%	651,783	24%	2,768,160
65 and Over	110,474	51%	2,573	1%	16,670	8%	272	0%	1	0%	27,733	13%	718	0%	2,603	1%	9,173	4%	44,600	21%	214,817
Not Available	3,234	3%	94,342	84%	248	0%	6	0%	16	0%	893	1%	42	0%	1,655	1%	74	0%	11,822	11%	112,332
TOTAL	2,379,813	58%	157,330	4%	143,535	3%	8,550	0%	11,406	0%	158,128	4%	83,173	2%	93,656	2%	140,127	3%	936,524	23%	4,112,242
Gender																					
Female	1,281,362	63%	30,642	1%	65,016	3%	4,020	0%	4,464	0%	76,339	4%	17,815	1%	35,934	2%	70,299	3%	459,577	22%	2,045,468
Male	1,096,106	56%	32,418	2%	78,229	4%	4,521	0%	6,883	0%	81,263	4%	65,268	3%	57,594	3%	69,695	4%	466,223	24%	1,958,200
Not Available	2,350	2%	94,270	87%	265	0%	9	0%	59	0%	531	0%	90	0%	128	0%	118	0%	10,734	10%	108,554
TOTAL	2,379,818	58%	157,330	4%	143,510	3%	8,550	0%	11,406	0%	158,133	4%	83,173	2%	93,656	2%	140,112	3%	936,534	23%	4,112,222
Race																					
American Indian/ Alaskan Native	27,820	59%	1,339	3%	1,853	4%	93	0%	173	0%	922	2%	771	2%	1,436	3%	2,201	5%	10,896	23%	47,504
Asian	37,037	53%	883	1%	2,260	3%	44	0%	67	0%	2,098	3%	615	1%	815	1%	1,175	2%	24,638	35%	69,632
Black/African American	448,826	55%	50,978	6%	31,715	4%	1,940	0%	3,237	0%	37,790	5%	27,745	3%	30,471	4%	29,523	4%	156,665	19%	818,890
Native Hawaiian/ Pacific Islander	3,912	65%	86	1%	256	4%	9	0%	52	1%	185	3%	80	1%	192	3%	114	2%	1,128	19%	6,014
White	1,529,885	61%	80,557	3%	92,705	4%	5,731	0%	5,049	0%	98,617	4%	33,495	1%	47,876	2%	95,255	4%	519,937	21%	2,509,107
Hispanic or Latino	124,000	51%	15,688	6%	5,737	2%	71	0%	458	0%	3,137	1%	7,117	3%	2,521	1%	2,148	1%	82,412	34%	243,289
Multi-Racial	26,571	56%	1,506	3%	2,145	5%	79	0%	439	1%	1,510	3%	1,025	2%	1,475	3%	684	1%	12,166	26%	47,600
Not Available	181,766	49%	6,294	2%	6,845	2%	583	0%	1,931	1%	13,869	4%	12,320	3%	8,869	2%	9,033	2%	128,640	35%	370,150
TOTAL	2,379,818	58%	157,330	4%	143,515	3%	8,550	0%	11,406	0%	158,128	4%	83,168	2%	93,656	2%	140,132	3%	936,539	23%	4,112,242
Hispanic Origin																					
Hispanic or Latino	386,784	66%	4,451	1%	19,361	3%	388	0%	1,499	0%	18,357	3%	12,709	2%	17,312	3%	7,929	1%	119,369	20%	588,159
Not Hispanic or Latino	1,389,795	68%	29,315	1%	75,370	4%	4,846	0%	4,366	0%	82,354	4%	46,016	2%	54,719	3%	104,349	5%	262,397	13%	2,053,527
Not Available	582,481	40%	123,564	9%	47,402	3%	3,306	0%	4,730	0%	57,206	4%	24,295	2%	20,716	1%	27,224	2%	551,794	38%	1,442,718
TOTAL	2,358,296	58%	157,330	4%	142,133	3%	8,540	0%	10,595	0%	157,912	4%	83,019	2%	92,747	2%	139,475	3%	933,560	23%	4,083,607

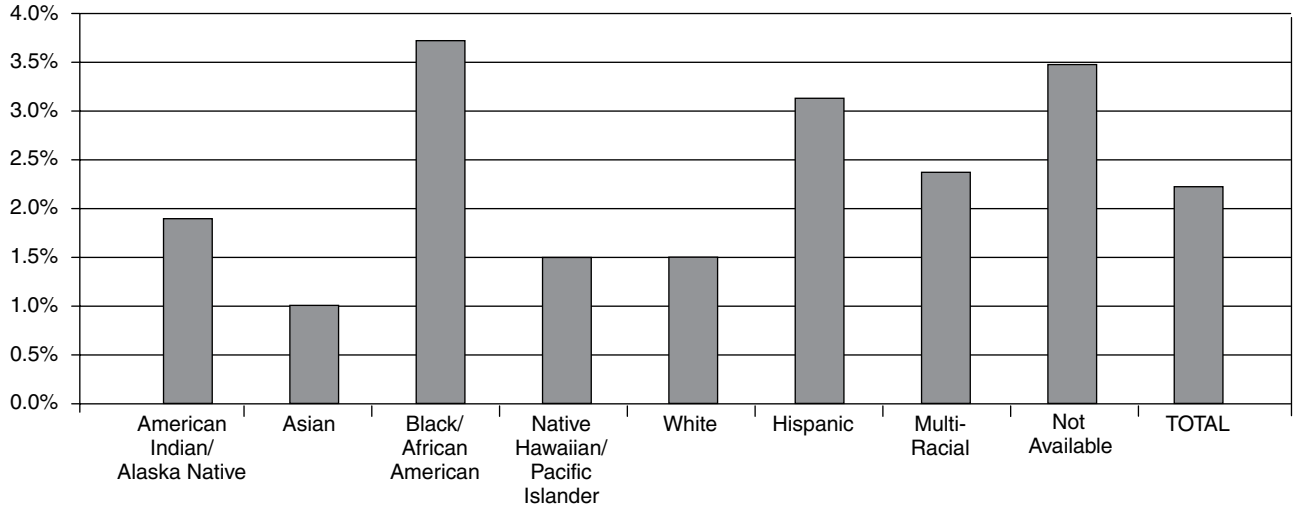

Figure 10.13. Percentage of MH Consumers Living in Jails and Other Correctional Settings: By Race, URS Year 3.

Table 10.7. Readmissions to State psychiatric hospitals within 30 and 180 days, by legal status: 2004

	Civil Status		Forensic Status	
	30 Day Rate	**180 Day Rate**	**30 Day Rate**	**180 Day Rate**
Age				
4 to 12	7.0%	15.1%		9%
13 to 17	6.4%	14.6%	3.8%	10%
18 to 20	9.6%	20.2%	5.6%	15%
21 to 64	9.1%	20.4%	4.6%	15%
65 to 74	7.5%	17.5%	4.7%	21%
75 and Over	5.1%	10.6%	4.2%	15%
Not Available	11.8%	13.9%	8.2%	22%
TOTAL	9.1%	20.4%	4.6%	15%
Gender				
Female	8.6%	19.5%	4.4%	15%
Male	9.5%	21.1%	4.3%	15%
Not Available	10.4%	12.7%	15.1%	20%
TOTAL	9.1%	20.4%	4.6%	15%
Race				
American Indian/Alaskan Native	10.3%	19.4%	2.8%	14%
Asian	8.1%	16.6%	1.9%	12%
Black/African American	10.2%	23.6%	5.4%	18%
Native Hawaiian/Pacific Islander	9.4%	21.7%	6.4%	1%
White	8.7%	19.4%	4.0%	14%
Hispanic or Latino	9.3%	18.3%	2.7%	11%
Multi-Racial	6.6%	10.5%		8%
Race Not Available	8.2%	13.1%	6.3%	18%
TOTAL	9.1%	20.4%	4.6%	15%

chiatric hospital. In 2004, 40 States reported data for civil patients (both voluntary and involuntary admissions) and 28 States for forensic clients (table 10.7). Forensic clients are patients who are sent to the psychiatric hospitals from the courts owing to a criminal justice issue. Forensic clients include patients who are at the hospital for evaluations of competency to stand trial, clients found incompetent to stand trial, clients found not guilty by reason of insanity, clients found guilty but mentally ill, and in some States persons committed to a psychiatric hospital under a sexual offender statute.

Readmissions to State psychiatric hospitals within 30 days were higher for civil status (both civil voluntary and involuntary status) patients (9.1 percent) than for forensic patients (4.6 percent). Readmissions within 180 days were also higher for civil patients (20.5 percent) than for forensic patients (12.5 percent). Readmissions (within both 30 days and 180 days) were higher for adults than children, with older adults having lower rates than average (figure 10.14).

Readmissions of civil status Black/African Americans and American Indian/Alaskan Natives were higher than average, and readmission rates for Whites, Asians, and multi-racial consumers were lower than average.

In addition to compiling information on readmission to State psychiatric hospitals, the URS is testing a measure of readmissions to any psychiatric inpatient facilities within the State. Since many States have drastically downsized their State hospitals and increasingly rely on general hospital psychiatric beds and private psychiatric hospitals, the measurement of readmissions to any psychiatric inpatient hospital within a State is a more comprehensive picture of the readmissions. Unfortunately, the necessary data from general hospital psychiatric units and private psychiatric hospitals are currently available in only a few States. In the 14 States that were able to report this broader measure in 2004, on average 14.6 percent of consumers had a readmission within 30 days and 23.2 percent had a readmission within 180 days.

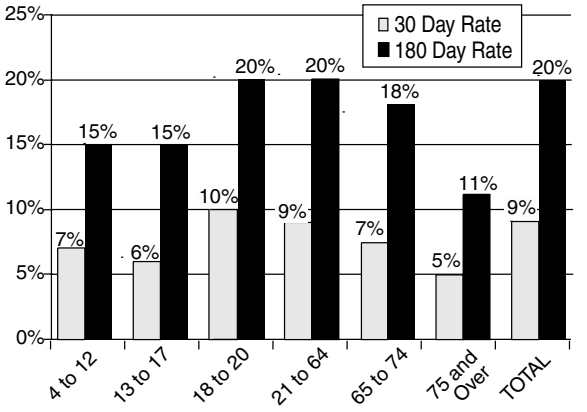

Figure 10.14. 30- and 180-Day State Psychiatric Hospital Readmission Rates for Civil Patients, by Age, URS 2004.

Developmental NOMs Measures and URS Data

As described above, five NOMs from developmental URS tables are currently being tested and finalized. Various approaches to compile the data needed for these developmental tables are being pilot tested across the States. The work on these five NOMs should be completed in 2006, and States will begin reporting on the additional NOMs through the URS process in December 2006:

1. Criminal justice involvement (adult and child)
2. School attendance
3. Social connectedness
4. Improved functioning
5. Use of evidence-based practices

The URS States are currently working with CMHS to test specific consumer self-report items related to the NOMs of social connectedness, level of functioning, arrests within the past year, and school attendance. These self-report items were developed due to the difficulty in obtaining outcomes data on them from administrative data sources in many States. In addition to testing self-report versions of these NOMs, the URS plans to implement a validation study comparing consumer self-report data on these measures to existing administrative data from the States.

States are already reporting on the use of 10 different EBPs in developmental tables in the URS. The URS EBP workgroup is working with CMHS to refine the reporting guidance to States on these tables and to help develop NOMs-related measures from these tables.

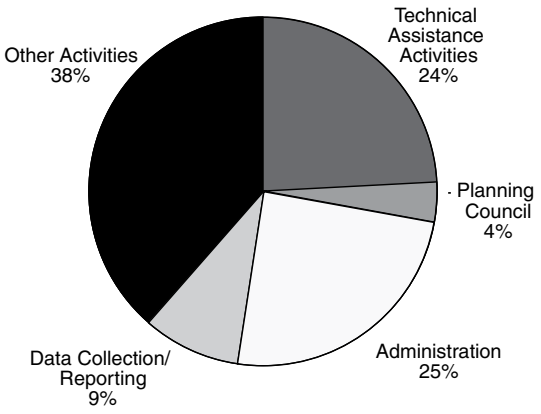

Figure 10.15. Expenditures of the Federal Mental Health Block Grant for Nondirect Service Activities, FY 2004.

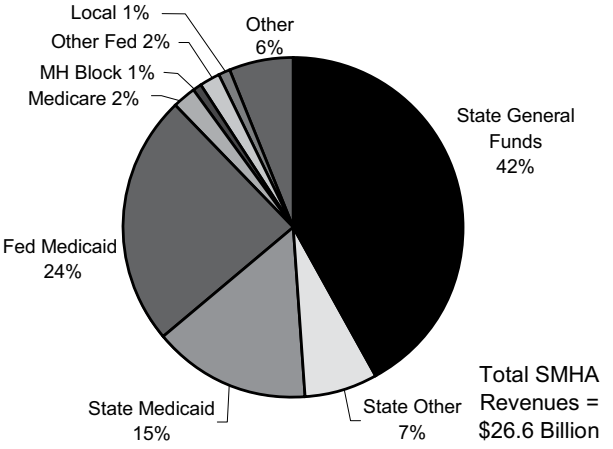

Figure 10.16. SMHA-controlled Revenues for Mental Health, FY 2003.

Additional URS Data Tables

Some of the 21 URS tables do not directly relate to the calculation of the SAMHSA mental health NOMs, but rather reflect the needs of CMHS/SAMHSA for additional information about States' use of the CMHBG. For example, URS tables 8 and 10 compile information about the uses of the CMHBG funds to pay for direct and nondirect services (figure 10.15). Table 12 compiles information from States about the mental health programs that are included in their reporting on other URS tables, as well as information on the level of duplication in their reporting universe. Table 7 incorporates data from the NASMHPD Research Institute's annual State Mental Health Agency Revenues and Expenditures study regarding the $26.6 billion expended annually by SMHAs (figure 10.16).

Next Steps

Each year a set of State-specific output tables showing State-level data and regional and/or national averages is produced. The URS 2002, 2003, and 2004 State-level output reports are available on the SAMHSA Web site at http://www.mentalhealth.samhsa.gov/cmhs/MentalHealthStatistics/UniformReport.asp. Information on the latest URS data tables, definitions, meetings, and reports is available at http://www.nri-inc.org/SDICC/defsdicc.cfm.

As discussed earlier, the full URS data system includes 21 tables, and two additional SAMHSA National Outcome Measures that are being tested. Over the next year, final recommended operational definitions of all 10 mental health NOMs will be developed for State implementation. Change measures or measures to demonstrate improvement in consumer status due to mental health treatment will also be developed for implementation. In addition to these measures, some States are piloting new surveys related to consumer recovery as well as survey questions on cultural competence that can be added to the MHSIP Consumer Survey. Recovery and cultural competence are highlighted in the President's New Freedom Commission as important goals for public mental health systems, thus supporting adequate information strategies to assess mental health programs.

States continue to implement the enhancements to their information system infrastructure necessary to report data on the NOMs and the URS tables. As States continue to serve population groups that may vary in definition, and as States may have different methods of organizing and delivering mental health services, there is a need for caution when comparing URS data across States. Because of State variations, the primary uses of the URS data will continue to be aggregate national information, individual State reports, and comparisons within a State to assess year-to-year reports.

The URS data set continues to be dynamic and is being adapted to reflect the changing needs of SAMHSA/CMHS and the States. It is hoped that the performance measures and data in the URS will become increasingly useful to program managers, consumers, family members, and funders who are working with State systems to improve the quality of mental health services throughout the Nation. The core of the effort is support of the use of data in decision making for improved planning at local, State, and national levels.

Chapter 11

State Mental Health Agency Implementation of the New Freedom Commission on Mental Health Goals: 2004

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State Mental Health Agencies (SMHAs) Are Making Substantial Progress Toward Achieving the Major Goals of the Commission

Findings

- Most (71 percent) State Mental Health Agencies (SMHAs) are collaborating with Medicaid and State health departments to promote the diagnosis and treatment of mental health by primary care.
- Almost all States are working to reduce fragmentation across State agencies providing mental health services.
- All States are adopting Recovery mission statements or working to develop recovery-oriented services.
- All States are reporting shortages of mental health staff.
- Most States are providing prevention/early intervention services.
- All States are implementing at least one EBP service.
- SMHAs are investing heavily in technology to enhance quality and accountability.

Introduction

In 2002, President George W. Bush appointed a 15-member Commission to examine the mental health system in the United States. The charge to the President's New Freedom Commission on Mental Health was to undertake an in-depth review of the public/private mental health system and make recommendations on steps to achieve an effective mental health system in the United States. This 15-member Commission with its seven ex-officio Federal participants spent a year examining all aspects of the U.S. mental health delivery system. The Commission used public hearings, site visits, written and oral testimony from experts, and comments and concerns received through the Internet. After 6 months, an interim report to the President stated that "the system was in shambles" and identified substantial fragmentation as a barrier to access to care for children, adults, and older adults. Analysis of all the reports and findings seemed to suggest that the only way to create an effective and efficient mental health system was to fundamentally *transform* the system, not merely make minor changes to the existing system.

In order to achieve this fundamental transformation, the Commission developed a plan that included six goals and 19 recommendations. It was the Commission's belief that these recommendations needed to be seen in totality since they were interrelated. The overarching principles in the findings emphasized that the mental health system needed to be equivalent to the public health system, with better access for all, equity in treatment and funding, and a reduction of stigma. Findings suggested that too often the mental health system was built around a delivery and payment system instead of the needs of mental health service recipients and their families, resulting in frequently unsatisfactory outcomes. Further findings pointed to the public mental health

system's failure to employ evidence-based practices or the newest technologies and confirmed that a person's race, ethnicity, or geographical location could compromise his or her access to services. The Commission's findings and recommendations pointed out the benefits of early detection and the need for community-based services and supports, as opposed to a crisis-oriented system that often responds only years after the first appearance of symptoms.

The report's six goals were broad-based, visionary expressions of what a transformed mental health system would look like. Its 19 supporting recommendations were drafted to apply to almost anyone with a stake in the public system, whether at the local, State, or Federal level. The Commission appears to have wanted to change perceptions about mental health service delivery almost as much as it did certain practices. In the 2 years since the report, the Commission's work has had an impact on the thinking and the language of many involved with publicly funded mental health services. In particular, the concept that "recovery is possible" and the recommendation of a "consumer- and family-driven" system have captured considerable attention.

For practical application of the recommendations (table 11.1), the Commission looked to the Federal Government for leadership but to local and State governments and advocacy at all levels for the energy to ensure transformation of mental health service delivery in the Nation. The recommendation most clearly targeted to the Federal Government was recommendation 2.3: *Align relevant Federal programs to improve access and accountability for mental health services.* Under the direction of the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Mental Health Services, Federal agencies have inventoried programs that impact the delivery of mental health services. A workgroup of Federal agency representatives meets regularly to examine ways to ensure consistency in the government's approach to meeting the needs of consumers and families affected by mental illness and mental health disorders.

Table 11.1. Goals of The President's New Freedom Commission on Mental Health

Goal 1:	Americans understand mental health is essential to overall health
Goal 2:	Mental health care is consumer and family driven
Goal 3:	Disparities in mental health services are eliminated
Goal 4:	Early mental health screening, assessment, and referral to services are common practice
Goal 5:	Excellent mental health care is delivered and research is accelerated
Goal 6:	Technology is used to access mental health care and information

In reality, the States can most readily act to implement the Commission's recommendations. Indeed, the most concrete recommendation of the Commission was the creation of a comprehensive mental health plan in each State. The Commission saw the comprehensive State mental health plan as knitting together the disparate elements that in most States contribute to the sense of fragmentation highlighted in the Commission's Interim Report. The Commission envisioned several purposes behind developing a comprehensive plan in each State. A comprehensive plan would promote partnerships between State agencies and among the broad range of stakeholders in the system. It would help to ensure more coordinated use of existing resources. Most important, it would enable stakeholders to assess the strengths and weakness of the existing array of services and provide a framework for creating a robust set of relationships and developing the full range of services contemplated by the Commission.

While some of the Commission's goals were oriented toward action by the Federal Government, many are actionable by State governments and specifically by State mental health authorities (SMHAs)—the lead agencies on mental health services in each State. SMHAs are responsible for developing comprehensive mental health systems and serve as the Nation's safety net for the provision of mental health services to adults with serious mental illnesses and children with serious emotional disturbances. Collectively, the SMHAs serve 6 million individuals with mental illnesses each year (CMHS, 2004) and expend $26 billion (National Association of State Mental Health Program Directors Research Institute, Inc., 2005) each year to pay for these mental health services.

Most SMHAs have embraced the Commission's report and recommendations as a road map for their own efforts to improve the quality of their mental health systems and to guide their transformation activities. After the Commission released its final report, the SMHAs, through the National Association of State Mental Health Program Directors (NASMHPD), collectively endorsed the goals in an official policy statement (NASMHPD, 2003).

To help States initiate development of comprehensive plans, the Federal Government invited applications for Mental Health Transformation State Incentive Grants (MHT-SIG). Administered by CMHS, this grant program requires Governors' offices to oversee planning and system development through creation of Transformation Working Groups whose members and chairs they appoint. The MHT-SIG program places a premium on collaboration, with a clear goal in mind: "The intended outcome of Comprehensive State Mental Health Plans is to encourage States and localities to develop a comprehensive strategy to respond to the needs and preferences of consumers or families…. The final result should be an extensive and coordinated State system of services and supports that work to foster consumer independence and their ability to live, work, learn, and participate fully in their communities" (New Freedom Commission on Mental Health, 2003, p. 44).

As focused as the MHT-SIG program may be on advancing the specific goals of the Commission report, it will not immediately bring resources to all States. Some States wishing to move forward with a transformation agenda have begun developing their comprehensive State plans without benefit of these Federal grants. That many States have started down this road independent of Federal funding demonstrates the broad consensus that new, more comprehensive approaches to mental health service delivery are needed.

As SMHAs have embraced the Commission's principles and goals and begun to fundamentally retool their mental health systems based on principles of recovery, client and family-centered services, and emphasis on coordinated services in the community, they have encountered the critical issue of collection and appropriate use of data. SMHAs realize the importance of information and data in both program development and in delivery of quality services. Therefore, SMHAs must make conscientious decisions to view data and information as a product that should be readily available, proactive, and transparent. The Commission believed that data could no longer be seen as an afterthought or an irritating burden of "completing the paperwork"; rather, data must be an integral and powerful part of system transformation. Since the release of the Commission's report, the States have made a concerted effort to collect and disseminate data to help support and illuminate the report's six goals.

The National Association of State Mental Health Program Directors Research Institute, Inc. (NRI) and NASMHPD have been working with the States to document their work to transform their systems and implement the Commission's goals. The information being compiled by NRI through its CMHS-supported State Profiles System is publicly accessible to help States and advocates transforming systems.

State Profiling System

NRI maintains several databases about SMHAs. The SMHA Profiling System, funded under a contract from CMHS, provides a central database of information describing the organization, funding, operation, services, policies, statutes, and consumers of SMHAs. This database describes each SMHA's organization and structure, service systems, eligible populations, emerging policy issues, number of consumers served, fiscal resources, consumer issues, information management structures, and the research and evaluation it conducts. Questions within each component are designed to address specific needs of SMHA managers and others interested in public mental health systems, and to support decision making, policy analysis, research, and evaluation.

An advisory group consisting of SMHA commissioners, planners, researchers, consumers, and Federal officials guides the Profiles content. The advisory group meets annually to review results of prior Profiles cycles, discuss and identify emergent issues facing the States, and develop priority questions and areas for the next cycle. The Profiles contents are selected to meet the following uses by States and others:

- Provide information needed to advocate for resources and program changes that respond to changing State needs;
- Document and assess changes in State programs over time;
- Obtain information on State policy, statutes, and regulations that explain differences among SMHA service systems;
- Provide contextual information for relating and interpreting information from various databases;
- Identify items to better compare States in research projects that rely on national databases;
- Identify and address current SMHA policy issues; and

- Obtain timely data on national trends as input for State decision making.

The Profiles Advisory Group recommended that information about SMHAs was needed in the following 11 broad content areas that form the basis of the State Profiling System.

New Freedom Commission on Mental Health (NFC): Focuses on the State activities related to the six goals for transforming mental health systems from the President's New Freedom Commission Report. These goals are the focus of major systems change in many States and by Federal agencies.

Organization and Structure Component: Contains information on the location and general functions of the SMHA within the context of State government, including the organizational location of the SMHA within State government and of other State agencies under the same umbrella; to whom the SMHA commissioner/director is accountable; responsibility for a variety of mental health services, including State mental hospitals, community mental health programs, and forensic programs; ways in which community-based mental health services are funded; and the role of cities and/or counties.

Policy Component: Contains information on priority clients and mandates for core services; other service system requirements, standards, and future directions; activities relating to downsizing, closing, or consolidating State mental hospitals; privatizing components of the public mental health system; and major legal issues involving the SMHA.

Client Component: Contains aggregated data characterizing individuals served by the SMHA in State mental hospitals and community-based programs.

Services Component: Describes the nature of the service system supported by each SMHA in three broad areas. (1) SMHA service system issues include the types of services offered by the SMHA in State hospitals and community programs, the definitions of these services, linkages of services among institutions and communities, and the role of different services within the SMHA's desired service system. (2) Linkages to other State services systems include information about the linkages between the SMHA mental health system and other State agencies that provide services for individuals with mental illness. (3) Information on the implementation of various evidence-based practices by SMHAs is a new focus in this component.

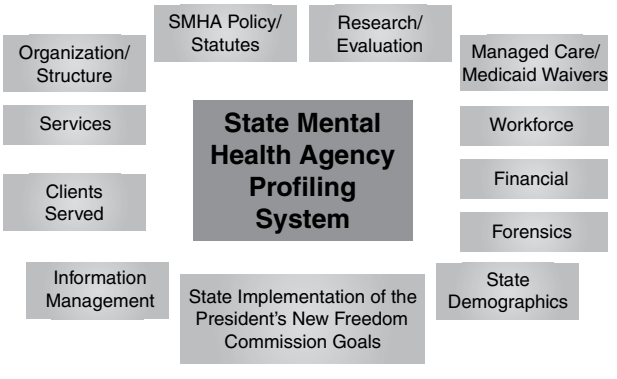

Figure 11.1. SMHA Profiles Components.

Forensic Component: Contains information about the organization and delivery of services to forensic clients by the SMHA and the relationship of the SMHA to the criminal justice systems in each State.

Workforce Component: Staffing levels of State-operated and State-funded mental health services provider organizations; minority workforce issues; client to staff ratios; recruitment, training, and retention of staff; salary levels; and workers' compensation.

Financial Component: Includes the forms and information necessary to complete the annual SMHA-controlled Revenues and Expenditures Study plus information about the resources available to the SMHAs and the States to fund the delivery of mental health services.

Managed Behavioral Health Care: The use of managed care to deliver public mental health services, the roles of Medicaid waivers, and how traditional SMHA-funded providers interact with managed care organizations.

Research and Evaluation Component: Organizational locus of the research and evaluation functions and their funding and staffing levels.

Information Management Component: Current status of the information management function and its development over time. The component provides for a systematic compilation of the organizational placement of information management functions, the level of integration of these functions, and their funding and staffing.

To minimize the response burden on SMHAs, the following criteria were developed to determine what information should be maintained in the Profiling System:

- The Profiling System needs sufficient detail to answer important State-level questions.

- State-level information is maintained, not individual program or sub-State levels.

- Items are not duplicative of existing information systems. Profiling information should help develop a better understanding of existing information systems, not replace them.

The key new area in the latest cycle of the profiles is a focus on the New Freedom Commission's six goals for transforming mental health. The Profiles have compiled information on the activities of SMHAs to implement major portions of each of the six goals. Individual State responses to the Profiles are available on NRI's Web site at www.nri-inc.org. On the Profiles Web site, users can access State responses by keyword, by State, and by special topical reports.

The Profiles System's databases from 1996 to the present are accessible online and include both quantitative data (such as mental health services data and SMHA revenues and expenditures data) and qualitative information (such as policies and administrative practices). Data from every State, the District of Columbia, and Guam depicting their systems in 1996, 1999, 2001, 2002, and 2004, as well as topical reports for each year, are accessible via NRI's Web site.

National Activities to Implement the Commission's Goals

The Commission's report has provided a rallying point for considerable activity in the mental health community. Not only has it created a road map for the CMHS and its sister Federal agencies, it has simultaneously provided a standard for State-initiated activity, and it has given the notably fractious mental health advocacy community a set of principles on which many key organizations can agree.

As the only Federal agency solely focused on the provision of mental health services, CMHS was tasked with implementing the Commission's recommendations at the Federal level. For CMHS, this has meant the initiation of several new activities. CMHS and its director have developed an inventory of mental health services supported by all Federal agencies. Working from that inventory, they have attempted to identify both gaps and redundancies in service delivery. CMHS has taken responsibility for convening a working group composed of representatives from a wide array of Federal agencies, and that working group has continued to meet on a regular basis since the Commission report was delivered.

To provide more effective leadership on its transformation agenda, CMHS also has undertaken an internal reorganization effort. In part, this realignment is meant to signal a shift from "business as usual" to a posture that will ensure the agency's ability to keep up the momentum created by the Commission report.

Most publicly, CMHS has been tasked and funded by Congress to develop a program of Mental Health Transformation State Incentive Grants (MHT-SIG) for which States, territories, and federally recognized tribes could apply. The MHT-SIG was funded in the Federal budget for FY 2005, and it is anticipated that the program will continue to be a centerpiece of CMHS efforts for at least 5 years. In the first year there is enough funding (approximately $18.5 million) for six to eight grantees to receive $2 to $3 million each. It is expected that two to three new grantees will be added in FY 2006.

The purpose of the MHT-SIG is to enable States, territories, and tribes to plan for and develop infrastructure that will enable them to create the Comprehensive State Mental Health Plans recommended by the Commission. The MHT-SIG asks States to create Mental Health Transformation Working Groups chaired by appointees answerable directly to the office of the Governor or, in the case of territories or tribes, the entity's designated chief executive. The idea is that it will take the attention of the chief executive to bring the disparate players in the mental health field to the table with the purpose of coordinating mental health service delivery in that jurisdiction. In their applications for the grants, States were asked to demonstrate the degree to which appropriate parties already were collaborating and working toward development of a comprehensive State plan, as well as to lay out in detail how a grant award would help them move forward with the planning process.

The MHT-SIG and, indeed, the work of the Commission both built on considerable activity already taking place in many States. While the Commission introduced the concept of mental health system transformation and placed particular emphasis on development of a statewide mental health plan, policy makers in a number of States had already concluded that the system was in need of repair. Starting in 1999 in no fewer than 13 States, commissions or task forces had been convened by the Governor, legislature, or a State oversight agency to study the mental health system and make recommendations for its reform.

The trend of State-level reform has continued since the Commission issued its report. Whether ini-

tiated by SMHAs or through actions of the Governor, major efforts to improve mental health service delivery are under way in most States. In some instances, a close examination of mental health service delivery was prompted by the State budget crises that crested in 2003; in others, the effort resulted from recognition that other State systems, especially corrections, were bearing a burden resulting from the failures of the mental health system.

The Commission report also spurred unusual advocacy activity at the national level. In recognition of the opportunity presented by the Commission's work, 16 national associations and advocacy organizations came together to develop a robust Federal policy agenda and a strategy for implementing it. Creating the Campaign for Mental Health Reform,[1] the groups demonstrated an ability to collaborate rarely seen in the past in the mental health advocacy community. Creation of the campaign showed the degree to which advocates were invested in the central themes of the Commission report, as well as their conviction that "business as usual" would not result in changes in Federal policy that would ensure adoption of the Commission's recommendations. The campaign partners embraced the Commission report as a platform on which to continue to build as mental health transformation efforts gathered steam. The campaign provided considerable advocacy in support of the MHT-SIG program as well as the Mentally Ill Offender Treatment and Crime Reduction Act, which created a grant program within the Department of Justice for the diversion and reintegration of persons with mental illness who come into contact with the criminal justice system. The campaign's collaborative approach signaled to the broader field and to policy makers that the transformation agenda has found acceptance among the mental health system's stakeholders and, more important, that they are willing to set aside their differences to work on its behalf.

State Activities to Implement the Commission Goals

As described above, the 2004 cycle of NRI's State Profiling System was redesigned to compile information from the SMHAs about their activities related to each of the six goals. The State responses to each of the goals are listed below. Additional detailed information about State activities is available at http://www.nri-inc.org/defprofiles.cfm.

Goal 1: Americans Understand Mental Health Is Essential to Overall Health Care

The Commission's first goal is to reduce the stigma and discrimination related to mental illnesses and increase the public's understanding of mental illnesses. With the elimination of stigma and a better understanding of the fundamental role of mental health to overall health care, the public will seek care earlier and more often.

Fundamental to increased access is providing better information to Americans about mental illness and better recognition of mental illnesses among primary care providers. SMHAs are traditionally specialty systems that focus their attention on the provision of mental health (and often other disability services). However, many States are now actively working across State governments to increase the recognition and treatment of mental illnesses. For example, 71 percent of SMHAs (32 of 45 States reporting) are collaborating with their State health department and/or Medicaid agency to increase the recognition and treatment of persons with mental illness by primary care providers. These initiatives include providing psychiatric consultation (three States), and providing training and education to primary care providers (seven States).

In addition to efforts to get primary care workers to accurately identify and treat mental illnesses, more than half the States are working with primary care systems to improve the quality of physical

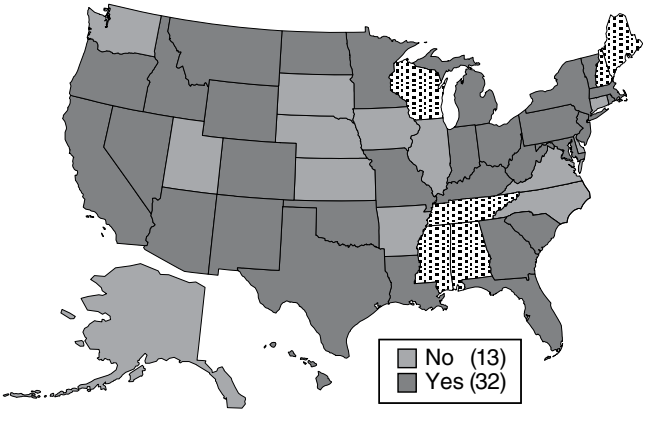

Figure 11.2. SMHAs are Collaborating with Health or Medicaid to Increase MH Services in Primary Care.

[1] A list of the 16 member organizations can be found at http://www.mhreform.org.

health care treatment for individuals with mental illness. Several studies have recently found that the physical conditions of persons with mental illnesses are often not adequately addressed, and that major medical conditions are often not treated (Cradock-O'Leary, Young, Yano, Wang, & Lee, 2002). More than half (56 percent) of SMHAs are working with primary care providers to improve the physical health treatment of persons with mental illnesses (Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Kentucky, Louisiana, Massachusetts, Maryland, Missouri, Montana, New Jersey, Nevada, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, West Virginia).

A second area of focus by more than half the SMHAs is the development of public awareness and information efforts. Sixty percent of SMHAs (27 of 45) have public information campaigns to promote better understandings of the role of mental health in overall health (Arizona, Colorado (adult), District of Columbia, Florida, Hawaii, Indiana, Kentucky, Louisiana, Massachusetts, Maryland, Montana, North Carolina, New Jersey, New Mexico, Nevada, New York, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, West Virginia, Wyoming).

The Commission found that stigma related to mental illnesses remains a major impediment to many people seeking mental health treatment: 33 SMHAs (73 percent) report they have public health information campaigns designed to combat stigma with mental illnesses (Alaska, Arkansas, Arizona, California, Colorado, Connecticut, District of Columbia, Delaware, Florida, Hawaii, Idaho, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Maryland, Missouri, Montana, North Carolina, North Dakota, New Jersey, Nevada, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Vermont, Wyoming).

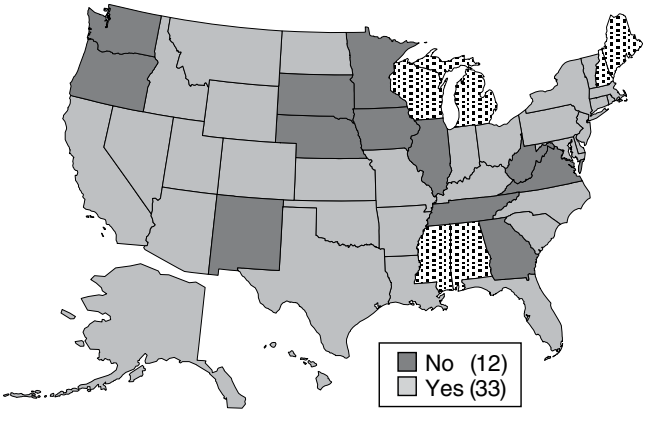

Figure 11.3. SMHA Has Public Health Information Efforts to Combat Stigma.

Ensuring that private health insurance coverage addresses the needs of persons to receive mental health services is an additional component of ensuring access to services. Although there is no national legislation requiring "parity" in mental health coverage with physical health services, four States report that their State insurance laws mandate mental health insurance benefits, and in 19 these insurance benefits include parity in benefits with physical health care. Eleven States limit benefits to specific mental disorders, four report that parity laws cover all mental health service, and nine have benefits that include both mental health and substance abuse services.

Goal 2: Mental Health Care Is Consumer and Family Driven

The Commission promulgated the objective that all mental health care should be recovery oriented and organized and driven by consumer and family needs, and that every consumer should have an individualized plan of care. SMHAs are already working to achieve these goals through a number of activities (table 11.2).

Recovery Orientation: Every one of the 45 reporting SMHAs has adopted a mission statement or policy about the potential of consumers to recover from their illnesses and is seeking to reorient the mental health system to be more recovery oriented.

Table 11.2. SMHAs support consumer choice through…

	Percent	States
Program planning at the SMHA level	88%	42
Resource allocation at the SMHA level	58%	28
Participation in their own resource allocation	31%	15
Person-centered and consumer directed individualized treatment plans/support plans	77%	37
Voucher systems for individuals to purchase services of their choice	6%	3
Access to consumer satisfaction and other outcome data	81%	39
Psychiatric advanced directives	63%	30

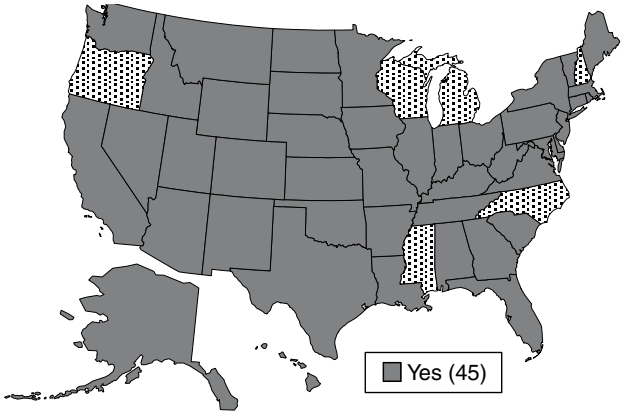

Figure 11.4. SMHA Has Adopted a Recovery Mission Statement or Policy.

SMHA recovery initiatives include drafting recovery mission statements, changing the array of services funded by the SMHA, working with consumers and families to promote recovery concepts, and moving toward evidence-based practices.

Individualized Treatment Plans: SMHAs are taking action to reduce this fragmentation and to move their systems to reflect the desires of mental health consumers to recover and direct their own care. Ninety-five percent of SMHAs (39 States) have initiatives to ensure that every consumer receives an individualized, person-centered treatment plan that meets his or her unique needs. To monitor the development and implementation of these individualized treatment plans, 29 SMHAs receive information on individualized treatment plans from community mental health providers.

SMHAs involve consumers and family members in the SMHA's policymaking, quality assurance, and research and evaluation activities. The Profiles compiled information on the types of involvement that SMHAs have for consumers and family members (table 11.3).

Reducing Fragmentation

The Commission identified as a major problem with the provision of comprehensive consumer-directed mental health services the fact that the provision of services is fragmented among many different funding and service delivery systems. As a result, the provision of care is often driven more by

Table 11.3. Types of consumer and family involvement in SMHA's policymaking, quality assurance, and research/evaluation activities

	Percent	States
SMHA advisory boards	96%	46
Statewide and regional planning efforts	92%	44
Participation at public forums	90%	43
Local governing/advisory boards	88%	42
Providing legislative testimony	75%	36
Input of consumers through focus groups	75%	36
Development and/or promulgation of rules and regulations	63%	30
Quality assurance	54%	26
Advisory board members for system evaluations	50%	24
Membership in SMHA process action teams or quality councils	46%	22
Quality assurance monitoring team	42%	20
Direct hire of consumers for research and evaluation within the SMHA	40%	19
Internal Review Boards (IRB) for research and evaluation	31%	15
Consultant contracts for research and evaluation awarded to consumer-run organizations	31%	15
SMHA has statutory or Regulatory Mandates for Consumers and Family Member Participation in:		
Boards	75%	36
Policy making	38%	18
Evaluation/quality assurance monitoring	29%	14
Internal Review Boards (IRB) for research and evaluation	13%	6
Licensing/credentialing	6%	3

eligibility and funding considerations than by the desires and needs of families and consumers of mental health services. Consumers often are subject to multiple eligibility determinations to receive services, and the services they receive may be determined more by what funding sources will pay for than by what the consumer actually needs or wants.

Over half the SMHAs (24 of 25) are developing a comprehensive State mental health plan that spans multiple State government agencies and addresses the mental health services and essential supports provided by State agencies other than the SMHA. All SMHAs (46) include representatives of other State government agencies in the SMHA's mental health planning council.

Most SMHAs are working with other major State government agencies to reduce fragmentation in mental health services and improve access to services (table 11.4): 39 States are working with housing, 39 with Medicaid, 37 with juvenile justice, and 37 with corrections.

Housing for Persons with Mental Illnesses

Persons with mental illness often need more than just mental health services in order to live productive lives in the community. As a result, many SMHAs are working with consumers to provide vocational and housing supports to assist them in their recovery. Finding decent and affordable housing is a major issue for most SMHAs. SMHAs identified the following major barriers to addressing consumer housing needs:

- Insufficient availability of subsidized housing (41 States)
- Consumer income insufficient to afford private market housing (41 States)
- Insufficient funding for development of affordable housing (37 States)
- Insufficient funding for necessary support services (26 States)
- Community opposition—"not in my back yard" (NIMBY) (20 States)

Most SMHAs (65 percent) have a housing plan (a delineated set of strategies to address the housing needs of persons with mental illness). There are housing specialists/coordinators responsible for increasing affordable housing opportunities for persons with serious mental illnesses within the SMHA in 32 States, within the State housing agency in 11 States, and within both agencies in nine States. In 38 States, the SMHA supports or collaborates with community development corporations or local housing authorities. In 26 States, the local mental health authority works with these local housing authorities.

SMHAs have established working interagency relationships with the other major State agencies responsible for the development of housing: 90 percent (35 States) with the State housing finance agency, 31 States with the State department of housing/community development, 25 with the State affordable housing coalition, and 38 with the State coalition for homeless persons.

Table 11.4. Coordination to enhance service delivery

SMHA has initiatives to work with other State agencies to coordinate services?	Reduce Fragmentation	Client Eligibility Determination	Combine/ Coordinate Funding	Coordinate/ Combine Service Delivery
Medicaid Agency	39	28	36	36
Corrections Agency	37	13	14	33
Health Agency	31	12	18	27
Housing Agency	39	22	28	36
Education Agency	27	14	20	29
Juvenile Justice	37	19	27	37
Child Welfare	36	19	28	36
Other State Agencies	9	6	9	12

Custody Relinquishment of Children

A major problem identified by the Commission regarding the provision of mental health service to children was that too many parents have to relinquish the custody of their children to the State government so their children can receive publicly funded mental health services. The Commission called for policy changes to eliminate the need for parents to relinquish custody of their children in order for them to receive services. States have already been working to ensure this change: Twenty-eight SMHAs have laws or policies designed to keep parents from having to relinquish custody of children in this situation (Alaska, Alabama, Arizona, Colorado, Connecticut, District of Columbia, Delaware, Florida, Georgia, Illinois, Indiana, Kansas, Massachusetts, Maryland, Maine, Minnesota, Missouri, North Dakota, New Jersey, New Mexico, Nevada, New York, Ohio, Pennsylvania, South Carolina, Texas, Utah, Vermont).

Goal 3: Disparities in Mental Health Services Are Eliminated

The Commission found that minority populations are underserved and "that the mental health system has not kept pace with the diverse needs of racial and ethnic minorities, often underserving or inappropriately serving them" (New Freedom Commission on Mental Health, 2003). SMHAs report taking many steps to address the needs of ethnic and minority populations, as well as rural and geographically remote persons with mental illnesses.

Rural and Geographically Remote Mental Health Services

Seventy-eight percent (36 of 46) of SMHAs have initiatives to increase access to mental health services in rural and geographically remote areas. And 42 percent (18 of 43) have initiatives to recruit and train mental health professionals to work in rural and remote areas. Seventy-four percent (35 of 47) of SMHAs have initiatives to provide transportation for mental health clients so they can access needed mental health services.

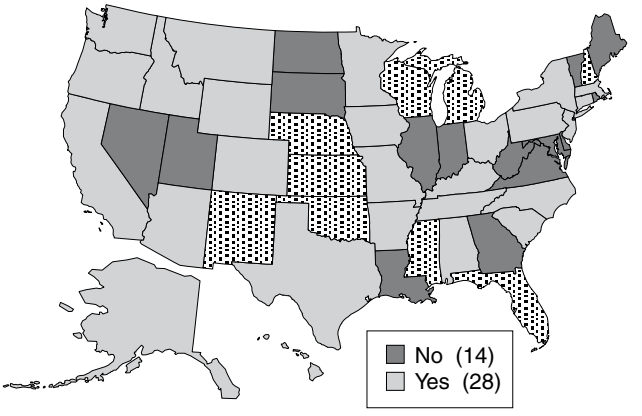

Figure 11.5. SMHAs Have a Cultural Competence Plan.

Cultural Competence Issues

One of the first steps essential to the provision of culturally appropriate services to ethnic and cultural minorities is identifying the needs of these consumers and planning to develop the appropriate mental health services and staff training to meet these needs. A NASMHPD task force has been working on cultural competence issues for several years. The task force has developed a self-assessment instrument for SMHAs and mental health programs to use in moving their cultural competence planning and implementation forward (NASMHPD, 2004).

The State Profiles found that 78 percent of SMHAs (28 of 42) have a cultural competence plan.

- Twenty-three SMHAs have established measurable objectives in their cultural competence plan.
- Twenty-three SMHAs have conducted a cultural competence assessment of their mental health system.
- Twenty-two SMHAs address linguistic competence in their cultural competence plan.
- Thirty-two SMHAs report they have a staff person with overall responsibility for cultural competence.
- Twenty-five SMHAs have a cultural competence advisory committee.

Minority Staffing Issues

Having a mental health services workforce that understands and can provide culturally competent mental health services is an important step to reduce disparities. Many SMHAs are undertaking initiatives to recruit and train minority mental health workers into the public mental health system. Twenty-one SMHAs have initiatives to recruit and train members of minority groups, ethnic groups, or other special populations for work in State-funded mental health programs: Ten have staff recruitment initiatives for blacks/African Americans, seven for Hispanics, six for Asians, five for Native Americans, and four for Pacific Islanders.

In addition to efforts to recruit more minorities into the public mental health system, SMHAs are fostering initiatives to increase the training they provide to minorities in their system: Eight SMHAs have staff training initiatives for blacks/African Americans, six for Hispanics, eight for Asians, six for Native Americans, and seven for Pacific Islanders.

Staffing Shortages

A significant problem for SMHAs in providing quality mental health services is a universal shortage of mental health staff. Of SMHAs reporting 44 of 45 are currently experiencing shortages of mental health staff. Psychiatrists and registered nurses were the professional disciplines for which the largest numbers of SMHAs reported shortages (figure 11.6).

Many (29) SMHAs report they have initiatives to address these staffing shortages: Twenty-four SMHAs are working with universities to increase the training of future staff and increase recruitment into the public sector, 19 are increasing salaries paid in the SMHA system, 17 are providing training at mental h ealth providers, and 14 are providing recruitment bonuses or other financial incentives.

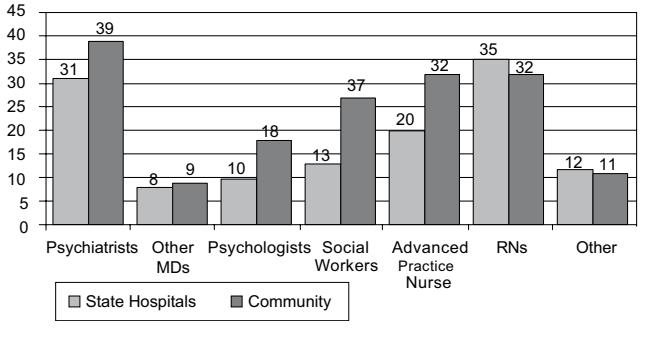

Figure 11.6. Shortages of Mental Health Staff, by Discipline.

Goal 4: Early Mental Health Screening, Assessment, and Referral to Services Are Common Practice

The Commission report found that "emerging research indicates that intervening early can interrupt the negative course of some mental illnesses and may, in some cases, lessen long-term disability" (New Freedom Commission on Mental Health, 2003, p. 57). As a result, the Commission called for a major increase in the early identification of mental health problems and for making mental health screening and assessment part of routine practice in health care. SMHAs are undertaking a number of efforts to meet these goals.

Early Detection

Thirty-nine of 50 SMHAs (78 percent) have initiatives for the early detection of mental health problems: 39 States for children, 17 for adults, and 17 for older adults (figure 11.7). Thirty-three SMHAs (67 percent) operate or fund prevention/early intervention programs for children, 16 operate or fund such programs for adults, and 10 operate or fund them for elderly persons. Thirty-four of 44 SMHAs (82 percent) work with schools to expand and improve mental health services for children.

Persons with co-occurring mental illnesses and substance abuse disorders often experience difficulty having both of their illnesses appropriately recognized and treated. Thirty-seven of 46 SMHAs (80 percent) require or work with mental health providers to screen for co-occurring mental health and substance abuse disorders. Thirty-one SMHAs operate or fund separate specialized treatment programs for persons with co-occurring mental health and substance abuse disorders.

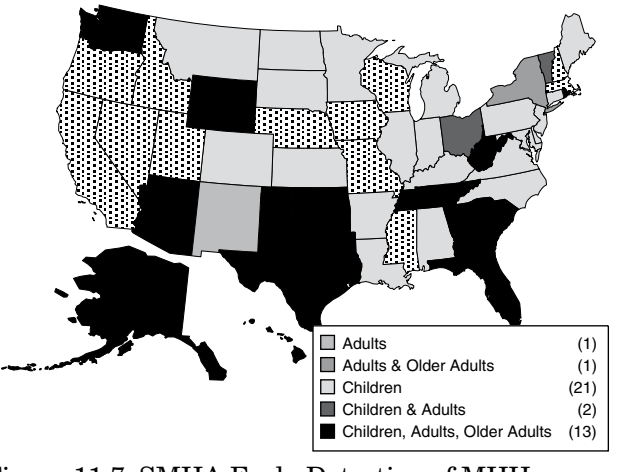

Figure 11.7. SMHA Early Detection of MHH Problem Initiatives.

Twenty-eight of 47 SMHAs (60 percent) require or work with mental health providers to screen for histories of trauma in persons served in the public mental health system.

Older Adults

The Commission documented that the mental health needs of older adults often are recognized or treated adequately. Fifteen of 43 SMHAs (35 percent) have a specialized plan for providing mental health services to older adults (age 65+). Eleven SMHAs offer specialized training to providers regarding older adult mental health service needs and recognition of mental illnesses. Twenty-eight SMHAs work with providers to help them recognize and treat older adults with mental health problems. Twenty-one work with community mental health providers, 22 with nursing homes, 18 with other long-term care settings, 13 with psychiatric hospitals, and eight with primary care providers.

Criminal Justice System Issues

Many persons with mental illness unfortunately fall into the criminal justice system, where their mental health needs are either unrecognized or often inadequately treated. SMHAs have undertaken a variety of initiatives to work with the criminal justice system to help divert persons with mental illness out of corrections programs and into treatment. Forty-six out of 48 (96 percent) of the States reported having at least one mental health court or other criminal justice diversion program for persons with mental illnesses (figure 11.8).

Sixty-seven percent of SMHAs (31 of 45) have at least one mental health court designed to divert persons with mental illnesses from the criminal justice system into mental health treatment. Mental health courts, which are modeled after drug courts, are special courts designed to handle criminal cases of persons with mental illnesses and divert them out of jail or prison and into treatment. These States reported on 178 courts that served 5,251 persons in 2003. Ten of the States have the courts control dedicated resources for services totaling over $1.7 million.

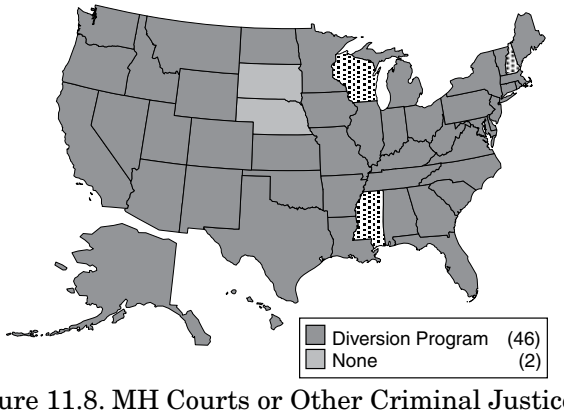

Figure 11.8. MH Courts or Other Criminal Justice Diversion Program: 2004.

Diversion Programs

According to the CMHS-funded GAINS Center, "diversion" programs refer to "programs that divert individuals with serious mental illness (and often co-occurring substance use disorders) in contact with the justice system from jail and provide linkages to community-based treatment and support services. The individual thus avoids or spends a significantly reduced time period in jail and/or lockups on the current charge" (http://www.gainsctr.com/flash_site/tapa/index.html).

Thirty-one States have pre-booking diversion programs to help divert adults with mental illnesses into treatment. Pre-booking diversion programs aim to move people out of the criminal justice system and into treatment before formal criminal charges are made against them. Twenty-eight SMHAs have funded or otherwise promoted pre-booking programs for adults in the past 2 years. Twenty-seven SMHAs have plans to fund or otherwise promote pre-booking programs in the next fiscal year.

Twenty-seven SMHAs have post-booking, pre-adjudication programs to help divert adults with mental illnesses into treatment. These programs are designed to move persons with mental illnesses out of the criminal justice system and into community treatment after charges have been filed, but before they go to court. SMHAs have funded or otherwise promoted criminal justice diversion programs for adults in the last 2 years. Twenty-four SMHAs have plans to fund or promote any criminal justice diversion programs in the next fiscal year.

Twenty-nine of 45 SMHAs support diversion programs for youth with mental illnesses from the juvenile justice system into treatment. Nineteen SMHAs have juvenile justice diversion programs at the intake level, 17 at the adjudication level, and 15 at pre-arrest stages.

Sixty-one percent of SMHAs (27 of 44) have re-entry programs to support prisoners or jail detainees with mental illness and/or co-occurring substance abuse disorders who are returning to the community.

Goal 5: Excellent Mental Health Care Is Delivered and Research Is Accelerated

The Commission set a goal that persons with mental illnesses receive the highest quality mental health services demonstrated effective by research. One major impediment to the provision of quality mental health services is the long delay between the advances in knowledge from research to the implementation of these advances into common clinical practice. The Commission called for concerted action to accelerate research to promote recovery and resilience and to advance the use of evidence-based practices in mental health services.

Most SMHAs (76 percent) are working with academia to move research results into better mental health services. States report a number of initiatives between SMHAs and academia to accelerate the movement of research findings into practice. Examples of these initiatives include establishing "centers for excellence" to work with mental health providers, establishing joint appointments with mental health researchers and mental health policy and clinical providers, and using local academic institutions to provide training to mental health providers. In addition to activities to move research into practice, 61 percent of SMHAs have initiatives to help academia and other researchers to study mental health issues identified by the SMHA.

Ninety-two percent of SMHAs are measuring client outcome measures. The most common client outcome measures being routinely measured by SMHAs for community services are as follows (49 SMHAs reporting):

- Consumer perception of care: 42
- Consumer functioning: 40
- Family involvement/satisfaction: 35
- Change in employment status: 30
- Change in living situation: 31
- Consumer symptoms: 26
- Strength-based measures: 17
- Consumer recovery: 15

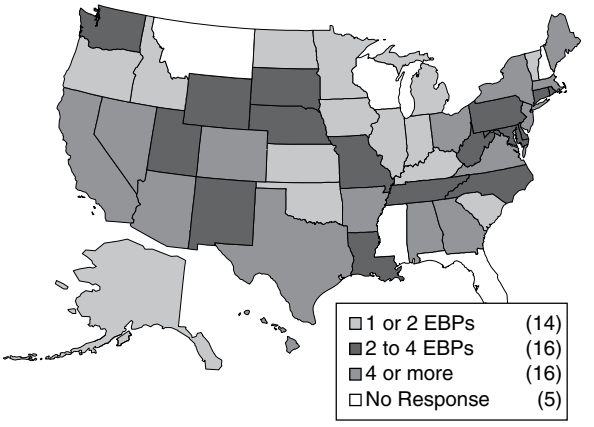

Figure 11.9. Number of Adult Evidence-Based Practices Implemented by SMHAs: 2004.

Evidence-Based Practices

The Commission recommended an increase in the implementation of mental health services that have been demonstrated to be effective (evidence-based practices, or EBPs). The NRI's State Profiles System compiles information on the implementation by SMHAs of the six adult EBPs for which CMHS has developed "toolkits", as well as for several child/adolescent services that many researchers have identified as having strong research evidence.

Every reporting SMHA is implementing at least one adult evidence-based practice (EBP), and most States are implementing multiple EBPs, with three EBPs being implemented in most States: assertive community treatment teams: 37 SMHAs; supported employment: 37 SMHAs; integrated dual diagnosis programs for persons with co-occurring mental health and substance abuse: 34 SMHAs (figure 11.9).

SMHAs are increasingly offering these EBPs throughout the State and are working to increase the training of mental health providers to deliver EBPs according to practice standards. For example:

- Assertive community treatment (ACT) is being provided by more than 485 programs to 64,242 consumers (32 SMHAs reporting). Twenty-six of these SMHAs measure the fidelity of ACT programs to the model on which studies were conducted.
- Supported employment (SE) was provided statewide in 20 States and in parts of 16 States and was provided to 39,513 persons by 650 programs in 29 States. Fourteen States reported they measure the fidelity of their SE programs to the model.

Table 11.5. Mechanisms to provide ongoing training to providers	
Expert consultants	43
Internal staff training	36
Collaboration with universities	24
Provider-to-provider training	25
Establishment of research/training institute(s)	15
Outside accreditation	4
Awareness/training	35
Consensus building among stakeholders	36
Monitoring of fidelity	27
Modification of information systems and data reports	22
Incorporation of EBPs into contracts	21
Budget requests specific to EBPs	19
Financial incentives	15
Other	7
Shortages of appropriately trained workforce	39
Financing issues in paying for EBPs	40
Attaining or maintaining fidelity to EBP model standards	34
Modification of EBP models to meet local needs	27
Resistance to implementing EBPs from providers	25
Other	4

SMHAs are using a number of initiatives to promote the adoption of EBPs across their systems (table 11.5).

Goal 6: Technology Is Used to Access Mental Health Care and Information

The Commission established a goal of increasing the use of technology to improve the quality of mental health services and to promote better information about services among consumers and family members. SMHAs are investing in technology to implement this goal:

Forty-seven percent of SMHAs (23) have implemented electronic medical records in either State hospitals or community programs (figure 11.10). Most of these initiatives are in the community (18), and 13 are in State psychiatric hospitals.

Seventeen SMHAs have implemented electronic medication ordering systems for their State psychiatric hospitals, and four States have implemented them with community mental health providers.

Telemedicine Initiatives

Eighty-one percent of SMHAs (38 of 47) promote the use of telemedicine to provide mental health services (figure 11.11). To help promote the use of telemedicine services, 10 SMHAs reimburse providers for providing these telemedicine services, and 25 State Medicaid agencies reimburse for mental health telemedicine services. In addition, three States have changed State licensure or scope-of-practice restrictions to promote and encourage the use of telemedicine.

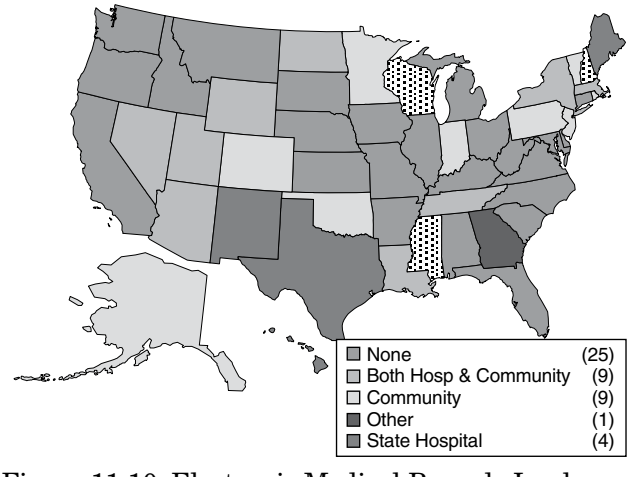

Figure 11.10. Electronic Medical Records Implemented by SMHAs.

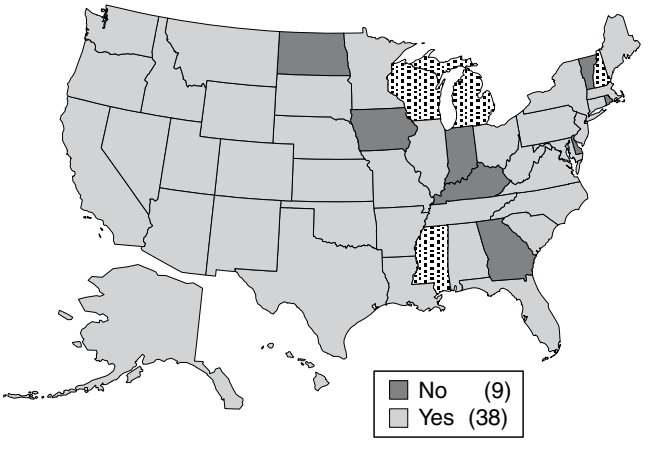

Figure 11.11. SMHAs Promote the Use of Telemedicine to Provide Mental Health Services.

Providing Consumers Access to Data on Mental Health Services

SMHAs have many initiatives to make information about recovery, self-help services, and data on services available to consumers, family members, and advocates via the Internet:

- Information about self-help services, education, and supports to consumers and family members: 26
- Information about identifying mental illnesses: 21
- Information about mental health treatments: 20
- Information about evidence-based practices: 20
- Information about outcomes of SMHA providers: 16
- Information about specific recovery initiatives by the SMHA: 15
- Performance measures about SMHA providers: 12

Seventy-two percent of SMHAs (33) survey consumers to assess the extent to which services did or did not achieve the self-defined goals of recipients. Twenty-five SMHAs make these survey data public, and 23 SMHAs use these data in policy decisions.

Next Steps/Future

The Profiles information about SMHA activities related to the Commission goals demonstrates that the States have embraced the goals and challenges of the Commission report as a road map to transform their systems. States are in the midst of major changes in the way they organize, fund, and deliver mental health services.

The Profiles Technical Advisory Group met during the spring of 2005 and has refined the information compiled by the NRI related to the six goals. The NRI will be updating the Profiles information on State implementation of the Commission goals during the fall of 2005. The updated information will become available on the NRI's Web site as of spring 2006.

The NASMHPD commissioners have committed to making information and data more accessible to consumers, family members, and advocates, to allow all interested groups to better understand systems and work toward achieving quality and appropriate mental health services for all who need them. We hope that the information contained in this chapter, as well as the State Profiles System information, can be used as instruments of transformation within State government to help drive the changes States are making. The information can be used to identify other States that have initiatives similar to those being considered in a State, and to organize and help develop technical assistance across States.

The full State Mental Health Agency Profiles database on the implementation of the six Commission goals are available via the NRI's Web site at www.nri-inc.org. Using the Profiles Web site, interested users can search by State or by keyword to find out what each of the States are accomplishing on the specific issues described above.

REFERENCES

CMHS Uniform Reporting System (2004).

Cradock-O'Leary, J., Young, A. S., Yano, E. M., Wang, M., & Lee, M. L. (2002) Use of general medical services by VA patients with psychiatric disorders. *Psychiatric Services, 53,* 874–878.

National Association of State Mental Health Program Directors Research Institute, Inc. (2004). *Cultural competency: Measurement as a strategy for moving knowledge into practice in state mental health systems: Final report.* Alexandria, VA: Author.

National Association of State Mental Health Program Directors Research Institute, Inc. (2005). *Funding sources and expenditures of state mental health agencies: Fiscal year 2003.* Alexandria, VA: Author.

National Association of State Mental Health Program Directors Research Institute, Inc. (2003). *Position Statement on the President's New Freedom Commission on Mental Health.* Alexandria, VA: Author.

The President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America. Final report.* DDHS Pub. No. SMA-03-3932. Rockville, MD: U.S. Department of Health and Human Services.

Note: Connecticut has two separate State agencies responsible for mental health: a child and adolescent agency and an adult agency. The counts of SMHAs shown in this report may reflect responses from both.

Section III. Mental Health Care in Primary Care Settings

Chapter 12

Introduction to Mental Health Care in Primary Care Settings

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Intermountain Health Care

What Is It?

Mental health integration (MHI) is a comprehensive approach to promoting the health of individuals, families, and communities based on communication and coordination of evidence-based primary care and mental health services. The World Health Organization defines health as a complete state of physical and mental well-being (World Health Organization, 2002). The Surgeon General defines mental health as a state of successful performance of mental and physical function resulting in productive activities and fulfilling relationships with others and the ability to adapt to and cope with adversity (U.S. Department of Health and Human Services, 1999). MHI is mental health care that is integrated into everyday primary care practice. The integration of mental health into primary care simply means to *treat* mental health like any other health condition. This integration is one example of quality health care delivery redesign that is team based and outcomes oriented and follows a standardized quality process that facilitates communication and coordination, based on consumer and family preferences and sound economics.

Why Do We Care?

Today, the responsibility for providing mental health care falls increasingly to primary care providers. Both consumer preference and economic disincentives are driving the need for reform of our fragmented system. In the past decade, there has been a significant increase in the proportion of people with serious mental illness and substance abuse disorders who report receiving care from primary care providers and hospital emergency rooms (Kessler et al., 2005; Reiger et al., 1993).

Depression and mental disorders are increasingly associated with high disability, projected to rank second only to cardiovascular illness as the leading cause of disability worldwide by 2020 (Murray & Lopez, 1996). Despite the availability of evidence-based treatment for mental disorders, many patients and families do not receive effective treatment (Eisenberg, 1992; Kessler et al., 2005; Wang, Demler, & Kessler, 2002; Whooley & Simon, 2000; Young et al., 2001). Ethnic minorities, older patients, and less educated patients are more likely to be subject to treatment disparities and to receive lower quality care than are other depressed patients (Melfi et al., 2000; Miranda, 2004; U.S. Department of Health and Human Services, 1999; Young et al., 2001).

Although primary care provides the majority of mental health care, lack of time and documented economic benefit make it difficult for health care delivery systems to proactively implement effective treatment strategies for these growing disabilities. Current care delivery models are inadequate and inefficient, leading to provider and consumer exhaustion, as well as significant gaps in care and poor outcomes.

Where Is It Going?

The Institute of Medicine has outlined in its Quality Chasm series of reports a new conceptual framework for defining and operationalizing quality health care reform in our country (Quality of Health Care Committee, 2001). Although not coordinated on a national level, multiple research and practice efforts across the country and abroad are actively testing and redesigning care to realign quality, performance, and economic value. Many of the most effective models of care redesign combine several quality principles into "collaborative care" models in an effort to improve the process and clinical outcomes of care for chronic illness (Katon et al., 1999; Simon et al., 2000; Wagner, Austin, & Von Korff., 1996). Reorganized systems of collaborative care can improve health outcomes and lower overall costs, and enhance consumer and provider satisfaction. Ongoing evaluation of these efforts to measure the *value* of the impact of integrated models on satisfaction, clinical outcomes, and cost will require engaging diverse stakeholders who are influential in developing the business case for quality in their unique communities.

As a nonprofit organization with no commercial investors, Intermountain Health Care (IHC) combines the financial, administrative, and delivery aspects of health care into one integrated network committed to providing clinical excellence, quality, and innovation. In 1999, a key group of IHC leaders became increasingly concerned that primary care medical resources were not being used efficiently to treat patients with depression and other mental health conditions. These leaders were influential in establishing the MHI quality improvement program to address the practice burden of managing these conditions and to build a business case for integration. Consumers, providers, hospital and physician administrators, community partners, and research staff worked together to enable this integration. Early results demonstrated that collaborative primary and mental health care led to improved functional status in patients and improved satisfaction and confidence among physicians in managing mental health problems as part of routine care at a neutral cost (Quality of Health Care Committee, 2004). This is only one of many examples of integrated systems success in promoting clinical quality as the driver of sound economics.

What Are the Barriers?

A significant barrier to integration efforts is the lack of a well-coordinated national effort to improve the quality of mental health and substance abuse services in primary health care or to improve the quality of primary health care services available in specialty mental health care services. Lack of oversight and national leadership prevent the implementation of available research and practice findings into real-world health delivery systems by enabling stigma, perverse economics, and technological barriers to persist.

Although stigma continues to be a leading barrier to mental health care, economic disincentives in our health care market have reinforced the low relative value of "quality of life" outcomes. The historical and prevailing disconnect between primary medical care and behavioral health impedes reimbursement for mental health care. Mental health benefits are also subject to monetary restrictions that are not imposed for other medical conditions. Many of the key elements of the proven collaborative care models are not currently reimbursable through public and private insurers. Quality care provision without accompanying reimbursement is impractical and promotes economic waste.

Shared communication in an integrated system is key to providing safe, person-centered, efficient, effective, timely, and equitable health care. Current language and interface barriers (e.g., technical vocabulary, Web pages in English only, and lack of access to the Internet), limit smooth information transfer. These barriers also present ongoing challenges in confidentiality and privacy interpretations of regulations pertaining to the Health Insurance Portability and Accountability Act (HIPAA).

What Do We Need to Do About It?

Identify Champion Leaders. The delivery of sustainable health care quality requires strong leadership. National leadership is needed to legislate policies that will support health care redesign. These policies would drive health care organizations toward continuous quality improvement and building national standards to measure, improve, and reward quality.

Establish Community Coalitions. Community coalitions of consumers, providers, and payers are needed to negotiate disparate and competing inter-

ests and lead the implementation of these common national quality standards.

Provide Consumer Access to Health Information. Consumers need access to information on service quality and community outcomes. Access would promote consumer demand and consumer choice, which should be supported by equitable health care policy mandating mental health parity with general medical benefits (Goldman, 2002). This would be a step forward in actualizing "personalized" consumer-centered medicine. Consumers and families who have an active role in choosing their care and designing their treatment goals are more likely to achieve optimal health outcomes that match their cultural preferences.

Enact Measurement Standards. To improve the quality of care will require continual monitoring and sound measurement. National organizations, such as National Committee for Quality Assurance (NCQA), that develop standard quality guidelines need to balance scientific inquiry with cost and practicality of administering them in real-world health systems. Reimbursement can then be based on achievement of selected process and outcome measures, rather than solely on consumption of health care resources (Leatherman et al., 2003).

National standards for data collection and storage are essential to this measurement process. A vigorous but flexible clinical information system is needed to provide care coordination; generate proactive care reminders; maintain clinical registries; and create transparent communication between consumers and their family, their primary care providers, and mental health resources.

Build Flexible Information Systems. Technological decision support at the point of care will increase providers' use of clinical practice guidelines as a baseline in their treatment decisions and, hence, improve outcomes (Hunkler et al., 2000; Simon et al., 2000; Wells et al., 2000). Once effective information systems are in place, communities can report their quality outcomes and compare them with those of other communities throughout the Nation.

The most effective and sustainable health care delivery systems will be able to match health care resources to level of disease severity, thereby providing the communities they serve with the means to plan and allocate resources in a rational way. Measuring and reporting satisfaction and clinical and cost outcomes that are meaningful to all stakeholders will build consensus and foster continued support of mental health integration. The quality reform leaders of our time would say that health care in our communities is all about using resources responsibly and building and maintaining quality relationships with all our stakeholders.

REFERENCES

Eisenberg, L. (1992). Treating depression and anxiety in primary care. *New England Journal of Medicine, 326,* 1080–1084.

Goldman, H. H. (2002). Perspectives: Parity—prelude to a fifth cycle of reform. *Journal of Mental Health Policy Economics, 5*(3), 109–113.

Hunkler, E., Meresman, J., et al. (2000). Effectiveness of nurse telehealth and peer support in augmenting SSRI treatment of depression in primary care. *Archives of Family Medicine,* 9, 100–105.

Katon, W., Von Korff, M., et al. (1999). Collaborative care models for the treatment of depression. *American Journal of Managed Care, 5,* 794–800.

Kessler, R., Demler, O., et al. (2005). Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine, 352*(24), 2515–2523.

Leatherman, Berwick, et al. (2003). The business case for quality: Case studies and an analysis. *Health Affairs, 22*(2), 17–30.

Melfi, C. A., Croghan, T. W., et al. (2000). Racial variation in antidepressant treatment in a Medicaid population. *Journal of Clinical Psychiatry, 61,* 16–21.

Miranda, J. (2004). Disparities in care for depression among primary care patients. *Journal of General Internal Medicine, 19*(2), 120–126.

Murray, C., & Lopez, A. (1996). *The global burden of disease. A comprehensive assessment of mortality and disability for diseases, injuries and risk factors in 1990 and projected to 2020.* Cambridge, MA: Harvard School of Public Health.

Quality of Health Care Committee (Eds.). (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: Institute of Medicine.

Quality of Health Care Committee. (Eds.). (2004). Measurement. In *Report of the First Annual Crossing the Quality Chasm Summit: A focus on communities* (pp. 27–36).

Reiger, D., Narrow, W., Rae, D., et al. (1993). The de facto mental health and addictive disorders service system: Epidemiological catchment area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry, 50,* 85–94.

Simon, G., Von Korff, M., et al. (2000). Randomized trial of monitoring, feedback and management of care by telephone to improve treatment of depression in primary care. *British Medical Journal, 320*(7234), 550–554.

U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General.* Rockville, MD: Author.

Wagner, E., Austin, B., & Von Korff, M. (1996). Organizing care for patients with chronic illness. *Millbank Quarterly. 74,* 511–544.

Wang, P. S., Demler, O., & Kessler, R. C. (2002). Adequacy of treatment for serious mental illness in the United States. *American Journal of Public Health, 92,* 92–98.

Wells, K., Sherbourne, C., Schoenbaum, M., et al. (2000). Impact of disseminating quality improvement programs for depression in managed primary care: A randomized control trail. *JAMA, 283*(24), 212–220.

Whooley, M., & Simon, G. Managing depression in medical outpatients. (2000). *New England Journal of Medicine, 343*(26), 1942–1950.

World Health Organization. (2002). *The World Health Report 2001—Mental health: new understanding, new hope.* Geneva: Author.

Young, A. S., Klap, R., et al. (2001). The quality of care for depressive and anxiety disorders in the United States. *Archives of General Psychiatry, 58,* 55–61.

Chapter 13

The Primary Care/Behavioral Health Interface

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Introduction

This chapter presents a broad overview of the primary care/mental health care interface in the United States. We begin with a brief discussion of four core elements that characterize primary care, consider the implications of each of these categories for efforts to improve the quality of care on the primary care/behavioral health care interface, and end with a discussion of multifaceted approaches that address multiple dimensions of care. In the spirit of the topic, we have sought to make this review as "integrative" as possible, considering populations with both mental and addictive disorders, and addressing both behavioral care in primary care settings and the primary care of persons with behavioral disorders.

What Is Primary Care?

Although the term *primary care* can be used to denote a group of medical specialties such as family practice, general internal medicine, and pediatrics, it is most appropriately defined in terms of its functions rather than training or specialties. The Institute of Medicine has defined primary care as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Donaldson, Yordy, Loher, & Nasselow, 1996). The locus of this care can be an individual (physician or nonphysician), a team, or a clinic.

More specifically, primary care can be understood in terms of four core constructs, most fully articulated by Barbara Starfield (1998). *First contact* implies that the provider or providers are the point at which individuals seek entry into the health care system. At a population level, the concept of first contact care is closely related to the notion of *access* to care. *Comprehensiveness* reflects a scope of primary care "addressing a large majority of personal health needs." It reflects both the notion that an individual should receive services of high quality, and that primary care providers can deliver the bulk of those services. *Coordination* denotes alignment of service delivery across providers, clinics, and organizations. Finally, *longitudinality* or *continuity* represents the degree to which the primary care provider is the principal source of care over time (Alpert and Charney, 1974).

These four constructs provide useful anchors for understanding, and seeking to improve, care on the interface between primary care and mental health care. What is the role of primary care as a point of *first contact* to behavioral services, and what is the role of behavioral settings in facilitating access to primary care? Given finite time and provider availability, how should we ensure that persons with behavioral conditions receive a *comprehensive* range of primary care and behavioral services? Particularly for persons with comorbid conditions, how well is care *coordinated* between medical and specialty settings, and who should be accountable for that coordination? Does that care reflect a *continuous* relationship with a primary care provider or team over time? This overview addresses each of these "Four C's" sequentially, seeking to understand both behavioral health care in primary care settings and primary care for persons treated in specialty mental health settings. We seek to understand these constructs in the context of a fifth "C" alluded to in the Institute of Medicine (IOM) definition, the *communities* in which these services are delivered. Particularly in the public sector, interventions must be developed with a clear understanding of the values and cultures of the communities where they are to be used (Wells, Miranda, Bruce, Alegria, and Wallerstein, 2004).

Access to Care

Understanding the importance of access to care requires drawing a distinction between two notions of accessibility: "potential" and "realized" (Andersen and Aday, 1978). Whereas potential access embodies the structural ingredients needed for providing care (e.g., medical insurance, geographic proximity of care), realized access implies actual receipt of services. This distinction, in particular the gap between potential and realized access, provides a useful context for understanding both access to behavioral services in primary care and access to primary care for persons treated by specialist behavioral providers.

Primary Care and Access to Behavioral Services

The wide reach of primary care into the general population suggests its importance as a source of *potential access* to health services. Four-fifths of Americans report having a usual source of care (Pancholi, 2004), and three-fourths of Americans make one or more medical visits during any given year (Krauss, Machlin, and Kass, 2001). While this reach is not complete—primary care interventions will not reach many of the uninsured and other vulnerable populations—it is broader than any existing public health infrastructure in the United States (Starfield, 1996).

About 30 percent of the U.S. population meet Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for one or more behavioral disorder in any given year (Kessler et al., 1994; Robins and Regier, 1991); however, even among those with serious disorders, fewer than half receive any mental health care (Demyttenaere, Bruffaerts, Posada-Villa, Gasquet, Kovess, Lepine, et al., 2004; Wang, Demler, and Kessler, 2002). The high prevalence and low treatment rates of mental disorders make primary care settings an important source of *potential access* to treatment for mental and substance use disorders.

Data on service use suggest that primary care settings also represent a growing source of *realized access* to mental health care in the United States. In 1990, more mental health services were delivered by primary care providers than by specialty mental health providers (Robins and Regier, 1991). Since that time, primary care has played a growing role in the delivery of mental health care, particularly for depression and anxiety disorders. These shifts have in part been driven by the development of selective serotonin reuptake inhibitor (SSRI) antidepressants, whose side effect profiles and broad set of indications make them easy to prescribe (Olfson et al., 2003; Pincus et al., 1998).

Despite these rising treatment rates, there is still evidence of a substantial gap between potential and realized access *to care* for mental disorders in primary care. Primary care providers commonly fail to recognize or treat disorders such as alcohol abuse (Buchsbaum, Buchanan, Poses, Schnoll, & Lawton, 1992), depression (Hirschfeld et al., 1997), and anxiety disorders (Roy-Byrne et al., 2002) in their patients. A host of patient, provider, and system-level factors likely underlie these low rates of diagnosis and treatment. In contrast to individuals seeking care from the specialty system, patients in primary care are less comfortable in reporting behavioral symptoms or in accepting treatment (Van Voorhees et al., 2003). Primary care providers may lack knowledge about these conditions or may simply lack the time to adequately diagnose and treat them (Mechanic, McAlpine, & Rosenthal, 2001). Clinics rarely have organized procedures to screen and track care for behavioral disorders (Edlund, Unutzer, & Wells, 2004).

Access to Primary Medical Care for Persons with Behavioral Conditions

Particularly for persons with serious and persistent mental disorders, specialty behavioral settings may represent their main, and often their only, point of contact with the broader health system (Druss & Rosenheck, 2000). However, as with the case of mental disorders in primary care, this potential access commonly fails to be realized. While rates of medical morbidity in patients treated in the specialty behavioral sector disorders are high (Jeste, Gladsjo, Lindamer, & Lacro, 1996; Sokal et al., 2004; Stein, 1999), these conditions commonly go undiagnosed and untreated (Koran et al., 1989; Koryani, 1979; Marder et al., 2004).

As with behavioral disorders in primary care, these low rates likely represent a combination of patient, provider, and system-level factors. Patient factors include poor self-care, lack of motivation, and fearfulness about using medical services (Lin et al., 2004). Specialty mental health providers commonly lack expertise or comfort in diagnosing medical conditions (Golomb et al., 2000; Shore, 1996). Medical providers, in turn, often assume that these patients' presenting complaints are psychologically rather than medically determined, leading them to be less aggressive in ordering procedures and diagnostic tests (Graber et al., 2000). Finally, most specialty mental health clinics in both the public sector (e.g., community mental health centers and substance abuse treatment programs) and private setting (managed behavioral health organizations) are financially and organizationally separated from medical care (Bartels, 2004; Koyanagi, 2004). This separation means that those organizations are typically accountable only for the treatment of behavioral conditions, rather than the full scope of issues affecting persons with those conditions.

Improving Access to Care

During the past 20 years, efforts by a broad range of stakeholders have reduced the gap between potential and realized access on the primary care/behavioral health interface. At the patient level, Federal agencies (National Institute of Mental Health, 2005) nonprofit advocacy groups (Glover, Birkel, Faenza, & Bernstein, 2003), and the pharmaceutical industry (Donohue, Berndt, Rosenthal, Epstein, & Frank, 2004) have all made efforts to reduce stigma and increase treatment rates for mental disorders. Studies have sought to make education and guidelines available to providers to improve recognition and treatment of behavioral disorders (Lin, Simon, Katzelnick, & Pearson, 2001; Thompson et al., 2000). System-level interventions, such as routine screening, have been shown to improve rates of accurate mental health and substance diagnoses (Gilbody, House, & Sheldon, 2001; Rollman et al., 2001). Facilitated referrals to primary care can improve rates of contact primary care services for persons with substance use disorders (Samet et al., 2003). However, these efforts have had more success in improving rates of service use than in improving quality and outcomes of care (Beich, Thorsen, & Rollnick, 2003; Gilbody, House, & Sheldon, 2001; Rollman et al., 2002).

These findings suggest that realized access to care is necessary but not sufficient to improve quality of care on the mental health behavioral interface. Meaningful quality improvement requires attention to the other core dimensions of primary care: comprehensiveness, coordination, and continuity.

Comprehensiveness

Primary Care and Comprehensiveness of Behavioral Services

Can comprehensive behavioral services be provided in primary care? A number of studies have shown that the quality of mental and substance use treatment in primary care settings typically is poor (McGlynn et al., 2003; Saitz, Mulvey, Plough, & Samet, 1997; Wells, Schoenbaum, Unutzer, Lagomasino, & Rubenstein, 1999). Mental health specialists often have interpreted these findings as evidence that primary care providers lack the knowledge or training to provide appropriate treatment for mental disorders (Hodges, Inch, & Silver, 2001; Munoz, Hollon, McGrath, Rehm, & VandenBos, 1994). However, as noted earlier, programs educating primary care providers have proved to have only a limited benefit in improving treatment of behavioral disorders in primary care, suggesting that other, more complex issues are involved.

Primary care providers by definition are responsible for managing a broad range of medical conditions and for preventive services in their patients. The number and complexity of these competing demands increased during the 1990s with the growth of managed care and increasing pressure on primary care providers to treat rather than refer common problems (Sox, 2003). The growth of treatment guidelines and of the medical knowledge base has further increased the pressures; it has been estimated that simply complying with the U.S. Preventive Services Taskforce recommendations would require 7.4 hours of each primary care provider's time each day (Yarnall, Pollak, Ostbyte, Krause, & Michener, 2003). It is important for behavioral health advocates and researchers to remember that these conditions comprise only one of a host of conditions and tasks competing for primary care physicians' attention and time (Klinkman, 1997; Rost et al., 2000).

Comprehensiveness of Primary Care in Persons with Behavioral Conditions

Even when persons with behavioral conditions have one or more primary care visits, there is evidence that comprehensiveness and quality of their primary medical care are substandard (Dixon et al., 2004; Druss, Rosenheck, Desai, & Perlin, 2002; Jones, Clarke, & Carney, 2004). The problem of competing demands may create similar challenges for delivering primary medical care for persons with behavioral disorders as it does in improving their mental health care. Behavioral providers feel stretched in managing their patients' mental and addiction disorders; the thought of adding medical problems to their scope of responsibility may feel overwhelming.

Improving Comprehensiveness of Care

Given the limited time and resources available in primary care settings and in behavioral health settings, how is it possible to improve the care for each type of service without sacrificing care for the other? Information technology (IT) has been widely touted as a strategy to address these trade-offs more broadly in U.S. health care, particularly for its potential to improve quality and efficiency of care simultaneously (Berwick, 2002; Bodenheimer & Grumbach, 2003).

On the behavioral health/primary care interface, IT may include innovations such as patient registries, electronic medical records, or handheld patient records (Freedman, 2003). These systems hold an enormous potential to improve delivery of comprehensive services. However, for IT strategies to fulfill this potential, they must be embedded in a broader quality improvement strategy (Hersh, 2004). If the providers perceive these technologies as simply another "competing demand" on their limited time, they will not be willing to use them, and the technologies will have limited benefit in improving care (Warner, King, Blizart, McClenahan, & Tang, 2000).

Coordination

Coordination of care involves improving the alignment of service delivery across providers, clinics, and organizations. While effective coordination is important for all care delivered on the primary care/mental health interface, it is particularly critical for patients with comorbid conditions. Clinically, medical, addictive, and mental health disorders commonly co-occur; the presence of any one type of disorder is a risk factor for each of the others (Katon, 2003; Kessler, 2004).

Two major barriers exist to more effective coordination of care in patients with comorbid behavioral and medical conditions. First, because comorbid conditions typically are managed across multiple providers and systems of care, they require effective

communication among the clinicians and settings. If primary care providers are unaware of patients' behavioral conditions and treatment, or if specialty behavioral providers are unaware of patients' medical needs, then care may be redundant, inefficient, or at worst, unsafe.

Second, multiplicity of providers and systems of care leads to a diffusion of responsibility. When a person is treated by more than one provider or system of care, which is responsible for ensuring that the care is delivered appropriately?

Primary Care and Coordination of Behavioral Services

The quality of behavioral services in primary care is worse for persons with comorbid medical conditions than it is for general medical populations (Katon et al., 2004). In cases in which primary care providers offer both forms of service, competing demands, described in the previous section, are the major concern. When service is provided by multiple providers in the same system of care, the issue of coordination across those providers becomes a concern.

The greatest challenges for coordination occur when the same patients are treated not only by different providers, but by providers who work in separate systems of care. Approximately 164 million Americans, or two-thirds of those with health insurance, are enrolled in a managed behavioral health program that is financially and organizationally "carved out" from medical care (Open Minds, 2002). While these organizations can provide expertise and economies of scale in managing mental disorders, they create enormous challenges for coordinating care with general medical services (Frank, Huskamp, & Pincus, 2003; Garnick et al., 2001).

Coordination of Primary Care for Patients with Behavioral Disorders

Patients with serious behavioral disorders are typically treated in the public mental health sector. With the exception of the Veterans Administration (VA) health system, the vast majority of this care is effectively "carved out" from public sector medical care and provided in freestanding community mental health centers and substance abuse treatment programs. These programs rarely have the capacity to provide medical care onsite and have few incentives to coordinate care with patients' medical providers (Samet, Friedmann, & Saitz, 2001). This separation leads to lack of effective exchange of information between medical and mental heath providers and lack of accountability for care. The result is that even when patients in this system have a primary care provider, quality of primary care is often poor (Levinson, Druss, Dombrowski, & Rosenheck, 2003).

Improving Coordination

Efforts to improve coordination of care have involved both enhancing communication between medical and behavioral providers and better defining a locus of accountability for care. As with comprehensiveness of care, many efforts to improve communication have emphasized the importance of information technology, such as electronic medical records. However, sharing behavioral information outside the mental and substance systems raises concern about how best to balance effective communication and preservation of patient privacy (Appelbaum, 2002).

The issue of locus of accountability in comorbid conditions is addressed in the "four quadrant" model proposed by the Substance Abuse and Mental Health Services Administration (2002). This framework has been adapted to co-occurring medical and mental health conditions. Briefly, the framework proposes a continuum of care in which, when medical morbidity predominates, patients obtain care in the medical sector, and when mental health morbidity predominates, they are treated in the mental health sector (Mauer, 2004). While it is clearly worth striving for such a continuum of care, it is also important to acknowledge that organizational, geographic, and financing arrangements will likely always play as important a role as clinical considerations in influencing where patients receive their care.

Continuity

Whereas coordination involves organization across geographic and organizational boundaries, continuity involves organization over time. While continuity is important for all patients, it is particularly critical for the treatment of chronic conditions, which by definition persist over time. Both physicians and the systems they work in tend to be ori-

ented toward the treatment of acute conditions, and fare more poorly in managing chronic illnesses.

Primary Care and Continuity of Behavioral Services

The most common cause of poor quality behavioral treatment in primary care is inadequate followup after treatment initiation (Simon, Von Korff, Rutter, & Peterson, 2001; Stein et al., 2004). During the past 20 years, trends in health care insurance have raised particular challenges for delivering continuous care. The cost containment mechanisms associated with managed care, the predominant form of care delivery during the 1990s, reduced continuity of care (Safran, Tarlov, & Rogers, 1994), particularly for individuals with chronic illnesses (Druss, Schlesinger, Thomas, & Allen, 2000). Now, benefits designs are increasingly shifting toward models that rely on high deductibles and copayments to curb expenditures (Robinson, 2004). Work from the RAND Health Insurance Experiment found that mental health services are more sensitive to reduction due to cost sharing than are general health services (Manning, Wells, Duan, Newhouse, & Ware, 1986), reflecting the potential for these structures to reduce continuity of behavioral care. As these plans become more widespread, it will be important to monitor both their broad impact and their particular effects on the care of mental disorders on the primary care/behavioral health interface.

Continuity of Primary Care for Patients with Behavioral Disorders

As is the case for behavioral disorders in primary care, continuity may be the single most challenging dimension of primary care to achieve for patients with mental and addictive disorders (Cohen et al., 2004; DiMatteo, Lepper, & Croghan, 2000). Continuity of primary care for persons treated in the public sector is typically hindered by poverty, underinsurance, social instability, and symptoms of the behavioral conditions themselves.

Improving Continuity

Because of challenges of providing continuous treatment in primary care, models that center accountability for ensuring that patients receive appropriate followup in a separate organization, commonly referred to as "disease management" programs, have enjoyed growing popularity. These programs, which are targeted at managing chronic conditions such as diabetes and depression, are promoted for their ability to increase efficiency, comprehensiveness, and efficiency of care without placing additional burdens on primary care providers.

However, shifting the locus of accountability for care away from primary care teams may involve analogous concerns to those seen in carve-out models, by reducing primary care providers' knowledge of, and responsibility for, these conditions (Casalino, 2005). Similarly, efforts to improve continuity of primary care for persons with mental disorders must ensure both coordination of, and accountability for, care by guaranteeing that these persons receive care from specialty behavioral providers.

Putting It All Together: Multifaceted Interventions for Improving Care on the Behavioral/Primary Care Interface

While a number of approaches can be used to address each of the specific dimensions of primary care at the mental health care/primary care interface, these approaches have had a limited impact on improving quality of care. This recognition has led to the development and testing of multifaceted interventions that simultaneously address multiple dimensions.

Perhaps the best known approach to improving service delivery in primary care is the "chronic care model," a multidimensional approach to the health care for individuals with chronic illnesses developed at Group Health Cooperative of Puget Sound. This model incorporates six elements for improving quality of chronic illness care: self-management support, clinical information systems, delivery system redesign, decision support, health care organization, and community resources (Bodenheimer, Wagner, & Grumbach, 2002).

In the mid-1990s, these models were adapted to the treatment of depression in primary care by Katon and colleagues (1995, 1996). These "collaborative care" models rely on a care manager who *coordinates* care between mental health experts and primary care staff, typically as part of a multidisciplinary team. This care manager facilitates *access* to care

through patient screening and case identification, develops a *comprehensive* treatment plan with the patient, and afterwards works to ensure *continuous* followup with that plan.

A growing number of studies, including several large multi-site randomized trials (Bruce et al., 2004; Dietrich et al., 2004; Rost, Nutting, Smith, Elliott, & Dickinson, 2002; Unutzer et al., 2002; Wells et al., 2000), have demonstrated that these organized programs are highly effective for improving the treatment of depression in primary care (Badamgarav et al., 2004; Gilbody, Whitty, Grimshaw, & Thomas, 2003; Neumeyer-Gromen, Lampert, Stark, & Kallischnigg, 2004). These models have been shown to be as cost-effective as other common health interventions (Pirraglia, Rosen, Hermann, Olchanski, & Neumann, 2004). They have been successfully applied to the treatment of anxiety disorders (Roy-Byrne et al., 2001) and bipolar disorder (Simon et al., 2005), and hold promise for the treatment of addictive disorders (Watkins, Pincus, Tanielian, & Lloyd, 2003). They have also been successfully extended into Community Health Centers and public sector facilities as part of the Institute for Health Improvement/Health Resources and Services Administration "breakthrough" collaboratives (Wagner et al., 2001). At least one study has demonstrated that ethnic minorities may derive greater clinical benefit from these models than whites, suggesting the potential of these approaches to reduce disparities in treatment (Miranda et al., 2003).

Parallel approaches have been tested to improve the quality of primary medical care in persons with serious mental (Druss, Rohrbaugh, Levinson, & Rosenheck, 2001) and addictive (Willenbring & Olson, 1999; Weisner, Mertens, Parthasarathy, Moore, & Lu, 2001) disorders. These approaches appear to improve both the quality of health care and self-reported health status, with similar effect sizes as those of efforts to improve the treatment of mental disorders in primary care. In addiction disorders, these models are also associated with improved rates of abstinence.

The chronic care model has many appealing characteristics for improving care on the primary care/mental health interface. It targets multiple levels of care simultaneously; it includes both mental health and general health providers; and it focuses on improving broad functional outcomes rather than simply reducing symptoms. However, these very strengths create inherent challenges in the broader dissemination of these approaches.

Several characteristics of any innovation (within or outside of health care) have consistently been shown to predict their rate of diffusion: simplicity (versus complexity), compatibility with the existing organizational structure, and relative advantage (e.g., profitability) to the organization (Rogers, 1995). Collaborative care teams, which require hiring new staff and developing new infrastructure such as registries, are relatively complex to implement; it is striking to contrast the slow uptake of these models to the extremely rapid diffusion of SSRI antidepressants (National Center for Health Statistics, 2004). Second, health interventions spanning more than one department or organization are inevitably more difficult to institute than those that are fully housed in a single organizational entity (Bradley et al., 2004). Third, much of the relative advantage of these programs is experienced outside of the systems that are paying for them. Savings from these programs are likely to accrue in a diverse range of settings, including reduced emergency room use and improved workplace productivity, and in health improvements that do not translate into monetary gains.

Improving the uptake of these programs will require attention to these broad principles. It is important to ensure that these models can be introduced incrementally and tailored to fit local needs—"adapted" rather than simply "adopted" (Berwick, 2003). These approaches have largely been developed in staff model Health maintenance organizations (HMOs) and may need to look quite different to be sustainable in carve-out plans or rural settings. Efforts are needed to better align incentives so that primary care providers, mental health practitioners, and patients each share in their relative benefits (Pincus, 2003). Finally, particularly in the public sector, it is critical that such programs be developed and implemented as partnerships with local communities to ensure that they are compatible with those communities' preferences and values (Wells et al., 2004).

Optimizing care on the primary care/behavioral interface requires striking several balances—between specialization and integration, between centralization and local innovation, and between structure and flexibility. These tensions are not unique to mental health care or even health care systems, but rather reflect deep properties of all organizations. The organizational literature reminds us that rather than seeking "one-size-fits-all" approaches to addressing these tensions, we should expect that the correct balance will vary greatly based on local geographic, workforce, and financing structures (Lawrence & Lorsch, 1969). We now have a strong evidence base

demonstrating both the need and the potential to improve access, comprehensiveness, coordination, and continuity on the primary care/behavioral health interface. As we work to translate our "science" into "practice," we must both recognize and embrace this local complexity and diversity.

REFERENCES

Alpert, J., & Charney, E. (1974). *The education of physicians for primary care.* Pub No. (HRA) 74-3113. Rockville, MD: U.S. Department of Health, Education, and Welfare. Public Health Service, Human Resource Administration.

Andersen, R., & Aday, L. A. (1978). Access to medical care in the U.S.: Realized and potential. *Medical Care, 16*(7), 533–546.

Appelbaum, P. S. (2002). Privacy in psychiatric treatment: Threats and responses. *American Journal of Psychiatry, 159*(11), 1809–1818.

Badamgarav, E., Weingarten, S. R., Henning, J. M., Knight, K., Hasselblad, V., Gano, A., Jr., et al. (2004). Disease management programs for depression: A systematic review and meta-analysis of randomized controlled trials. *Medical Care, 42*(12), 1211–1221.

Bartels, S. J. (2004). Caring for the whole person: Integrated health care for older adults with severe mental illness and medical comorbidity. *Journal of the American Geriatric Society, 52*(s12), S249–S257.

Beich, A., Thorsen, T., & Rollnick, S. (2003). Screening in brief intervention trials targeting excessive drinkers in general practice: Systematic review and meta-analysis. *British Medical Journal, 327*(7414), 536–542.

Berwick, D. M. (2002). A user's manual for the IOM's "Quality Chasm" report. *Health Affairs (Millwood), 21*(3), 80–90.

Berwick, D. M. (2003). Disseminating innovations in health care. *JAMA. 289*(15), 1969–1975.

Bodenheimer, T., & Grumbach, K. (2003). Electronic technology: A spark to revitalize primary care? *JAMA,* 290(2), 259–264.

Bodenheimer, T., Wagner, E. H., & Grumbach, K. (2002). Improving primary care for patients with chronic illness. *JAMA, 288*(14), 1775–1779.

Bradley, E. H., Webster, T. R., Baker, D., Schlesinger, M., Inouye, S. K., Barth, M. C., et al. (2004). Translating research into practice: speeding the adoption of innovative health care programs. *Issue Brief.* (Commonwealth Fund), (724), 1–12.

Bruce, M. L., Ten Have, T. R., Reynolds, C. F., 3rd, Katz, I. I., Schulberg, H. C., Mulsant, B. H., et al. (2004). Reducing suicidal ideation and depressive symptoms in depressed older primary care patients: A randomized controlled trial. *JAMA, 291*(9), 1081–1091.

Buchsbaum, D. G., Buchanan, R. G., Poses, R. M., Schnoll, S. H., & Lawton, M. J. (1992). Physician detection of drinking problems in patients attending a general medicine practice. *Journal of General Internal Medicine, 7*(5), 517–521.

Casalino, L. P. (2005). Disease management and the organization of physician practice. *JAMA, 293*(4), 485–488.

Cohen, M. H., Cook, J. A., Grey, D., Young, M., Hanau L. H., Tien, P., et al. (2004). Medically eligible women who do not use HAART: The importance of abuse, drug use, and race. *American Journal of Public Health, 94*(7), 1147–1151.

Demyttenaere, K., Bruffaerts, R., Posada-Villa, J., Gasquet, I., Kovess, V., Lepine, J. P., et al. (2004). WHO World Mental Health Survey Consortium. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *JAMA, 291*(21), 2581–2590.

Dietrich, A. J., Oxman, T. E., Williams, J. W., Jr., Schulberg, H. C., Bruce, M. L., Lee, P. W., et al. (2004). Re-engineering systems for the treatment of depression in primary care: Cluster randomised controlled trial. *British Medical Journal, 329*(7466), 602.

DiMatteo, M. R., Lepper, H. S., & Croghan, T. W. (2000). Depression is a risk factor for noncompliance with medical treatment: Meta-analysis of the effects of anxiety and depression on patient adherence. *Archives of Internal Medicine, 160*(14), 2101–2107.

Dixon, L. B., Kreyenbuhl, J. A., Dickerson, F. B., Donner, T. W., Brown, C. H., Wolheiter, K., et al. (2004). A comparison of type 2 diabetes outcomes among persons with and without severe mental illnesses. *Psychiatric Services, 55*(8), 892–900.

Donaldson, M., Yordy, K., Lohr, K., & Nasselow, N. (Eds.). (1996). *Primary care: America's health in a new era.* Institute of Medicine. Washington, DC: National Academy Press.

Donohue, J. M., Berndt, E. R., Rosenthal, M., Epstein, A. M., & Frank, R. G. (2004). Effects of pharmaceutical promotion on adherence to the treatment guidelines for depression. *Medical Care, 42*(12), 1176–1185.

Druss, B. G., Rohrbaugh, R. M., Levinson, C. M., & Rosenheck, R. A. (2001). Integrated medical care for patients with serious psychiatric illness: A randomized trial. *Archives of General Psychiatry, 58*(9), 861–868.

Druss, B. G., & Rosenheck, R. A. (2000). Locus of mental health treatment in an integrated service system. *Psychiatric Services, 51*(7), 890–892.

Druss, B. G., Rosenheck, R. A., Desai, M. M., & Perlin, J. B. (2002). Quality of preventive medical care for patients with mental disorders. *Medical Care, 40*(2), 129–136.

Druss, B. G., Schlesinger, M., Thomas, T., & Allen, H. (2000). Chronic illness and plan satisfaction under managed care. *Health Affairs (Millwood), 19*(1), 203–209.

Edlund, M. J., Unutzer, J., & Wells, K. B. (2004). Clinician screening and treatment of alcohol, drug, and mental problems in primary care: Results from healthcare for communities. *Medical Care, 42*(12), 1158–1166.

Frank, R. G., Huskamp, H. A., & Pincus, H. A. (2003). Aligning incentives in the treatment of depression in primary care with evidence-based practice. *Psychiatric Services, 54*(5), 682–687.

Freedman, J. (2003). The role of information technology in evidenced-based practice. *Psychiatric Clinics of North America, 26*(4), 833–850.

Garnick, D. W., Horgan, C. M., Hodgkin, D., Merrick, E. L., Goldin, D., Ritter, G., et al. (2001). Risk transfer and accountability in managed care organizations' carve-out contracts. *Psychiatric Services, 52*(11), 1502–1509.

Gilbody, S. M., House, A. O., & Sheldon, T. A. (2001). Routinely administered questionnaires for depression and anxiety: Systematic review. *British Medical Journal, 322*(7283), 406–409.

Gilbody, S., Whitty, P., Grimshaw, J., & Thomas, R. (2003). Educational and organizational interventions to improve the management of depression in primary care: A systematic review. *JAMA, 289*(23), 3145–3151.

Glover, R. W., Birkel, R., Faenza, M., & Bernstein, R. (2003). New Freedom Commission Report. The Campaign for Mental Health Reform: A new advocacy partnership. *Psychiatric Services, 54,* 1475–1479.

Golomb, B. A., Pyne, J. M., Wright, B., Jaworski, B., Lohr, J. B., & Bozzette, S. A. (2000). The role of psychiatrists in primary care of patients with severe mental illness. *Psychiatric Services, 51*(6), 766–773.

Graber, M. A., Bergus, G., Dawson, J. D., Wood, G. B., Levy, B. T., & Levin, I. (2000). Effect of a patient's psychiatric history on physicians' estimation of probability of disease. *Journal of General Internal Medicine, 15*(3), 204–206.

Hersh, W. (2004). Health care information technology: Progress and barriers. *JAMA, 292*(18), 2273–2274.

Hirschfeld, R. M., Keller, M. B., Panico, S., Arons, B. S., Barlow, D., Davidoff, F., et al. (1997). The National Depressive and Manic-Depressive Association consensus statement on the undertreatment of depression. *JAMA, 277*(4), 333–340.

Hodges, B., Inch, C., & Silver, I. (2001). Improving the psychiatric knowledge, skills, and attitudes of primary care physicians, 1950–2000: A review. *American Journal of Psychiatry, 158*(10), 1579–1586.

Jeste, D. V., Gladsjo, J. A., Lindamer, L. A., & Lacro, J. P. (1996). Medical comorbidity in schizophrenia. *Schizophrenia Bulletin, 22*(3), 413–430.

Jones, L. E., Clarke, W., & Carney, C. P. (2004). Receipt of diabetes services by insured adults with and without claims for mental disorders. *Medical Care, 42*(12), 1167–1175.

Katon, W. J. (2003). Clinical and health services relationships between major depression, depressive symptoms, and general medical illness. *Biological Psychiatry, 54*(3), 216–226.

Katon, W., Robinson, P., Von Korff, M., Lin, E., Bush, T., Ludman, E., et al. (1996). A multifaceted intervention to improve treatment of depression in primary care. *Archives of General Psychiatry, 53*(10), 924–932.

Katon, W. J., Simon, G., Russo, J., Von Korff, M., Lin, E. H., & Ludman, E. (2004). Quality of depression care in a population-based sample of patients with diabetes and major depression. *Medical Care, 42*(12), 1222–1229.

Katon, W., Von Korff, M., Lin, E., Walker, E., Simon, G. E., Bush, T., et al. (1995). Collaborative management to achieve treatment guidelines. Impact on depression in primary care. *JAMA, 273*(13), 1026–1031.

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., et al. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Archives of General Psychiatry, 51,* 8–19.

Kessler, R. C. (2004). The epidemiology of dual diagnosis. *Biological Psychiatry, 56*(10), 730–737.

Klinkman, M. S. (1997). Competing demands in psychosocial care. A model for the identification and treatment of depressive disorders in primary care. *General Hospital Psychiatry, 19*(2), 98–111.

Koran, L. M., Sox, H. C., Jr., Marton, K. I., Moltzen, S., Sox, C. H., Kraemer, H. C., et al. (1989). Medical evaluation of psychiatric patients. I. Results in a state mental health system. *Archives of General Psychiatry, 46*(8), 733–740.

Koryani, E. K. (1979). Morbidity and rate of undiagnosed physical illness in a psychiatric clinic population. *Archives of General Psychiatry, 36,* 414–419.

Koyanagi, C. (2004). *Get it together: How to integrate physical and mental health care for people with serious mental disorders.* Washington, DC: Bazelon Center.

Krauss, N. A., Machlin, S., & Kass, B. L. (2001). Research findings #7: Use of health care services, 1996. Rockville, MD: Agency for Healthcare Research and Quality. http://www.meps.ahrq.gov/papers/rf7_99-0018/rf7.htm. Accessed July 12, 2005.

Lawrence, P. R., & Lorsch, J. W. (1969). *Organization and environment: Managing differentiation and integration.* Richard D. Irwin, Inc.

Levinson, M. C., Druss, B. G., Dombrowski, E. A., & Rosenheck, R. A. (2003). Barriers to primary medical care among patients at a community mental health center. *Psychiatric Services, 54*(8), 1158–1160.

Lin, E. H., Katon, W., Von Korff, M., Rutter, C., Simon, G. E., Oliver, M., et al. (2004). Relationship of depression and diabetes self-care, medication adherence, and preventive care. *Diabetes Care, 27*(9), 2154–2160.

Lin, E. H., Simon, G. E., Katzelnick, D. J., & Pearson, S. D. (2001). Does physician education on depression management improve treatment in primary care? *Journal of General Internal Medicine, 16*(9), 614–619.

Manning, W. G., Jr., Wells, K. B., Duan, N., Newhouse, J. P., & Ware, J. E., Jr. (1986). How cost sharing affects the use of ambulatory mental health services. *JAMA, 256*(14), 1930–1934.

Marder, S. R., Essock, S. M., Miller, A. L., Buchanan, R. W., Casey, D. E., Davis, J. M., et al. (2004). Physical health monitoring of patients with schizophrenia. *American Journal of Psychiatry, 161*(8), 1334–1349.

Mauer, B. J. (2004). *Behavioral health/primary care integration. The four quadrant model and evidence-based practices.* Rockville, MD: National Council for Community Behavioral Healthcare.

McGlynn, E. A., Asch, S. M., Adams, J., Keesey, J., Hicks, J., DeCristofaro, A., et al. (2003). The quality of health care delivered to adults in the United States. *New England Journal of Medicine, 348*(26), 2635–2645.

Mechanic, D., McAlpine, D. D., & Rosenthal, M. (2001). Are patients' office visits with physicians getting shorter? *New England Journal of Medicine, 344*(3), 198–204.

Miranda, J., Duan, N., Sherbourne, C., Schoenbaum, M., Lagomasino, I., Jackson-Triche, M., et al. (2003). Improving care for minorities: Can quality improvement interventions improve care and outcomes for depressed minorities? Results of a randomized, controlled trial. *Health Service Research, 38*(2), 613–630.

Munoz, R. F., Hollon, S. D., McGrath, E., Rehm, L. P., & VandenBos, G. R. (1994). On the AHCPR depression in primary care guidelines. Further considerations for practitioners. *The American Psychologist, 49*(1), 42–61.

National Center for Health Statistics. (2004). *Health, United States, 2004 with chartbook on trends in the health of Americans.* Table 87 (page 1 of 3). Selected prescription and nonprescription drugs recorded during physician office visits and hospital outpatient department visits, by age and sex: United States, 1995–96 and 2001–02. Hyattsville, MD: Author.

National Institute of Mental Health. Real men, real depression. http://menanddepression.nimh.nih.gov/. Accessed July 12, 2005.

Neumeyer-Gromen, A., Lampert, T., Stark, K., & Kallischnigg, G. (2004). Disease management programs for depression: A systematic review and meta-analysis of randomized controlled trials. *Medical Care, 42*(12), 1211–1221.

Olfson, M., Marcus, S. C., Druss, B., Elinson, L., Tanielian, T., & Pincus, H. A. (2002). National trends in the outpatient treatment of depression. *JAMA, 287*(2), 203–209.

Open Minds. (2002). *Yearbook of managed behavioral health and employee assistance program market share in the United States, 2002–2003.* Gettysburg, PA: Author.

Pancholi, M. (2004). *Reasons for lacking a usual source of care: 2001 estimates for the U.S. civilian noninstitutionalized population.* Statistical brief #32. Rockville, MD. Agency for Healthcare Research and Quality, http://www.meps.ahrq.gov/papers/st32/stat32.htm. Accessed July 12, 2005.

Pincus, H. A. (2003). The future of behavioral health and primary care: Drowning in the mainstream or left on the bank? *Psychosomatics, 44*(1), 1–11.

Pincus, H. A., Tanielian, T. L., Marcus, S. C., Olfson, M., Zarin, D. A., Thompson, J., et al. (1998). Prescribing trends in psychotropic medications: Primary care, psychiatry, and other medical specialties. *JAMA, 279*(7), 526–531.

Pirraglia, P. A., Rosen, A. B., Hermann, R. C., Olchanski, N. V., & Neumann, P. (2004). Cost-utility analysis studies of depression management: A systematic review. *American Journal of Psychiatry, 161*(12), 2155–2162.

Robins, L. N., & Regier, D. A. (Eds.). (1991). *Psychiatric disorders in America: The Epidemiological Catchment Area Study.* New York: Free Press.

Robinson, J. C. (2004). Reinvention of health insurance in the consumer era. *JAMA, 291*(15), 1880–1886.

Rogers, E. M. (1995). Attributes of innovations and their rates of adoption. In *Diffusion of innovations* (4th ed.) (pp. 204–251). New York: Free Press.

Rollman, B. L., Hanusa, B. H., Gilbert, T., Lowe, H. J., Kapoor, W. N., & Schulberg, H. C. (2001). The electronic medical record. A randomized trial of its impact on primary care physicians' initial management of major depression. *Archives of Internal Medicine, 161*(2), 189–197.

Rollman, B. L., Hanusa, B. H., Lowe, H. J., Gilbert, T., Kapoor, W. N., & Schulberg, H. C. (2002). A randomized trial using computerized decision support to improve treatment of major depression in primary care. *Journal of General Internal Medicine, 17*(7), 493–503.

Rost, K., Nutting, P., Smith, J., Coyne, J. C., Cooper-Patrick, L., & Rubenstein, L. (2000). The role of competing demands in the treatment provided primary care patients with major depression. *Archives of Family Medicine, 9*(2), 150–154.

Rost, K., Nutting, P., Smith, J. L., Elliott, C. E., & Dickinson, M. (2002). Managing depression as a chronic disease: A randomised trial of ongoing treatment in primary care. *BMJ, 325*(7370), 934.

Roy-Byrne, P. P., Katon, W., Cowley, D. S., & Russo, J. (2001). A randomized effectiveness trial of collaborative care for patients with panic disorder in primary care. *Archives of General Psychiatry, 58*(9), 869–876.

Roy-Byrne, P., Russo, J., Dugdale, D. C., Lessler, D., Cowley, D., & Katon, W. (2002). Undertreatment of panic disorder in primary care: Role of patient and physician characteristics. *Journal of the American Board of Family Practice, 15*(6), 443–450.

Safran, D. G., Tarlov, A. R., & Rogers, W. H. (1994). Primary care performance in fee-for-service and prepaid health care systems. Results from the Medical Outcomes Study. *JAMA 271*(20), 1579–1586.

Saitz, R., Mulvey, K. P., Plough, A., & Samet, J. H. (1997). Physician unawareness of serious substance abuse. *American Journal of Drug and Alcohol Abuse, 23,* 343–354.

Samet, J. H., Friedmann, P., & Saitz, R. (2001). Benefits of linking primary medical care and substance abuse services: Patient, provider, and societal perspectives. *Archives of Internal Medicine, 161*(1), 85–91.

Samet, J. H., Larson, M. J., Horton, N. J., Doyle, K., Winter, M., & Saitz, R. (2003). Linking alcohol- and drug-dependent adults to primary medical care: A randomized controlled trial of a multi-disciplinary health intervention in a detoxification unit. *Addiction, 98*(4), 509–516.

Shore, J. H. (1996). Psychiatry at a crossroad: Our role in primary care. *American Journal of Psychiatry, 153*(11), 1398–1403.

Simon, G. E., Ludman, E., Unutzer, J., Bauer, M., Rutter, C., & Operskalski, B. (2005). Randomized trial of a population-based care program for people with bipolar disorder. *Psychological Medicine, 35*(1), 13–24.

Simon, G. E., Von Korff, M., Rutter, C. M., & Peterson, D. A. (2001). Treatment process and outcomes for managed care patients receiving new antidepressant prescriptions from psychiatrists and primary care physicians. *Archives of General Psychiatry, 58*(4), 395–401.

Sokal, J., Messias, E., Dickerson, F. B., Kreyenbuhl, J., Brown, C. H., Goldberg, R. W., et al. (2004). Comorbidity of medical illnesses among adults with serious mental illness who are receiving community psychiatric services. *Journal of Nervous and Mental Disease, 192*(6), 421–7

Sox, H. C. (2003). The future of primary care. *Annals of Internal Medicine, 138*(3), 230–232.

Starfield, B. (1996). Public health and primary care: A framework for proposed linkages. *American Journal of Public Health, 86*(10), 1365–1369.

Starfield, B. (1998). *Primary care: Balancing health needs, services, and technology.* New York: Oxford University Press.

Stein, M. B., Sherbourne, C. D., Craske, M. G., Means-Christensen, A., Bystritsky, A., Katon, W., et al. (2004). Quality of care for primary care patients with anxiety disorders. *American Journal of Psychiatry, 161*(12), 2230–2237.

Stein, M. D. (1999). Medical consequences of substance abuse. *Psychiatric Clinics of North America, 22*(2), 351–370.

Substance Abuse and Mental Health Services Administration. (2002). *Report to Congress on the prevention and treatment of co-occurring substance abuse disorders and mental disorders.* Rockville, MD: U.S. Department of Health and Human Services. Substance Abuse and Mental Health Services Administration.

Thompson, C., Kinmonth, A. L., Stevens, L., Peveler, R. C., Stevens, A., Ostler, K. J., et al. (2000). Effects of a clinical-practice guideline and practice-based education on detection and outcome of depression in primary care: Hampshire Depression Project randomised controlled trial. *Lancet, 355,* 50–57.

Unutzer, J., Katon, W., Callahan, C. M., Williams, J. W., Jr., Hunkeler, E., Harpole, L., et al. (2002). IMPACT investigators. Improving mood-promoting access to collaborative treatment. Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. *JAMA, 288*(22), 2836–2845.

Van Voorhees, B. W., Cooper, L. A., Rost, K. M., Nutting, P., Rubenstein, L. V., Meredith, L., et al. (2003). Primary care patients with depression are less accepting of treatment than those seen by mental health specialists. *Journal of General Internal Medicine, 18*(12), 991–1000.

Wagner, E. H., Glasgow, R. E., Davis, C., Bonomi, A. E., Provost, L., McCulloch, D., et al. (2001). Quality improvement in chronic illness care: A collaborative approach. *Joint Commission Journal on Quality Improvement, 27*(2), 63–80.

Wang, P. S., Demler, O., & Kessler, R. C. (2002). Adequacy of treatment for serious mental illness in the United States. *American Journal of Public Health, 92*(1), 92–98.

Warner, J. P., King, M., Blizard, R., McClenahan, Z., & Tang, S. (2000). Patient-held shared care records for individuals with mental illness. Randomised controlled evaluation. *British Journal of Psychiatry, 177,* 319–324.

Watkins, K., Pincus, H. A., Tanielian, T. L., & Lloyd, J. (2003). Using the chronic care model to improve treatment of alcohol use disorders in primary care settings. *Journal of Studies on Alcohol, 64*(2), 209–218.

Weisner, C., Mertens, J., Parthasarathy, S., Moore, C., & Lu, Y. (2001). Integrating primary medical care with addiction treatment: A randomized controlled trial. *JAMA, 286*(14), 1715–1723.

Wells, K., Miranda, J., Bruce, M. L., Alegria, M., & Wallerstein, N. (2004). Bridging community intervention and mental health services research. *American Journal of Psychiatry, 161*(6), 955–963.

Wells, K. B., Schoenbaum, M., Unutzer, J., Lagomasino, I. T., & Rubenstein, L.V. (1999). Quality of care for primary care patients with depression in managed care. *Archives of Family Medicine, 8*(6), 529–536.

Wells, K. B., Sherbourne, C., Schoenbaum, M., Duan, N., Meredith, L., Unutzer, J., et al. (2000). Impact of disseminating quality improvement programs for depression in managed primary care: A randomized controlled trial. *JAMA, 283*(2), 212–220.

Willenbring, M. L., & Olson, D. H. (1999). A randomized trial of integrated outpatient treatment for medically ill alcoholic men. *Archives of Internal Medicine, 159*(16), 1946–1952.

Yarnall, K. S., Pollak, K. I., Ostbye, T., Krause, K. M., & Michener, J. L. (2003). Primary care: Is there enough time for prevention? *American Journal of Public Health, 93*(4), 635–641.

Chapter 14

The Primary Care of Mental Disorders in the United States

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Summary

Although the general medical sector traditionally has played an important role in the treatment of people with mental disorders, it has undergone dramatic changes during the past decade. For this reason, up-to-date information on the use of primary care for mental disorders in the United States is urgently needed.

In this chapter, we provide data on the patterns and predictors of 12-month mental health treatment in the general medical sector from the National Comorbidity Survey Replication (NCS-R). The NCS-R is a nationally representative face-to-face household survey of 9,282 English-speaking respondents ages 18 and older carried out between February 2001 and April 2003. Respondents were given a fully structured diagnostic interview, using the World Health Organization (WHO) World Mental Health (WMH) Survey Initiative version of the Composite International Diagnostic Interview (WMH-CIDI). The proportions of respondents with 12-month *Diagnostic and Statistical Manual of Mental Disorders, 4th ed.* (DSM-IV) anxiety, mood, impulse control, and substance abuse disorders who received treatment in the 12 months before the interview in the general medical sector were calculated. These proportions of respondents were compared with the proportions using other service sectors (specialty mental health, human services, and complementary-alternatives). The number of visits made in the prior year and the proportion of patients who received minimally adequate treatment were also assessed.

A larger proportion of respondents (9.3 percent), including those with (22.8 percent) and without (4.7 percent) 12-month DSM-IV disorders, received men-

tal health services in the general medical sector in the prior year than in any other sector. However, the mean number of 12-month visits among those treated in the general medical sector (2.6) was considerably lower than in any other sector. Furthermore, only a third of treated cases in the general medical sector received minimally adequate treatment; even employing our broadest definition, this percentage was again lower than for cases treated in any other sector. Among those treated in the health care system, receiving specifically primary care for mental disorders was related to being older aged, female, less educated, not married, and living in rural areas.

Although the use of primary care to treat mental disorders in the United States has grown rapidly during the past decade, the intensity and adequacy of those treatments remain poor. We provide possible explanations for these findings, including the many structural and financial barriers primary care providers now face. We close by suggesting some new perspectives and policy directions that may be needed to improve the primary care of mental disorders in the United States.

Background

The primary care sector traditionally has played an important role in the treatment of people with mental disorders in the United States. In the Epidemiologic Catchment Area (ECA) study conducted in the 1980s, 12.7 percent of respondents with 12-month DSM-III (American Psychiatric Association, 1980) mental disorders received treatment in the general medical sector in the year before interview—a proportion equal to those receiving care in the mental health specialty sector (Regier et al., 1993). In the National Comorbidity Survey (NCS) conducted in the 1990s, the proportion of respondents with DSM-III-R (American Psychiatric Association, 1987) disorders receiving treatment in the general medical sector was 7.9 percent, a smaller proportion than those treated in the specialty sector (12.4 percent), but not dramatically so (Kessler & Wang, 1999).

Since then, there have been many important changes with potentially large impacts on the primary care of mental disorders in the United States. The recent Surgeon General's Report (U.S. Department of Health and Human Services, 1999) and the President's New Freedom Commission on Mental Health (2004) have emphasized detection of mental disorders and use of evidence-based treatments in general medical settings. Community campaigns promoting awareness, screening, and help-seeking for mental disorders largely in primary care have been launched (Hirschfeld et al., 1997; Jacobs, 1995). The introduction of newer, more tolerable pharmacologic treatments has made it easier for primary care providers to treat people with mental disorders (Leucht, Pitschel-Walz, Abraham, & Kissling, 1999; Olfson et al., 2002a; Schatzberg & Nemeroff, 2004). The era of managed care also has brought with it greater emphasis on the delivery of mental health treatments in primary care settings (Sturm & Klap, 1999; Weissman, Pettigrew, Sotsky, & Regier, 2000; Williams, 1998; Williams et al., 1999). The increasing "medicalization" of mental health care and direct-to-consumer advertising of pharmacological treatments have further increased consumer demand for general medical services (Relman, 1980; Rosenthal, Berndt, Donohue, Frank, & Epstein, 2002).

Up-to-date data are imperative to assess the impact of these changes and to identify the role that the general medical sector now plays in caring for people with mental disorders. Earlier research found that the recognition of mental disorders in primary care was poor, with as many as half of active cases not receiving correct diagnoses (Simon & Von Korff, 1995). Furthermore, rates of treatment initiation and the quality of treatments for mental disorders in primary care have been low, with only the minority of patients receiving care that meets minimal quality standards (Wang, Berglund, & Kessler, 2000; Wang, Demler, & Kessler, 2002; Wells, Schoenbaum, Unutzer, Lagomasino, & Rubenstein, 1999; Young, Klap, Sherbourne, & Wells, 2001). Up-to-date data on the intensity and adequacy of treatments received in primary care are crucial to guide future policy initiatives in this area.

The goals of this chapter are to provide basic descriptive data on the primary care of mental disorders from the NCS-R, conducted between 2001 and 2003 (Kessler et al., in press a). We first identify the proportions of cases with 12-month mental disorders who obtain any treatment in the general medical as well as other service sectors. We also calculate the typical number of visits made and the proportion receiving minimally adequate treatment for mental disorders in primary care and compare these numbers to other service sectors. Finally, we identify demographic correlates of seeking health care treatment for mental disorders in the general medical sector.

Methods

Sample

The NCS-R is a nationally representative face-to-face household survey of respondents ages 18 and older in the coterminous United States (Kessler et al., in press a; Kessler & Merikangas, in press). Interviews were carried out between February 2001 and April 2003 on 9,282 respondents. A core diagnostic assessment was administered to all respondents in Part I. Part II contained assessments of risk factors, correlates, service use, and additional disorders and was given to all Part I respondents with lifetime disorders plus a probability subsample of other respondents. Recruitment, consent, and field procedures used in the NCS-R were approved by the Human Subjects Committees of both Harvard Medical School and the University of Michigan. The overall NCS-R response rate was 70.9 percent.

Measures

WHO WMH-CIDI Survey: Diagnostic assessments of 12-month mental disorders were made using WHO's WMH Survey Initiative version of the CIDI (Kessler & Ustun, in press). The WMH-CIDI is a fully structured lay-administered diagnostic interview that generates both ICD-10 (WHO, 1991) and DSM-IV (American Psychiatric Association, 1994) diagnoses. Twelve-month disorders considered here include mood (bipolar I and II disorders, major depressive disorder, and dysthymia), anxiety (panic disorder, agoraphobia without panic, specific phobia, social phobia, generalized anxiety disorder, obsessive-compulsive disorder, post-traumatic stress disorder, and separation anxiety disorder), impulse-control (intermittent explosive disorder), and substance disorders (alcohol and drug abuse and dependence). Organic exclusions were employed with diagnostic hierarchy rules (except for substance disorders for which abuse is defined with or without dependence). The Structured Clinical Interview for DSM-IV (SCID) (First, Spitzer, & Williams, 1995) was used to conduct blind clinical reappraisals (Kessler et al., under review). These reappraisals showed generally good concordance between WMH-CIDI lifetime diagnoses and the SCID for anxiety, mood, and substance disorders (lifetime diagnoses of WMH-CIDI impulse-control disorders have not been validated). Evaluation of WMH-CIDI 12-month diagnoses is currently ongoing.

Mental Health Service Use in the Year Prior to Interview: Initial questions asked all Part II respondents whether they ever received treatment for "problems with your emotions or nerves or your use of alcohol or drugs." Respondent booklets were provided as visual recall aids and contained lists of the types of treatment providers. Assessments included different types of professionals, support groups, self-help groups, mental health crisis hotlines (assumed to be visits with nonpsychiatrist mental health specialists), complementary and alternative medicine (CAM) therapies, and use of treatment settings such as hospitals and other facilities (each day of admission was assumed to include a visit with a psychiatrist). Respondents were then asked followup questions about their age at first and most recent contacts as well as the number and duration of visits in the past 12 months.

Endorsements of 12-month service use were classified into the following categories: psychiatrist; nonpsychiatrist mental health specialist (psychologist or other nonpsychiatrist mental health professional in any setting, social worker or counselor in a mental health specialty setting, or use of a mental health hotline); general medical provider (primary care doctor, other general medical doctor, nurse, or any other health professional not previously mentioned); human services professional (religious or spiritual advisor, or social worker or counselor in any setting other than a specialty mental health setting); and CAM professional (any other type of healer, such as chiropractor, participation in an internet support group, or participation in a self-help group). Psychiatrist and nonpsychiatrist specialist categories were combined into a broader mental health specialty (MHS) category; MHS was also combined with general medical (GM) into an even broader health care (HC) category. Human Services (HS) and CAM providers were also combined into a Non-Health Care (NHC) category.

Definitions of Minimally Adequate Treatment: We initially created a broad definition of minimally adequate treatment to accommodate respondents who began treatments shortly before the NCS-R interview and therefore might not have had time to fulfill requirements, even if they were in the process of receiving adequate treatment. Furthermore, this broad definition of minimally adequate treatment was designed to accommodate the possibility that respondents may have been receiving very brief treatments that have been developed for certain disorders (Ballesteros, Duffy, Querejata, Arino, & Gonzales-Pinto, 2004; Ost, Ferebee, & Furmark, 1997). This broad definition of minimally adequate treatment consisted of receiving ≥ two visits to an appro-

priate treatment sector (i.e., one visit for presumptive evaluation/diagnosis and ≥ one visit for treatment) or being in ongoing treatment at interview.

We also attempted to construct a narrower definition of minimally adequate treatment based on available evidence-based guidelines (Agency for Health Care Policy and Research, 1993; American Psychiatric Association, 1998, 2000, 2002, 2004; Lehman & Steinwachs, 1998). This consisted of receiving either pharmacotherapy (≥ 2 months of an appropriate medication for the focal disorder plus ≥ four visits to any type of medical doctor) or psychotherapy (≥ eight visits with any health care or human services professional lasting an average of ≥ 30 minutes). We required ≥ four physician visits for pharmacotherapy based on the fact that ≥ four visits for medication evaluation, initiation, and monitoring are generally recommended during the acute and continuation phases of treatment in available guidelines (Agency for Health Care Policy and Research, 1993; American Psychiatric Association, 1998, 2000, 2002, 2004; Lehman & Steinwachs, 1998). Medications considered appropriate for disorders included antidepressants for depressive disorders; mood stabilizers or antipsychotics for bipolar disorders; antidepressants or anxiolytics for anxiety disorders; antagonists or agonists (e.g., disulfiram, naltrexone, or methodone) for alcohol and substance disorders; and any psychiatric drug for impulse control disorders (Schatzberg & Nemeroff, 2004). We required at least eight sessions for minimally adequate psychotherapy because clinical trials demonstrating effectiveness have generally included ≥ eight psychotherapy visits (Agency for Health Care Policy and Research, 1993; American Psychiatric Association, 1998, 2000, 2002, 2004; Lehman & Steinwachs, 1998). Self-help visits of any duration were counted as psychotherapy visits for alcohol and substance disorders.

For respondents with comorbid disorders, treatment adequacy was defined separately for each 12-month disorder (i.e., a respondent with comorbid disorders could be classified as receiving minimally adequate treatment for one disorder but not for another).

Predictor Variables: Demographic variables examined as potential predictors of service use included cohort (defined by age at interview and categorized as 18–29, 30–44, 45–59, 60+); gender; race-ethnicity (Non-Hispanic White, Non-Hispanic Black, Hispanic, Other); completed years of education (0–11, 12, 13–15, and 16+); marital status (married-cohabitating, previously married, never married); family income in relation to the Federal poverty line (categorized as low [≤ 1.5 times the poverty line], low average [1.5+ to 3 times], high-average [3+ to 6 times], and high [6+ times]; urbanicity defined according to 2000 Census (U.S. Census Bureau, 2000) definitions (large and smaller Metropolitan Areas; Central Cities, Suburbs, and Adjacent Areas; and Rural Areas); and health insurance coverage (including private, public, or military sources).

Analyses: NCS-R data were first weighted to adjust for differences in probabilities of selection, differential nonresponse, residual differences between the sample and the U.S. population, and oversampling in the Part II sample (Kessler et al., under review).

We examined basic patterns of service use by calculating the percentages receiving treatment in any and particular service sectors, the frequency of visits among those in treatment, and probabilities of treatments meeting criteria for our broad and narrow definitions of minimal adequacy. We examined the sociodemographic predictors of receiving any 12-month treatment in the total sample and treatment in the general medical sector among those receiving any health care treatment using logistic regression (Hosmer & Lemeshow, 1989) analysis.

The Taylor series method as implemented in SUDAAN (2002) was used to estimate standard errors. Statistical significance was evaluated using two-sided design-based tests and the .05 level of significance. Wald χ^2 tests were used to test significance in logistic regression analyses and were based on coefficient variance–covariance matrices adjusted for design effects using the Taylor series method.

Results

Twelve-Month Use of the General Medical Sector for Mental Health Services: In the total sample, 9.3 percent of respondents received mental health services in the general medical sector in the prior year, a percentage higher than for any other sector. The proportions using the general medical sector were also greater than for any other sector when the sample was broken down into those with 12-month mental disorders (22.8 percent) and without (4.7 percent). Among cases with specific 12-month DSM-IV disorders, the proportions receiving treatment in the general medical sector were highest for those with panic (43.7 percent), dysthymia (39.6 percent), bipolar (33.1 percent), or major depressive disorder (32.5 percent) and lowest for specific phobia (21.2 percent), alcohol dependence (19.3 percent), alcohol abuse (16.4 percent), or intermittent explosive disorder (12.6 percent) (table 14.1).

Table 14.1. Prevalence of 12-month mental-health service use in separate service sectors by 12-month DSM-IV/WMH-CIDI disorder

	Health care										Nonhealth care								
	Mental health specialty																		
	Psychiatrist		Non-psychiatrist[2]		Any		General medical[3]		Any		Human services[4]		CAM[5]		Any		Any service use		n[1]
	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	
I. Anxiety Disorders																			
Panic disorder	21.4	(2.5)	24.5	(2.8)	34.6	(2.6)	43.2	(3.2)	58.5	(3.3)	14.1	(2.3)	8.2	(1.9)	19.9	(2.5)	65.0	(3.3)	251
Agoraphobia without panic	23.5	(6.0)	28.5	(6.0)	33.5	(6.7)	24.1	(5.2)	45.8	(7.0)	19.3	(5.5)	12.3	(3.2)	23.2	(5.7)	52.6	(7.4)	79
Specific phobia	12.1	(1.6)	13.6	(1.4)	19.0	(1.8)	21.2	(1.5)	32.5	(2.0)	10.0	(1.3)	7.0	(0.8)	14.5	(1.3)	38.1	(1.9)	811
Social phobia	15.1	(1.5)	18.8	(1.5)	24.6	(1.5)	25.1	(1.7)	39.9	(1.8)	9.5	(1.3)	7.7	(1.0)	15.1	(1.2)	45.6	(1.9)	634
Generalized anxiety disorder	16.8	(2.3)	19.8	(2.6)	28.3	(2.9)	33.9	(2.8)	45.9	(2.9)	14.2	(2.1)	11.4	(1.6)	22.2	(2.2)	53.7	(2.5)	288
Post-traumatic stress disorder	22.3	(2.2)	26.1	(2.3)	33.8	(2.8)	30.6	(2.5)	49.3	(3.2)	16.2	(2.9)	12.7	(2.0)	23.9	(2.4)	56.8	(3.3)	201
Obsessive-compulsive disorder	30.0	(10.0)	31.5	(10.0)	37.0	(10.4)	37.6	(11.2)	51.2	(11.5)	15.5	(7.8)	5.0	(3.7)	20.5	(9.2)	51.2	(11.5)	18
Separation anxiety disorder	21.2	(6.8)	16.1	(6.5)	27.7	(8.0)	26.7	(9.4)	37.9	(10.0)	17.4	(7.7)	13.9	(5.6)	28.7	(9.0)	44.9	(10.9)	27
Any anxiety disorder	13.0	(1.0)	16.0	(1.0)	21.6	(1.2)	24.1	(1.0)	36.8	(1.4)	9.8	(0.9)	7.3	(0.6)	14.9	(0.8)	41.9	(1.3)	1,031
II. Mood Disorders																			
Major depressive disorder	20.6	(1.8)	23.2	(1.9)	32.9	(1.6)	32.5	(2.3)	51.7	(2.2)	12.5	(1.5)	9.0	(1.3)	18.7	(1.8)	56.8	(2.2)	623
Dysthymia	27.7	(3.7)	23.3	(3.2)	36.8	(4.1)	39.6	(5.1)	61.7	(4.5)	16.0	(3.4)	7.1	(2.3)	19.6	(4.0)	67.5	(4.1)	135
Bipolar I-II disorders	22.5	(2.2)	26.9	(2.2)	33.6	(2.3)	33.1	(3.0)	48.6	(2.7)	15.4	(2.3)	12.2	(2.7)	24.0	(2.9)	55.3	(3.0)	244
Any mood disorder	21.0	(1.3)	24.0	(1.5)	32.9	(1.3)	32.8	(1.8)	50.9	(1.8)	13.3	(1.4)	9.8	(1.3)	20.0	(1.7)	56.3	(1.8)	884
III. Impulse-control Disorders																			
Intermittent explosive disorder	7.3	(1.8)	9.6	(1.7)	14.2	(2.3)	13.6	(2.7)	23.7	(2.7)	8.3	(2.1)	3.7	(1.2)	11.3	(2.6)	30.4	(2.9)	245
IV. Substance Disorders																			
Alcohol abuse	13.1	(1.8)	20.4	(2.7)	25.8	(2.3)	16.3	(2.1)	33.6	(2.5)	9.9	(2.0)	7.4	(1.9)	13.8	(2.3)	37.2	(2.6)	177
Alcohol dependence	19.6	(2.9)	28.0	(5.8)	35.1	(4.4)	19.3	(3.7)	43.6	(4.9)	12.7	(2.9)	14.5	(3.3)	21.3	(3.6)	47.9	(5.4)	76
Drug abuse	15.6	(3.8)	26.4	(4.8)	32.9	(4.9)	21.9	(4.2)	40.6	(4.8)	10.7	(4.2)	8.1	(2.7)	16.9	(5.6)	43.7	(4.8)	78
Drug dependence	30.0	(10.2)	29.0	(7.9)	42.3	(9.7)	23.5	(7.3)	49.1	(9.4)	5.8	(4.1)	7.4	(4.0)	13.2	(5.9)	52.2	(10.0)	24
Any substance disorder	13.4	(1.6)	21.2	(2.9)	26.4	(2.5)	18.1	(1.7)	34.7	(2.6)	10.1	(1.8)	7.4	(1.7)	14.7	(2.2)	38.2	(2.7)	219
V. Composite																			
Any disorder	12.3	(0.7)	16.0	(0.9)	21.7	(0.9)	22.8	(0.9)	36.0	(1.1)	9.7	(0.8)	6.9	(0.6)	14.5	(0.8)	40.9	(1.0)	1,441
No disorder	1.9	(0.2)	3.0	(0.3)	4.4	(0.4)	4.7	(0.3)	8.3	(0.5)	1.8	(0.2)	1.4	(0.2)	3.0	(0.3)	9.8	(0.6)	4,251
Total sample	4.5	(0.3)	6.3	(0.4)	8.8	(0.5)	9.3	(0.4)	15.3	(0.6)	3.8	(0.2)	2.8	(0.2)	5.9	(0.3)	17.7	(0.7)	5,692

[1]Weighted number of respondents meeting criteria for each 12-month DSM-IV/WMH-CIDI disorder.

[2]Non-psychiatrist defined as psychologists or other non-psychiatrist mental health professional in any setting, social worker or counselor in a mental health specialty setting, or use of a mental health hot line.

[3]General medical defined as primary care doctor, other general medical doctor, nurse, or any other health professional not previously mentioned.

[4]Human services professional defined as religious or spiritual advisor, social worker, or counselor in any setting other than a specialty mental health setting.

[5]Complementary-alternative medicine defined as any other type of healer, participation in an Internet support group, or participation in a self-help group.

Source: Reproduced with permission from Table 1 Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., and Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication, *Archives of General Psychiatry, 62*, 629–640. The results reported here differ slightly from those reported in Wang et al. (2005) because the latter included updates to the sample weights and diagnostic algorithms that were developed subsequent to carrying out the analyses reported here. These differences are for the most part substantively unimportant.

Mean Number of Visits in the General Medical Sector: The mean number of 12-month visits (table 14.2) among those receiving any treatment in the general medical sector was 2.6 and was considerably lower than the mean visits made in any other sector. The mean visits among those treated in the general medical sector were higher among those with disorders (2.9) than without (2.0), but not dramatically so. The mean visits in the general medical services sector among cases with specific disorders was highest for dysthymia (4.2) or panic disorder (4.1) and lowest for intermittent explosive disorder (2.2).

The median numbers of visits (not shown, but available upon request) were consistently lower than the means. For example, the median among patients receiving any treatment in the general medical sector was 1.6. The median visits to the general medical sector was 1.7 among patients with a 12-month disorder and 1.1 among those without. This greater magnitude of means than medians implies that a relatively small number of patients treated in the general medical sector receive a disproportionately higher share of all visits.

Proportions receiving minimally adequate treatment in the general medical sector: Table 14.3 shows the proportions of treated cases receiving minimally adequate treatment using our initial broad definition (i.e., receiving ≥ two visits to an appropriate sector or being in ongoing treatment at the time of interview). The percentage of treated cases receiving minimally adequate treatment in the general medical sector was only 33.2 percent; lower than in any other sector. Among cases with specific 12-month DSM-IV disorders, the proportions receiving minimally adequate treatment in the general medical sector were highest for those with separation anxiety disorder (63.7 percent), agoraphobia (60.6 percent), or dysthymia (46.1 percent) and lowest for drug abuse/dependence (18.0 percent), obsessive compulsive disorder (20.1 percent), or alcohol abuse/dependence (30.9 percent).

In analyses employing our narrower definition of minimally adequate treatment, only 12.7 percent of cases treated in the general medical sector qualified as receiving such care (not shown, but available upon request). Again, this proportion was lower than that observed for any other sector.

Predictors of Receiving Treatment in the General Medical Sector: After controlling for the presence of all individual 12-month mental disorders, the odds of receiving any 12-month mental health treatment are significantly related to being younger than age 60, female, non-Hispanic White, not having low-average family income, being previously married, and not living in a rural area (not shown, but available upon request). Among those who received any treatment, treatment in one of the health care sectors is significantly related to not being in the age range 18–29, not being non-Hispanic Black, living in rural areas, and having health insurance.

Among those who received health care treatment, receiving treatment specifically in the general medical sector was significantly related to being older aged, female, less educated, not married, and living in a rural area (see table 14.4).

Discussion

These results indicate that there has been a rapid rise in the use of primary care to treat mental disorders in the United States. Currently 22.8 percent of those with disorders receive treatment in the general medical sector, nearly triple the percentage observed in the NCS a decade ago (Kessler et al., 1999). Among treated cases, well over half now receive some form of primary care for their mental disorders—a proportion larger than for any other sector. General medical sector treatment is now the sole form of health care used by over one-third of cases accessing the health care system. This dramatically increased use of primary care for mental disorders in the NCS-R confirms the findings of other recent surveys. For example, the Healthcare for Communities (HCC) survey found that people with mental health needs are largely treated by primary care providers and that this trend increased over the period from 1997–8 to 2000–1 (Mechanic & Bilder, 2004). The National Medical Expenditure Survey and Medical Expenditure Panel Survey also found an increase in the use of physicians relative to mental health specialists during the 1990s (Olfson et al., 2002a).

Several factors could help explain this increased use of primary care for mental disorders. Employing primary care physicians as "gatekeepers" has been one way that managed health plans have shifted mental health contacts to the general medical sector. While discontent has been growing over restricted access to specialists, formal gatekeeping continues to cover nearly 40 percent of patients, and higher cost alternatives allowing patients to self-refer to specialists remain poorly subscribed (Forrest, 2003; Forrest et al., 2001; Kaiser Family Foundation and Health Research Education Trust, 2000). Other developments, such as improved recognition of how mental disorders present and the design of primary care screening tools to detect mental disorders, have made it easier to deliver mental health care

Table 14.2. Mean number of visits in separate service sectors among patients treated in those sectors by 12-month DSM-IV/WMH-CIDI disorder[1]

	Type of professional																	
	Psychiatrist		Other health care		Any mental health care		General medical[4]		Any health care		Human services[5]		CAM[6]		Nonhealth care		Any treatment	
	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)
I. Anxiety Disorders																		
Panic disorder	9.6	(1.6)	20.2	(3.4)	20.4	(3.3)	4.1	(0.8)	15.2	(2.1)	—	—	—	—	12.8	(2.4)	17.2	(2.3)
Agoraphobia without panic	—	—	—	—	—	—	—	—	10.9	(2.4)	—	—	—	—	—	—	18.6	(5.8)
Specific phobia	8.3	(1.1)	19.1	(2.8)	19.1	(2.6)	3.4	(0.4)	13.3	(1.8)	4.6	(0.7)	34.4	(7.0)	20.8	(3.9)	18.5	(2.2)
Social phobia	8.2	(1.3)	18.6	(2.5)	19.2	(2.5)	3.1	(0.3)	13.8	(1.9)	6.0	(1.1)	33.9	(7.6)	23.1	(4.5)	18.7	(2.4)
Generalized anxiety disorder	7.9	(1.7)	26.5	(5.3)	22.1	(4.7)	3.4	(0.4)	15.5	(3.1)	—	—	—	—	22.6	(6.4)	21.9	(3.5)
Post-traumatic stress disorder	8.4	(1.4)	23.1	(3.6)	23.1	(3.3)	2.9	(0.4)	17.7	(2.1)	6.8	(1.2)	45.2	(12.4)	32.7	(7.4)	26.2	(3.2)
Obsessive-compulsive disorder	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Separation anxiety disorder	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any anxiety disorder	7.2	(0.9)	18.4	(1.7)	17.9	(1.8)	3.1	(0.2)	12.5	(1.1)	5.9	(0.6)	33.3	(5.2)	21.6	(2.7)	17.7	(1.2)
II. Mood Disorders																		
Major depressive disorder	8.9	(1.7)	16.8	(1.8)	17.4	(2.2)	3.0	(0.3)	13.0	(1.6)	8.1	(1.4)	28.8	(6.5)	20.5	(4.1)	17.7	(2.2)
Dysthymia	10.4	(2.7)	23.2	(5.3)	22.5	(4.4)	4.2	(0.7)	16.2	(2.7)	—	—	—	—	—	—	20.9	(3.9)
Bipolar I or II	11.1	(2.4)	23.3	(4.8)	26.1	(4.3)	3.4	(0.5)	20.4	(2.7)	—	—	47.0	(11.9)	30.5	(7.2)	29.8	(3.6)
Any mood disorder	9.5	(1.4)	18.9	(2.1)	19.9	(2.1)	3.1	(0.2)	14.9	(1.4)	7.7	(1.3)	34.9	(6.1)	23.6	(3.5)	20.9	(2.0)
III. Impulse-control Disorders																		
Intermittent explosive disorder	—	—	—	—	13.0	(3.9)	2.2	(0.3)	9.1	(2.5)	—	—	—	—	—	—	9.3	(2.0)
IV. Substance Disorders																		
Alcohol abuse	—	—	19.2	(4.3)	19.5	(3.9)	3.0	(0.5)	16.5	(3.4)	—	—	—	—	21.5	(7.1)	21.7	(4.8)
Alcohol dependence	—	—	—	—	24.7	(6.2)	—	—	21.5	(5.4)	—	—	—	—	—	—	28.1	(6.8)
Drug abuse	—	—	—	—	21.2	(5.2)	—	—	18.3	(4.4)	—	—	—	—	—	—	26.5	(7.1)
Drug dependence	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any substance disorder	10.4	(2.8)	20.9	(3.3)	21.9	(3.3)	2.7	(0.4)	18.1	(2.9)	—	—	—	—	19.0	(6.2)	22.9	(4.0)
V. Composite																		
Any mental disorder	7.9	(1.0)	18.1	(1.5)	17.8	(1.5)	2.9	(0.2)	12.6	(1.0)	6.4	(0.9)	28.6	(4.3)	18.8	(2.2)	16.9	(1.0)
No mental disorder	6.6	(1.9)	12.5	(1.3)	11.3	(1.1)	2.0	(0.1)	7.1	(0.6)	8.2	(3.0)	31.7	(7.7)	20.1	(4.7)	11.6	(1.4)
Total	7.5	(0.9)	16.1	(1.0)	15.4	(1.0)	2.6	(0.1)	10.4	(0.7)	7.1	(1.5)	29.8	(3.9)	19.3	(2.4)	14.7	(0.8)

[1]Missing cell entries indicate that the number of patients with the disorder who were treated in the sector was less than 30, in which case no estimate was made.

[2]Due to lack of sufficient variance in the distribution, standard error cannot be calculated.

[3]Non-psychiatrist defined as psychologists or other non-psychiatrist mental health professional in any setting, social worker or counselor in a mental health specialty setting, or use of a mental health hot line.

[4]General medical defined as primary care doctor, other general medical doctor, nurse, or any other health professional not previously mentioned.

[5]Human services professional defined as religious or spiritual advisor, social worker, or counselor in any setting other than a specialty mental health setting.

[6]Complementary-alternative medicine defined as any other type of healer, participation in an Internet support group, or participation in a self-help group.

Table 14.3. Percentage of patients who received at least minimally adequate treatment in those sectors by 12-month DSM-IV/WMH-CIDI disorder[1]

	Type of professional															
	Psychiatrist		Other mental health care		Any mental health care		General medical[3]		Any health care		Human services[4]		Self help[5]		Any treatment	
	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)
I. Anxiety Disorders																
Panic disorder	68.0	(5.6)	59.0	(6.4)	64.7	(4.9)	42.9	(4.5)	60.4	(3.7)	57.1	(9.7)			60.9	(3.6)
Agoraphobia w/o panic disorder	66.4	(10.5)	61.9	(12.4)	66.1	(10.8)	60.6	(15.6)	70.3	(7.4)	70.5	(18.1)			68.2	(8.2)
Specific phobia	52.8	(6.8)	60.7	(5.3)	56.9	(5.7)	36.5	(3.4)	47.5	(3.3)	49.8	(6.6)			50.3	(2.7)
Social phobia	58.0	(7.0)	60.5	(4.7)	59.2	(5.2)	33.0	(3.0)	49.6	(3.3)	45.7	(7.5)			50.0	(3.7)
Generalized anxiety disorder	56.8	(11.9)	54.5	(7.6)	55.7	(8.6)	40.1	(5.8)	52.6	(5.7)	48.5	(15.1)			53.4	(6.7)
Post-traumatic stress disorder	56.5	(7.7)	70.5	(5.9)	68.3	(4.4)	34.6	(5.6)	58.9	(3.7)	44.4	(7.4)			58.3	(3.8)
Obsessive-compulsive disorder	29.7	(16.1)	53.4	(15.8)	52.7	(14.6)	20.1	(8.2)	50.2	(12.3)	57.8	(28.2)			49.4	(11.4)
Separation anxiety disorder	68.8	(14.6)	69.7	(17.5)	63.0	(13.6)	63.7	(16.2)	69.1	(8.7)	84.0	(16.3)			70.5	(8.4)
Any anxiety disorder	53.3	(6.2)	54.9	(3.2)	56.0	(4.0)	33.2	(2.2)	47.0	(2.5)	47.7	(4.6)			48.7	(2.3)
II. Mood Disorders																
Major depressive disorder	57.1	(8.4)	51.6	(4.2)	56.4	(4.6)	35.7	(3.3)	49.3	(4.0)	45.0	(7.2)			49.9	(3.6)
Dysthymia	57.8	(10.6)	74.8	(8.6)	71.0	(8.7)	46.1	(10.6)	58.0	(7.6)	52.8	(9.8)			57.6	(7.1)
Bipolar I-II disorders	56.9	(6.3)	51.3	(7.3)	54.0	(6.3)	38.3	(4.2)	51.3	(4.2)	58.7	(11.2)			56.5	(4.3)
Any mood disorder	57.4	(6.4)	51.5	(3.1)	55.8	(4.2)	36.9	(2.6)	50.2	(3.3)	48.6	(5.0)			52.0	(2.7)
III. Impulse-control Disorders																
Intermittent explosive disorder	46.7	(12.5)	35.8	(9.6)	37.3	(8.8)	31.6	(9.9)	40.3	(6.7)	17.6	(10.2)			35.4	(6.3)
IV. Substance Disorders																
Alcohol abuse	44.1	(12.8)	43.4	(9.2)	43.7	(9.3)	30.9	(8.5)	41.5	(6.2)	41.6	(13.5)			47.8	(5.5)
Alcohol dependence	49.8	(16.2)	41.8	(9.7)	43.5	(10.5)	38.5	(11.8)	42.9	(8.8)	39.2	(17.6)			50.1	(8.0)
Drug abuse	13.8	(7.4)	44.7	(12.6)	36.8	(11.1)	18.0	(7.3)	35.2	(9.3)	70.0	(21.6)			41.6	(11.5)
Drug dependence	7.5	(7.6)	49.5	(18.2)	28.5	(13.5)	41.2	(16.7)	35.1	(13.2)					35.1	(13.2)
Any substance disorder	38.5	(10.8)	44.4	(6.7)	44.2	(6.9)	25.6	(6.8)	41.5	(4.9)	53.2	(11.2)			47.9	(4.8)
V. Composite																
Any mental disorder	53.3	(5.3)	51.1	(2.7)	53.4	(3.3)	33.2	(2.0)	46.1	(2.2)	46.9	(4.1)			47.8	(2.0)
(n)[7]		(177)		(208)		(294)		(329)		(504)		(117)		(53)		(565)

[1]Missing cell entries indicate that the number of patients with the disorder who were treated in the sector was less than 30, in which case no estimate was made.
[2]Use of a mental health hot line removed from definition since it is not considered adequate treatment.
[3]General medical defined as primary care doctor, other general medical doctor, nurse, any other health professional not previously mentioned.
[4]Human services professional defined as religious or spiritual advisor, social worker, or counselor in any setting other than a specialty mental health setting.
[5]Standard definition of CAM reduced to self-help only since only self-help is considered adequate treatment.
[6]By definition, self-help is considered inadequate treatment for all disorders other than substance.
[7]Weighted number of respondents with a 12-month DSM-IV/WMH-CIDI disorder seeking treatment in each service sector.

Table 14.4. Demographic predictors of 12-month service use in the general medical sector among people with health care treatment

	Treatment
	General medical
	OR (95% CI)
I. Age	
18–29	0.2* (0.1–0.4)
30–44	0.3* (0.2–0.5)
45–59	0.5* (0.3–0.8)
60+	1.0 (1.0–1.0)
χ^2_3	28.3 (.000)
II. Education	
0–11 years	2.2* (1.3–3.5)
12 years	2.1* (1.4–3.1)
13–15 years	1.7* (1.1–2.7)
16+ years	1.0 (1.0–1.0)
χ^2_3	15.7 (.001)
III. Family Income	
Low	1.0 (0.6–1.6)
Low average	1.2 (0.8–1.8)
High average	1.3 (0.8–1.9)
High	1.0 (1.0–1.0)
χ^2_3	3.1 (.379)
IV. Insurance	
Yes	1.0 (0.7–1.5)
No	1.0 (1.0–1.0)
χ^2_1	0.0 (.977)
V. Marital Status	
Never married	0.7 (0.5–1.1)
Previously married	0.5* (0.4–0.8)
Married-cohabitating	1.0 (1.0–1.0)
χ^2_2	11.4 (.003)
VI. Race-Ethnicity	
Hispanic	0.8 (0.5–1.4)
Non-Hispanic Black	0.7 (0.4–1.1)
Other	0.6 (0.3–1.4)
Non-Hispanic White	1.0 (1.0–1.0)
χ^2_3	4.1 (.251)
VII. Sex	
Female	1.8* (1.3–2.4)
Male	1.0 (1.0–1.0)
χ^2_1	14.3 (.000)
VIII. County Urbanicity	
Central City (CC) 2M+	0.4* (0.2–0.7)
Central City (CC) <2M	0.5* (0.3–0.8)
Suburbs of CC 2M+	0.6* (0.3–1.0)
Suburbs of CC <2M	0.9 (0.5–1.5)
Adjacent Area	0.9 (0.6–1.3)
Rural Area	1.0 (1.0–1.0)
χ^2_5	22.7 (.000)
% Getting Treatment	60.7

* Significant at the .05 level, two-sided test.

[1]Respondents with OCD and the combination of any mood disorder and IED were dropped from this analysis because 100 percent of these subjects received health care treatment.

in general medical settings (Kessler & Wang, 1999; Kroenke, 2003; Simon, Von Korff, Piccinelli, Fullerton, & Ormell, 1999; Spitzer, Kroenke, & Williams, 1999). Pharmacologic treatments with improved safety profiles have made it easier for primary care providers to treat mental disorders, and direct-to-consumer advertising has spurred patient demand for such treatments (Gilbody, Wilson, & Watt, 2004; Leucht et al., 1999; Olfson et al., 2002a; Schatzberg & Nemeroff, 2004). There has also been a growing tendency for some primary care physicians to deliver psychotherapies themselves (Gallo et al., 2002; Hegel, Dietrich, Seville, & Jordan, 2004; Olfson, Marcus, Druss, & Pincus, 2002b).

While use of the general medical sector for mental health treatments clearly has grown, the intensity and quality of those treatments remain shallow and uneven. Cases treated in primary care received fewer visits in the prior year than those treated in any other sector. Even using our broadest definition of adequacy, only one-third of cases seen in the general medical sector received minimally adequate care—again, a proportion lower than for any other sector. These findings are consistent with earlier as well as more recent evidence. In the ECA study, respondents with mental disorders treated in the general medical sector received substantially fewer visits than those treated in specialty sectors (Narrow, Regier, Rae, Manderscheid, & Locke, 1993). Other studies conducted throughout the 1990s consistently found that only a minority of cases in primary care receive treatments that meet minimal standards for adequacy (Wang et al., 2000, 2002; Wells et al., 1999; Young et al., 2001). However, it is important to keep in mind that the quality of care received in mental health specialty settings was only moderately better in absolute terms, both in this study and others (Blanco, Laje, Olfson, Marcus, & Pincus, 2002; Simon, Von Korff, Rutter, & Peterson, 2001).

What explains the lower intensity and quality of mental health treatments in primary care? One possibility is that primary care patients with mental disorders, who typically present with somatic symptoms, may not believe that they have a mental disorder or need treatment, leading to lower compliance with recommended treatment regimens (Dietrich, Oxman, & Williams, 2003a; Kroenke, 2003; Mojtabai, Ofson, & Mechanic, 2002; Simon et al., 1999). Patients seeking help from general medical physicians have a less serious profile of disorders than those treated in other sectors (Kessler et al., 1999; Olfson & Pincus, 1996), which presumably impedes their unequivocal acceptance of physician formulations. Primary care patients also have been found to have less psychiatric comorbidity than patients

seeking mental health specialty care (Kessler et al., 1999; Mojtabai et al., 2002). This lower severity could influence not only patient adherence, but also physician behavior, a possibility that is consistent with evidence that severity is related to treatment intensity (Mojtabai et al., 2002; Wells et al., 1999). However, some investigators have found only modest differences in severity or impairment between primary care and specialty samples (Simon et al., 2001), and others have found that the presence of even worrisome symptoms, such as suicidal ideation, does not lead to more intensive treatment in primary care (Wells et al., 1999). These latter findings suggest that higher quality treatments are as necessary and beneficial in primary care as in mental health specialty populations.

Some earlier studies have found that the ability of primary care physicians to correctly diagnose and treat mental disorders was lower than that of mental health specialists (Katon, Von Korff, Lin, Bush, & Ormel, 1992a; Simon & Von Korff, 1995; Simon, Von Korff, Wagner, & Barlow, 1993; Wells et al., 1989), and such findings have led to numerous educational and other training initiatives (Hirschfeld et al., 1997). Some recent data suggest that general medical physicians' confidence in their abilities to treat mental disorders remains low despite additional didactic training (Dietrich et al., 2003b). Other data suggest that primary care physicians have improved rates of recognizing and treating mental disorders (Carney, Dietrich, Eliassen, Owen, & Badger, 1999), and in some treatment contexts primary care physicians and mental health specialists have similar levels of guideline-concordant care (Dietrich et al., 2003a; Simon et al., 2001).

Structural and financial barriers almost certainly play key roles in undermining the intensity and quality of mental health care in the general medical sector. Primary care physicians must deal with all of a patient's health needs, including the considerable general medical comorbidity that afflicts primary care populations (Starfield et al., 2003). This situation frequently leads to "competing demands" on physicians' limited time and resources (Jaen, Stange, & Nutting, 1994; Klinkman, 1997). Another important structural barrier primary care physicians face is the paucity of available mental health referrals (Trude & Stoddard, 2003). Capitated or bundled payments for primary care physicians and capitated referral systems, used in many managed care organizations, discourage maintenance treatment and referral to mental health specialists (Frank, Huskamp, & Pincus, 2003). Behavioral health carve-outs, now covering 50 to 70 percent of insured populations, can further erode general medical physicians' financial incentives to adequately treat mental disorders as well as fragment and disorganize mental health care (Findlay, 1999; Frank et al., 2003; Frank & McGuire, 1998).

Use of the general medical sector varies across individual mental disorders. Panic disorder, which frequently presents with somatic symptoms, may prompt general medical attention; on the other hand, specific phobia, which often involves lower levels of subjective distress, may be less likely to prompt patients to seek primary care treatment (Brunello et al., 2001; Katerndahl & Realini, 1995; Katon, Von Korff, & Lin, 1992b; Leaf et al., 1985; Solomon & Gordon, 1988). Externalizing disorders (e.g., substance disorders and intermittent explosive disorder) may also be associated with lower perceived needs for treatment, as well as tendencies for patients and providers to view these problems as social or criminal rather than medical in nature (Kaskutas, Weisner, & Caetano, 1997; Mojtabai et al., 2002). Also, effective primary care treatments are just emerging, which may be another cause of lower treatment rates for impulse-control disorders (Fava, 1997; Olvera, 2002).

The sociodemographic predictors of general medical sector use are generally consistent with prior research. The greater use of primary care for mental disorders by older people may be due to the stigma of mental disorders in the elderly, the unacceptability of mental health specialty treatments, and high rates of general medical care use for medical problems in the age group (Fischer, Wei, Solberg, Rush, & Heinrich, 2003; Klap, Unroe, & Unutzer, 2003; Leaf et al., 1985). The fact that female patients are more likely than male patients to use the general medical sector may be due to primary care physicians' greater willingness to treat women, while referring men to mental health specialists (Kessler, 1986; Shapiro et al., 1984). Because we adjusted for income, the inverse relationship between education and general medical sector use is not just due to education serving as a proxy for greater financial resources to pay for mental health specialty services; instead, these results could reflect the greater emphasis on knowledge and cognitive processes in many specialty psychotherapies (Wells, Manning, Duan, Newhouse, & Ware, 1986). The diminished use of primary care among those separated, widowed, or divorced may indicate that those experiencing relationship loss or strife often seek out counseling (Leaf et al., 1985). Greater use of primary care for mental health needs in rural areas may reflect the structural reality that mental health specialty resources are scarce outside of urban and suburban areas (Rost, Fortney, Fischer, & Smith, 2002).

There are, of course, several sets of potential limitations to keep in mind when interpreting these results. The WMH-CIDI did not assess all DSM-IV disorders. The most important consequence of this frame exclusion is that some respondents classified as not having a mental disorder may actually have met criteria for a DSM-IV disorder that was not assessed. People who were homeless or institutionalized were also excluded. However, the results reported here should still apply to a large majority of the population because the homeless and institutionalized make up a small percentage of the U.S. population.

People with mental disorders may also have had higher survey refusal rates (i.e., systematic survey nonresponse) or rates of recall failure, conscious nonreporting, and errors in the diagnostic evaluation (i.e., systematic nonreporting) than those without disorders. A likely consequence of such errors is that unmet needs for treatment have been underestimated (Allgulander, 1989; Cannell, Marquis, & Laurent, 1977; Eaton, Anthony, Tepper, & Dryman, 1992; Kessler et al., in press a; Kessler et al., under review; Turner et al., 1998).

Another potential limitation concerns the validity of self-reports of treatment use. Some investigators have found that self-reports of mental health service use overestimate treatment records (Rhodes & Fung 2004; Rhodes, Lin, & Mustard, 2002). Questions designed to measure a subject's commitment to the survey (i.e., commitment probes) and exclusion of the < 1 percent of respondents who failed to endorse that they would think carefully and answer honestly were employed in the NCS-R to minimize such inaccuracies. However, to the extent that they occurred, they are likely to have caused us to underestimate unmet needs for treatment.

The validity of our definitions of minimally adequate treatment is another potential limitation. For example, brief treatments have been described for certain phobias (Ost et al., 1997) and alcohol disorders (Ballesteros et al., 2004). Furthermore, those diagnosed shortly before interview may not have had enough time to meet our criteria for minimally adequate treatment. However, our broader definition (≥ two visits to an appropriate sector or being in ongoing treatment at the time of interview) should have taken these possibilities into account.

Finally, we did not attempt to determine needs for treatment based on the seriousness of disorders, as doing so was beyond the scope of this initial descriptive report. It therefore remains possible that respondents with untreated or inadequately treated disorders are disproportionately made up of mild or self-limiting cases.

Despite these potential limitations, the results reveal that improvements in the primary care of mental disorders are warranted. Even though there has been a large increase in the proportion of people with mental disorders receiving treatment, particularly in the general medical sector, many active cases still go untreated. Additional outreach efforts are clearly still needed to promote recognition of disorders and timely initiation of treatments. Concentrating these efforts in general medical settings seems indicated given, that they are increasingly the de facto portals of entry into the service delivery system for most people with mental health needs. Expanding awareness programs and use of tools to screen for mental disorders in primary care practices may be effective ways to achieve these goals (Hirschfeld et al., 1997; Jacobs, 1995; Spitzer et al., 1999).

Efforts to improve the quality of treatments are also sorely needed in light of the widespread low intensity and inadequacy of existing primary care for mental disorders. Simply introducing treatment guidelines and other simple educational approaches have not proven to be successful. However, a range of multifaceted primary care interventions that include elements of clinician and patient education, care management, and greater integration of primary and specialty care have proven to be effective and in some cases cost-effective (Gilbody, Whitty, Grimshaw, & Thomas, 2003; Katon et al., 1995; Katon, Roy-Byrne, Russo, & Cowley, 2002; Wells et al., 2000). Establishing performance standards, such as the Substance Abuse and Mental Health Services Administration's (SAMHSA's) Center for Mental Health Services Consumer-Oriented Mental Health Report Card or the new National Committee for Quality Assurance standards, could further help enhance the quality of primary care treatments and monitor the impact of future primary care interventions (National Committee for Quality Assurance, 1997; Substance Abuse and Mental Health Services Administration, 1996).

Beyond developing outreach and quality improvement initiatives, the longer term task of achieving sustainable improvement in the primary care of mental disorders remains. Primary care providers continue to face daunting financial and structural barriers to delivering quality mental health care. These same financial and structural barriers also deter the uptake of even effective model approaches in primary care (Frank et al., 2003; Klinkman, 1997; Pincus, Hough, Houtsinger, Rollman, & Frank, 2003; Williams, 1998; Williams et al., 1999). Widespread dissemination of quality improvement programs may ultimately depend on removing financial disincentives and redesigning current systems of care

(Frank et al., 2003; Williams et al., 1999). The Robert Wood Johnson Depression in Primary Care Program is one ongoing initiative that seeks to align primary care providers' incentives to promote sustainable evidence-based practice (Pincus et al., 2003). Finally, employer and governmental purchasers currently hesitate to pay for even proven interventions because they lack metrics for assessing return on investment (Wang, Simon, & Kessler, 2003). The National Institute of Mental Health (NIMH)-sponsored Work Outcomes Research and Cost-Effectiveness Study (WORCS) is an ongoing initiative that will calculate returns on investment to purchasers for investing in enhanced care of mental disorders (Wang et al., 2003).

New Perspectives and Directions

Taken together, the results described above and in related studies lead to what might be considered the fourth major stage in the development of an effective and efficient approach to the care of mental illness. The first stage was characterized by describing the volume of patients treated by the "hidden mental health sector" and by characterizing the extent to which these services were disorganized, inefficient, uncontrolled, and poorly reimbursed.

The second stage was characterized by the first of two very different approaches to remedying these deficiencies. The first approach was based on brute force or the "retail approach" to educational interventions to improve what was assumed to be a knowledge and skill deficiency in primary care physicians. This approach was taken so that mental health care could be controlled by, and to a considerable extent limited to, primary care physicians through gatekeeping and other means of limiting access to specialty mental health providers. While promoted by many health care plans as a way to "strengthen" the primary care physician's role in comprehensive health care, it was viewed by most primary care physicians as a crude cost-containment mechanism to limit services that many employers and payers perceived to have relatively little value by. Despite a wide range of creative, intensive, and theoretically sound approaches to education and professional development, including studies based on intense, multifaceted educational interventions involving both didactic and active experiences and case-based exercises, outcome studies showed that the detection, accurate diagnosis, and effective treatment of depression and other mental illnesses improved little. Knowledge was a necessary but not sufficient condition to improve mental health care in the primary care setting.

Attempts to restrict most mental health care to the primary care setting occurred during the same period as the expansion of mental health "carve-outs." These carve-outs required all mental health care to be provided in mental health care settings, usually without adequate or sometimes any communication with the patient's primary care physician. Mental health carve-outs were an effective approach for patients who actively sought specialty services. However, this organizational structure did not well serve the large portion of the primary care population who could not, would not, or did not seek such care. Most important, capturing and confining all mental health care in a single system, often organized through commercial contracts with outside provider organizations, limited care through restricted formularies and limits on the availability of outpatient counseling and inpatient admission. Both the carving out and confinement of services to a single provider group and the restrictions on access to services stood in distinct contrast to the relatively open access to therapies and providers for most other chronic medical conditions. The net effect of this approach was to restrict access to mental health care for a large portion of the population who resisted being carved out, as well as to limit mental health services to those who actively sought such care.

The third phase of this evolution was the design and evaluation of stratified approaches to allocating care based on severity and treatment response. In these models, psychiatrists are available to primary care physicians for direct (to patient) or indirect (to primary care physician) consultation; case managers follow patients closely and provide support, counseling, and education; and patients receive a variety of additional support and monitoring services. These approaches show significant benefit in adherence to medication regimens, treatment response, and functional outcomes but are unsustainable financially. Almost universally, these studies showed positive results while receiving support and funding but left no enduring legacy when the research funding ended. Care reverted to baseline levels.

The net effect of these three phases was to raise the consciousness of primary care physicians and their patients regarding the importance and legitimacy of effective treatment for mental illness. This experience also demonstrated new approaches that led to markedly improved outcomes, but without providing new resources or access to the incremental reimbursement necessary to support the required intensity of care to achieve such outcomes. Little

evidence existed that a multifaceted, structured, and stratified approach to mental illness care could be supported through usual practice revenues, or that most payers were willing to make the necessary investment in such programs—despite evidence of significant cost savings through reduced utilization of inappropriate medical care, decreased attrition, decreased disability, improved performance, and decreased absenteeism.

In combination with the data described above, these lessons lead naturally to a fourth stage characterized by the following critical questions that are worthy of attention by health services investigators, payers, employers, and health policy experts.

1. To what degree is the considerable mental illness care provided in the non-mental health care sector inevitable, because of a shortage of mental health care professionals (particularly psychiatrists), or desirable?

2. What financial structures and payer mechanisms are necessary to support the case management, stratified care, and structured consultation–liaison relationships that have been shown to be feasible and effective but unsustainable in the current health care system?

3. How could the treatment of mental illness be rationally allocated between the service sectors to result in higher levels of treatment to remission and more effective care of psychiatric comorbidity?

4. Is it possible for the treatment of mental illnesses to become a model for how a highly prevalent and expensive set of persistent conditions could be addressed by primary care and specialty sectors in a "both/and," rather than an "either/or" paradigm?

The current model of chronic disease care, and particularly the care of patients with multiple chronic diseases, is fragmented, inefficient, ineffective, and expensive. Health policy experts and national organizations have made several calls for new models for the population-based care of chronic disease. The new models would be required to allocate resources rationally; stratify care according to severity and complexity; and ensure that medical care information is structured, organized, and shared in sophisticated ways among a team of providers, including both primary care physicians and specialty consultants. Such calls have, in general, not yet led to substantial changes. The care of mental illness could become the paradigm for such a systemic change.

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REFERENCES

Agency for Health Care Policy and Research. (1993). *Depression Guideline Panel, Vol. 2: Treatment of major depression.* Clinical Practice Guideline No. 5. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research.

Allgulander, C. (1989). Psychoactive drug use in a general population sample, Sweden: Correlates with perceived health, psychiatric diagnoses, and mortality in an automated record-linkage study. *American Journal of Public Health,* 79, 1006–1010.

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders: DSM-III.* (3rd ed.). Washington, DC: Author.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders: DSM-III-R* (Rev. 3rd ed.). Washington, DC: Author.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders: DSM-IV-R.*(Rev. 4th ed.). Washington, DC: Author.

American Psychiatric Association. (1998). *Practice guideline for the treatment of patients with panic disorder.* Washington, DC: Author.

American Psychiatric Association. (2000). *Practice guideline for treatment of patients with major depressive disorder* (2nd ed.). Washington, DC: Author.

American Psychiatric Association. (2002). *Practice guideline for treatment of patients with bipolar disorder* (2nd ed.). Washington, DC: Author.

American Psychiatric Association. (2004). *Practice guideline for treatment of patients with schizophrenia* (2nd ed.). Washington, DC: Author.

Ballesteros, J., Duffy, J. C., Querejeta, I., Arino, J., & Gonzalez-Pinto, A. (2004). Efficacy of brief interventions for hazardous drinkers in primary care: Systematic review and meta-analyses. *Alcoholism, Clinical and Experimental Research, 28,* 608–618.

Blanco, C., Laje, G., Olfson, M., Marcus, S. C., & Pincus, H. A. (2002). Trends in the treatment of bipolar disorder by outpatient psychiatrists. *American Journal of Psychiatry, 159,* 1005–1010.

Brunello, N., Davidson, J. R., Deahl, M., Kessler, R. C., Mendlewicz, J., Racagni, G., et al. (2001). Posttraumatic stress disorder: Diagnosis and epidemiology, comorbidity and social consequences, biology and treatment. *Neuropsychobiology, 43,* 150–162.

Cannell, C. F., Marquis, K. H., & Laurent, A. (1977). A summary of studies of interviewing methodology: 1959–1970. *Vital Health Statistics, 2.*

Carney, P. A., Dietrich, A. J., Eliassen, M. S., Owen, M., & Badger, L. W. (1999). Recognizing and managing depression in primary care: A standardized patient study. *Journal of Family Practice, 48,* 965–972.

Dietrich, A. J., Oxman, T. E., & Williams, J. W., Jr. (2003a). Treatment of depression by mental health specialists and primary care physicians. *JAMA, 290,* 1991; author reply 1992–1993.

Dietrich, A. J., Williams, J. W., Jr., Ciotti, M. C., Schulkin, J., Stotland, N., Rost, K., et al. (2003b). Depression care attitudes and practices of newer obstetrician-gynecologists: A national survey. *American Journal of Obstetrics and Gynecology, 189,* 267–273.

Eaton, W. W., Anthony, J. C., Tepper, S., & Dryman, A. (1992). Psychopathology and attrition in the epidemiologic catchment area surveys. *American Journal of Epidemiology, 135,* 1051–1059.

Fava, M. (1997). Psychopharmacologic treatment of pathologic aggression. *Psychiatric Clinics of North America, 20,* 427–451.

Findlay, S. (1999). Managed behavioral health care in 1999: An industry at a crossroads. *Health Affairs (Millwood), 18,* 116–124.

First, M. B., Spitzer, R. L., & Williams, J. B. (1995). *Structured clinical interview for DSM-IV (SCID-I).* New York: Biometrics Research, New York State Psychiatric Institute.

Fischer, L. R., Wei, F., Solberg, L. I., Rush, W. A., & Heinrich, R. L. (2003). Treatment of elderly and other adult patients for depression in primary care. *Journal of the American Geriatrics Society, 51,* 1554–1562.

Forrest, C. B. (2003). Primary care in the United States. Primary care gatekeeping and referrals: Effective filter or failed experiment? *British Medical Journal, 326,* 692–695.

Forrest, C. B., Weiner, J. P., Fowles, J., Vogeli, C., Frick, K. D., Lemke, K. W., et al. (2001). Self-referral in point-of-service health plans. *JAMA, 285,* 2223–2231.

Frank, R. G., Huskamp, H. A., & Pincus, H. A. (2003). Aligning incentives in the treatment of depression in primary care with evidence-based practice. *Psychiatric Services, 54,* 682–687.

Frank, R. G., & McGuire, T. G. (1998). The economic functions of carve outs in managed care. *American Journal of Managed Care, 4 Supplement,* SP31–39.

Gallo, J. J., Meredith, L. S., Gonzales, J., Cooper, L. A., Nutting, P., Ford, D. E., et al. (2002). Do family physicians and internists differ in knowledge, attitudes, and self-reported approaches for depression? *International Journal of Psychiatry in Medicine, 32,* 1–20.

Gilbody, S., Whitty, P., Grimshaw, J., & Thomas, R. (2003). Educational and organizational interventions to improve the management of depression in primary care: a systematic review. *JAMA, 289,* 3145–3151.

Gilbody, S., Wilson, P., & Watt, I. (2004). Direct-to-consumer advertising of psychotropics. An emerging and evolving form of pharmaceutical company influence. *British Journal of Psychiatry, 185,* 1–2.

Hegel, M. T., Dietrich, A. J., Seville, J. L., & Jordan, C. B. (2004). Training residents in problem-solving treatment of depression: A pilot feasibility and impact study. *Family Medicine, 36,* 204–208.

Hirschfeld, R. M., Keller, M. B., Panico, S., Arons, B. S., Barlow, D., Davidoff, F., et al. (1997). The National Depressive and Manic-Depressive Association consensus statement on the undertreatment of depression. *JAMA, 277,* 333–340.

Hosmer, D. W., & Lemeshow, S. (1989). *Applied logistic regression.* New York: Wiley & Sons.

Jacobs, D. G., (1995). National Depression Screening Day: Educating the public, reaching those in need of treat-

ment, and broadening professional understanding. *Harvard Review of Psychiatry, 3,* 156–159.

Jaen, C. R., Stange, K. C., & Nutting, P. A. (1994). Competing demands of primary care: A model for the delivery of clinical preventive services. *Journal of Family Practice, 38,* 166–171.

Kaiser Family Foundation and Health Research Education Trust. (2000). Employer Health Benefits. 2000 annual survey. http://www.kff.org/insurance/index.cfm. Accessed July 12, 2005.

Kaskutas, L. A., Weisner, C., & Caetano, R. (1997). Predictors of help seeking among a longitudinal sample of the general population, 1984–1992. *Journal of Studies on Alcohol, 58,* 155–161.

Katerndahl, D. A., & Realini, J. P. (1995). Where do panic attack sufferers seek care? *Journal of Family Practice, 40,* 237–243.

Katon, W., Von Korff, M., Lin, E., Bush, T., & Ormel, J. (1992a). Adequacy and duration of antidepressant treatment in primary care. *Medical Care, 30,* 67–76.

Katon, W., Von Korff, M., Lin, E., Walker, E., Simon, G. E., Bush, T., et al. (1995). Collaborative management to achieve treatment guidelines. Impact on depression in primary care. *JAMA, 273,* 1026–1031.

Katon, W. J., Roy-Byrne, P., Russo, J., & Cowley, D. (2002). Cost-effectiveness and cost offset of a collaborative care intervention for primary care patients with panic disorder. *Archives of General Psychiatry, 59,* 1098–1104.

Katon, W. J., Von Korff, M., & Lin, E. (1992b). Panic disorder: Relationship to high medical utilization. *American Journal of Medicine, 92,* 7S–11S.

Kessler, R. C. (1986). Sex differences in the use of health services. In S. McHugh & T. M. Vallis (Eds.), *Illness behavior: A multidisciplinary model* (pp. 135–148). New York: Plenum.

Kessler, R. C., Berglund, P., Chiu, W.-T., et al. (in press a). The US National Comorbidity Survey Replication (NCS-R): An overview of design and field procedures. *International Journal of Methods in Psychiatric Research.*

Kessler, R. C., Berglund, P., Demler, O., et al. (under review). The National Comorbidity Survey Replication (NCS-R): An overview of methods.

Kessler, R. C., & Merikangas, K. R. (in press). The National Comorbidity Survey Replication (NCS-R). *International Journal of Methods in Psychiatric Research.*

Kessler, R. C., & Ustun, T. B. (in press). The World Mental Health (WMH) survey initiative version of the World Health Organization Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research.*

Kessler, R. C., & Wang, P. S. (1999). Screening measures for behavioral health assessment. In G. Hyner, K. Peterson, J. Travis, J. Dewey, J. Foerster, & E. Framer (Eds.), *SPM handbook of health assessment tools* (pp. 33–40). Pittsburgh, PA: Society for Prospective Medicine.

Kessler, R. C., Zhao, S., Katz, S. J., Kouzis, A. C., Frank, R. G., Edlund, M., et al. (1999). Past-year use of outpatient services for psychiatric problems in the National Comorbidity Survey. *American Journal of Psychiatry, 156,* 115–123.

Klap, R., Unroe, K. T., & Unutzer, J. (2003). Caring for mental illness in the United States: A focus on older adults. *American Journal of Geriatric Psychiatry, 11,* 517–524.

Klinkman, M. S. (1997). Competing demands in psychosocial care. A model for the identification and treatment of depressive disorders in primary care. *General Hospital Psychiatry, 19,* 98–111.

Kroenke, K. (2003). Patients presenting with somatic complaints: Epidemiology, psychiatric comorbidity and management. *International Journal of Methods in Psychiatric Research, 12,* 34–43.

Leaf, P. J., Livingston, M. M., Tischler, G. L., Weissman, M. M., Holzer, C. E., III, & Myers, J. K. (1985). Contact with health professionals for the treatment of psychiatric and emotional problems. *Medical Care, 23,* 1322–1337.

Lehman, A. F., & Steinwachs, D. M. (1998). Translating research into practice: The Schizophrenia Patient Outcomes Research Team (PORT) treatment recommendations. *Schizophrenia Bulletin, 24,* 1–10.

Leucht, S., Pitschel-Walz, G., Abraham, D., & Kissling, W. (1999). Efficacy and extrapyramidal side-effects of the new antipsychotics olanzapine, quetiapine, risperidone, and sertindole compared to conventional antipsychotics and placebo. A meta-analysis of randomized controlled trials. *Schizophrenia Research, 35,* 51–68.

Mechanic, D., & Bilder, S. (2004). Treatment of people with mental illness: A decade-long perspective. *Health Affairs (Millwood,) 23,* 84–95.

Mojtabai, R., Olfson, M., & Mechanic, D. (2002). Perceived need and help-seeking in adults with mood, anxiety, or substance use disorders. *Archives of General Psychiatry, 59*, 77–84.

Narrow, W. E., Regier, D. A., Rae, D. S., Manderscheid, R. W., & Locke, B. Z. (1993). Use of services by persons with mental and addictive disorders. Findings from the National Institute of Mental Health Epidemiologic Catchment Area Program. *Archives of General Psychiatry, 50,* 95–107.

National Committee for Quality Assurance. (Ed.). (1997). *HEDIS 3.0: Narrative: What's in it and why it matters.* Washington, DC: Author.

Olfson, M., Marcus, S. C., Druss, B., Elinson, L., Tanielian, T., & Pincus, H. A. (2002a). National trends in the outpatient treatment of depression. *JAMA, 287,* 203–209.

Olfson, M., Marcus, S. C., Druss, B., & Pincus, H. A. (2002b). National trends in the use of outpatient psychotherapy. *American Journal of Psychiatry, 159,* 1914–1920.

Olfson, M., & Pincus, H. A. (1996). Outpatient mental health care in nonhospital settings: Distribution of patients across provider groups. *American Journal of Psychiatry, 153,* 1353–1356.

Olvera, R. L. (2002). Intermittent explosive disorder: Epidemiology, diagnosis and management. *CNS Drugs, 16,* 517–526.

Ost, L. G., Ferebee, I., & Furmark, T. (1997). One-session group therapy of spider phobia: Direct versus indirect treatments. *Behaviour Research and Therapy, 35,* 721–732.

Pincus, H. A., Hough, L., Houtsinger, J. K., Rollman, B. L., & Frank, R. G. (2003). Emerging models of depression

care: Multi-level ('6 P') strategies. *International Journal of Methods in Psychiatric Research, 12,* 54–63.

Regier, D. A., Narrow, W. E., Rae, D. S., Manderscheid, R. W., Locke, B. Z., & Goodwin, F. K. (1993). The de facto US mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry, 50,* 85–94.

Relman, A. S. (1980). The new medical-industrial complex. *New England Journal of Medicine, 303,* 963-970.

Rhodes, A. E., & Fung, K. (2004). Self-reported use of mental health services versus administrative records: Care to recall? *International Journal of Methods in Psychiatric Research, 13,* 165–175.

Rhodes, A. E., Lin, E., & Mustard, C. A. (2002). Self-reported use of mental health services versus administrative records: Should we care? *International Journal of Methods in Psychiatric Research, 11,* 125–133.

Rosenthal, M. B., Berndt, E. R., Donohue, J. M., Frank, R. G., & Epstein, A. M. (2002). Promotion of prescription drugs to consumers. *New England Journal of Medicine, 346,* 498–505.

Rost, K., Fortney, J., Fischer, E., & Smith, J. (2002). Use, quality, and outcomes of care for mental health: The rural perspective. *Medical Care Research Review, 59*, 231–265, discussion 266–271.

Schatzberg, A. F., & Nemeroff, C. B. (2004). *Textbook of psychopharmacology.* Washington, DC: American Psychiatric Publishing.

Shapiro, S., Skinner, E. A., Kessler, L. G., Von Korff, M., German, P. S, Tischler G. L., et al. (1984). Utilization of health and mental health services. Three Epidemiologic Catchment Area sites. *Archives of General Psychiatry, 41,* 971–978.

Simon, G. E., Von Korff, M., Rutter, C. M., & Peterson, D. A. (2001). Treatment process and outcomes for managed care patients receiving new antidepressant prescriptions from psychiatrists and primary care physicians. *Archives of General Psychiatry, 58,* 395–401.

Simon, G. E., & Von Korff, M. (1995). Recognition, management, and outcomes of depression in primary care. *Archives of Family Medicine, 4,* 99–105.

Simon, G. E., Von Korff, M., Piccinelli, M., Fullerton, C., & Ormel, J. (1999). An international study of the relation between somatic symptoms and depression. *New England Journal of Medicine, 341,* 1329–1335.

Simon, G. E., Von Korff, M., Wagner, E. H., & Barlow, W. (1993). Patterns of antidepressant use in community practice. *General Hospital Psychiatry, 15,* 399–408.

Solomon, P., & Gordon, B. (1988). Outpatient compliance of psychiatric emergency room patients by presenting problems. *Psychiatric Quarterly, 59,* 271–83.

Spitzer, R. L., Kroenke, K., & Williams, J. B. (1999). Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. Primary care evaluation of mental disorders. Patient health questionnaire. *JAMA, 282,* 1737–1744.

Starfield, B., Lemke, K. W., Bernhardt, T., Foldes, S. S., Forrest, C. B., & Weiner, J. P. (2003). Comorbidity: Implications for the importance of primary care in 'case' management. *Annals of Family Medicine, 1,* 8–14.

Sturm, R., & Klap, R. (1999). Use of psychiatrists, psychologists, and master's-level therapists in managed behavioral health care carve-out plans. *Psychiatric Services, 50,* 504–508.

Substance Abuse and Mental Health Services Administration. (1996). *Consumer-oriented Mental Health Report Card.* Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.

SUDAAN. (2002). Professional software for survey data analysis, Version 8.0.1. Research Triangle Park, NC: Research Triangle Institute.

Trude, S., & Stoddard, J. J. (2003). Referral gridlock: Primary care physicians and mental health services. *Journal of General Internal Medicine, 18,* 442–449.

Turner, C. F., Ku, L., Rogers, S. M., Lindberg, L. D., Pleck, J. H., & Sonenstein, F. L. (1998). Adolescent sexual behavior, drug use, and violence: Increased reporting with computer survey technology. *Science, 280,* 867–873.

U.S. Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

U.S. Census Bureau. (2000). *County and city databook, 2000.* Washington, DC: U.S. Government Printing Office.

Wang, P. S., Berglund, P., & Kessler, R. C. (2000). Recent care of common mental disorders in the United States: Prevalence and conformance with evidence-based recommendations. *Journal of General Internal Medicine, 15,* 284–292.

Wang, P. S., Demler, O., & Kessler, R. C. (2002). Adequacy of treatment for serious mental illness in the United States. *American Journal of Public Health, 92,* 92–98.

Wang, P. S., Simon, G., & Kessler, R. C. (2003). The economic burden of depression and the cost-effectiveness of treatment. *International Journal of Methods in Psychiatric Research, 12,* 22–33.

Weissman, E., Pettigrew, K., Sotsky, S., & Regier, D. A. (2000). The cost of access to mental health services in managed care. *Psychiatric Services, 51,* 664–666.

Wells, K. B., Hays, R. D., Burnam, M. A., Rogers, W., Greenfield, S., & Ware, J. E., Jr. (1989). Detection of depressive disorder for patients receiving prepaid or fee-for-service care. Results from the Medical Outcomes Study. *JAMA, 262,* 3298–3302.

Wells, K. B., Manning, W. G., Duan, N., Newhouse, J. P., & Ware, J. E., Jr. (1986). Sociodemographic factors and the use of outpatient mental health services. *Medical Care, 24,* 75–85.

Wells, K. B., Schoenbaum, M., Unutzer, J., Lagomasino, I. T., & Rubenstein, L. V. (1999). Quality of care for primary care patients with depression in managed care. *Archives of Family Medicine, 8,* 529–536.

Wells, K. B., Sherbourne, C., Schoenbaum, M., Duan, N., Meredith, L., Unutzer, J., et al. (2000). Impact of disseminating quality improvement programs for depression in managed primary care: A randomized controlled trial. *JAMA, 283,* 212–220.

Williams, J. W., Jr. (1998). Competing demands: Does care for depression fit in primary care? *Journal of General Internal Medicine, 13,* 137–139.

Williams, J. W., Jr., Rost, K., Dietrich, A. J., Ciotti, M. C., Zyzanski, S. J., & Cornell, J. (1999). Primary care physicians' approach to depressive disorders. Effects of physician specialty and practice structure. *Archives of Family Medicine, 8,* 58–67.

World Health Organization. (1991). *International classification of diseases (ICD-10).* Geneva, Switzerland: World Health Organization.

Young, A. S., Klap, R., Sherbourne, C. D., & Wells, K.B. (2001). The quality of care for depressive and anxiety disorders in the United States. *Archives of General Psychiatry, 58,* 55–61.

Section IV.
Population Assessments

Chapter 15

The Prevalence and Correlates of Serious Mental Illness (SMI) in the National Comorbidity Survey Replication (NCS-R)

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Introduction

Although community epidemiological surveys estimate that as much as 30 percent of the U.S. population has a mental or substance use disorder each year (Kessler et al., 1994; Regier et al., 1998), it is unlikely that all these people need treatment, as some of them almost certainly have mild or self-limiting disorders (Narrow, Rae, Robins, & Regier, 2002). Given this likelihood, the assessment of serious mental illness (SMI) is in some ways more important for most policy planning purposes than the assessment

of all mental illness. Epidemiological surveys carried out over the past two decades were unable to provide definitive data on SMI because the main concern of these surveys was to include questions on the full set of diagnostic criteria for the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) disorders they assessed. Clinical severity of these disorders was not a major focus. Nonetheless, post hoc analysis of these surveys can provide some indirect information about severity. Secondary analyses of this sort, based both on epidemiological surveys carried out in the United States (Narrow et al., 2002) and on comparable surveys carried out in other developed countries (Bijl et al., 2003; Demyttenaere et al., 2004), strongly suggest that a substantial proportion of DSM cases in the community are mild.

Existing data on clinical severity of community cases are limited by the fact that only crude indicators of severity were included in previous community epidemiological surveys. In an effort to provide more direct data of this sort, the World Health Organization (WHO) recently expanded its Composite International Diagnostic Interview (CIDI) (Robins, Wing, Wittchen, & Helzer, 1988), the interview used in almost all major psychiatric epidemiological surveys in the world over the past decade, to include detailed questions about severity (Kessler & Ustun, 2004). This new version of the CIDI has now been used in a series of community epidemiological surveys coordinated by the WHO throughout the world. These surveys, known as the WHO World Mental Health (WMH) Survey Initiative (Demyttenaere et al., 2004), are designed explicitly to estimate the global burden of mental and substance disorders in comparison to commonly occurring physical disorders. The United States participated in the WMH Survey Initiative by carrying out a nationally representative household survey known as the National Comorbidity Survey Replication (NCS-R) (Kessler et al., 2004; Kessler & Merikangas, 2004). This chapter provides a brief overview of the initial NCS-R results on the prevalence and severity of mental and substance use disorders in the United States. A more detailed presentation of these results is reported elsewhere (Kessler, Chiu, Demler, & Walters, in press-b).

In addition, we present an overview of initial results regarding 10-year time trends in the prevalence and severity of mental disorders based on aggregate trend comparisons of the NCS-R with the original National Comorbidity Survey (NCS) (Kessler et al., 1994). The NCS was carried out a decade before the NCS-R. A more detailed presentation of these results is reported elsewhere (Kessler et al., in press-a). In the 1980s, the Epidemiologic Catchment Area (ECA) study found that approximately 30 percent of the adult respondents in that survey met criteria for one or more of the 12-month DSM-III disorders assessed (Robins & Regier, 1991). A decade later, the NCS found that approximately 30 percent of people ages 15–54 in that survey met criteria for one of the 12-month DSM-III-R disorder assessed (Kessler et al., 1994). In the past 10 years there have been dramatic changes in the use of mental health services in the United States. The Substance Abuse and Mental Health Services Administration (SAMSHA) documents that annual encounters in specialty mental health treatment centers increased by nearly 50 percent between 1992 and 2000 (Manderscheid et al., 2001). The National Ambulatory Medical Care Survey documents that the number of people receiving healthcare treatment for depression more than tripled between 1987 and 1997 (Olfson et al., 2002). The Robert Wood Johnson Foundation Community Tracking Survey documents that the proportion of people with serious mental illness who received specialty care increased by nearly 20 percent between 1997–8 and 2000–1 (Mechanic & Bilder, 2004). To the extent that these increases in treatment were effective, we might expect that the prevalence of mental disorders would be lower today than at the times of the ECA and NCS surveys. Comparison of the NCS and NCS-R prevalence data can be used to evaluate this prediction.

Finally, we review initial results on individual-level changes in the prevalence and severity of DSM disorders assessed first in the baseline NCS in 1990–2002 and then a second time in a re-interview with the same respondents a decade later (2001–03) in the NCS follow-up survey (NCS-2). A more detailed presentation of these results is reported elsewhere (Kessler et al., 2003). This part of the analysis addresses a practical problem that mental health policy analysts have wrestled with ever since the publication of the ECA prevalence data in the mid-1980s: that the 12-month prevalence of DSM disorders substantially exceeds the number of people who could be treated for mental or substance use disorders with current treatment resources. In recognition of this problem, several more restrictive definitions have been proposed to narrow the number of people qualifying for treatment. The National Institute of Mental Health (NIMH) National Advisory Mental Health Council (1993), for example, distinguished people with severe and persistent mental illness (SPMI) from other mentally ill people, while the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) Reorganization Act stipulated that State mental health Block Grant funds can be used

only to treat people with SMI (ADAMHA, 1992). Many health plans have followed suit by restricting mental health coverage to a subset of DSM disorders that they consider to be "biologically based."

Similar restrictions are being discussed to limit the number of people who qualify for a diagnosis in DSM-IV (Narrow et al., 2002; Regier, 2000; Regier & Narrow, 2002). The proposal to restrict the definition of DSM cases in this way has important implications not only for the definition of current unmet need for treatment, but also for current research and consideration of future treatment needs. The key fact here is that research has repeatedly shown that many syndromes currently defined as mental disorders are extremes on continua that appear not to have meaningful thresholds (Preisig, Merikangas, & Angst, 2001; Sullivan, Kessler, & Kendler, 1998). This means that early interventions to prevent progression along a given severity continuum might reduce the prevalence of serious cases (Eaton, Badawi, & Melton, 1995). Removal of mild cases from the DSM system would have the potential to undercut such efforts as well as to distort the reality that mental disorders, like physical disorders, vary widely in seriousness (Kendell, 2002; Spitzer, 1998).

To shed some light on this issue, we carried out an analysis of the NCS and NCS-2 panel data that expanded on a prior secondary analysis of the NCS (Narrow et al., 2002). In that study, 12-month DSM-III-R cases in the NCS were divided into those the authors considered either clinically significant (CSMI) or clinically nonsignificant (CNMI) based on respondent reports about interference and treatment. Comparison of these two subgroups showed, not surprisingly, that various indicators of illness severity (e.g., days out of role, history of suicide attempts) were higher in the former than the latter. The authors concluded from these results that mild cases should be excluded from DSM-V. We built on this analysis in two ways. First, we used data from the NCS-2 to examine the associations of baseline NCS 12-month illness severity with clinically significant outcomes assessed in NCS-2. Second, we expanded the number of illness severity categories from two to four by dividing the cases that Narrow (2002) and Regier et al. (1998) defined as having clinically significant mental illness into severe, serious, and moderate cases. As described below and presented in more depth elsewhere (Kessler et al., 2003), differences in the risk of clinically significant outcomes in NCS-2 across these severity categories are as large as, and in some cases larger than, those between moderate and mild (i.e., CNMI) cases. We also show that the elevated risk of the NCS-2 outcomes among mild cases versus noncases is consistently larger than the elevated risk among moderate cases versus mild cases. These results call into question the suggestion that the DSM-V case threshold should be set above CNMI rather than at any other arbitrary point on the severity gradient.

Methods

Samples

As described in more detail elsewhere (Kessler et al., 2004), the NCS-R interviewed 9,282 English-speaking household residents ages 18 and older in a nationally representative sample of the coterminous United States. Respondents were selected from a multistage clustered area probability sample. Face-to-face interviews were carried out between February 2001 and April 2003 by the professional interview field staff of the Institute for Social Research at the University of Michigan. The response rate was 70.9 percent. The survey was administered in two parts. Part I included a core diagnostic assessment that was administered to all respondents. Part II included questions about risk factors, consequences, and severity. Part II was administered to all Part I respondents who met lifetime criteria for any core disorder plus a probability subsample of other respondents, for a total Part II sample size of 5,692. We will focus on this Part II sample in the current chapter. This sample was weighted to adjust for the oversampling of cases from the Part I sample and for differential probabilities of selection due to household size and demographic–geographic correlates of response. We also carried out a nonrespondent survey in which a subsample of initial nonrespondents was recruited to complete a very brief screening survey in order to obtain basic information on several core symptoms of common mental disorders. A final Part II sample weight was developed based on this nonrespondent survey to adjust for psychiatric correlates of response.

The NCS-R, as the name implies, is a replication of the earlier National Comorbidity Survey (NCS) (Kessler et al., 1994). The NCS was a nationally representative household survey of respondents ages 15–54 carried out in 1990–92. The response rate was 82.4 percent, with 8,098 completed interviews. The same two-part interview was used in the NCS-R as in the NCS, the main difference in the two samples being that the age ranges differed. For purposes of trend comparison, a consolidated data file was

created that combined cases in the overlapping age range in the two samples (18–54). There were a total of 5,388 Part II NCS respondents and 4,319 NCS-R respondents in this age range.

In addition, an attempt was made to re-interview the 5,877 respondents in the Part II NCS sample in conjunction with the NCS-R. A total of 5,463 of these baseline respondents were successfully traced, of whom 166 were deceased and 4,375 interviewed, for a conditional response rate of 76.6 percent. The unconditional response rate, which takes into consideration the baseline NCS response rate of 82.4 percent, is 63.1 percent (.766 x .826). NCS-2 respondents differ significantly from other baseline NCS respondents in having higher probabilities of being female, well educated, and residents of rural areas (Kessler et al., 2003). A propensity score adjustment weight (Rosenbaum & Rubin, 1983) was used to correct the NCS-2 sample for these compositional biases. There was remarkably little difference between NCS-2 respondents and nonrespondents in either the prevalence of baseline NCS disorders or in the severity of these disorders once these demographic compositional adjustments were made (Kessler et al., 2003).

Diagnostic Assessment

DSM-IV diagnoses were made in the NCS-R using the WHO's WMH Survey Initiative version of the Composite International Diagnostic Interview (CIDI) (Kessler & Ustun, 2004) a fully structured lay-administered diagnostic interview that generates diagnoses according to the definitions and criteria of both the ICD-10 (World Health Organization, 1991) and DSM-IV (American Psychiatric Association, 1994) diagnostic systems. DSM-IV criteria are used in the current report, and we focus on respondents with disorders in the past 12 months. Organic exclusion rules and diagnostic hierarchy rules were used in making all diagnoses. The 12-month disorders considered here are anxiety disorders (panic disorder, generalized anxiety disorder, agoraphobia without panic disorder, specific phobia, social phobia, post-traumatic stress disorder, obsessive-compulsive disorder, and separation anxiety disorder), mood disorders (major depressive disorder, dysthymia, and bipolar disorder I or II), impulse-control disorders (oppositional-defiant disorder, conduct disorder, attention-deficit/hyperactivity disorder, and intermittent explosive disorder), and substance use disorders (alcohol and drug abuse and dependence). In addition, a screen was included for non-affective psychosis (NAP), including schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, and psychosis not otherwise specified. As described elsewhere (Kessler et al., 2004), confirmatory interviews carried out in a probability subsample of NCS-R respondents by clinical interviewers found generally good concordance between DSM-IV diagnoses based on the WMH-CIDI and clinician assessments of anxiety, mood, and substance use disorders. WMH-CIDI diagnoses of impulse-control disorders were not validated because a gold standard clinical interview exists for those disorders.

In addition to disorder-specific analyses, we developed a measure of overall disorder severity that expanded on SAMHSA's definition of SMI (Substance Abuse and Mental Health Services Administration, 1993). Respondents with a 12-month mental disorders were defined as having serious disorder (SMI) if they had at least one of the following: 12-month bipolar I disorder or NAP; a 12-month suicide attempt; at least two areas of role functioning with self-described "severe" role impairment on the Sheehan Disability Scales (Leon, Olfson, Portera, Farber, & Sheehan, 1997); or a pattern of functional impairment at a level consistent with a Global Assessment of Functioning (GAF) (Endicott, Spitzer, Fleiss, & Cohen, 1976) score of 50 or less. Respondents who did not meet criteria for SMI were classified moderate if they had at least one of the following: Bipolar II disorder; a suicide gesture, plan or ideation; or any other 12-month DSM-IV disorder with at least moderate role impairment in at least two areas of role functioning on the Sheehan Disability Scales. The remaining cases of disorder did not meet the specified impairments and were classified mild.

The four-category severity gradient was the focus of time trend analyses that compared prevalence in the NCS-R versus the NCS. The actual prevalence of individual disorders was not considered in the trend analysis because the NCS diagnoses used DSM-III-R criteria, versus DSM-IV criteria in the NCS-R. To account for these changes, a calibration process was used to create comparability in the prevalence measures. This was done by developing a series of nested logistic regression equations in the NCS-R that used symptom measures available in both surveys to predict (a) serious disorder versus all others, (b) serious-moderate disorder versus all others, and (c) any disorder versus no disorder. Prediction accuracy was good in all three equations, with area under the receiver operator characteristic curve of .68 for serious, .84 for serious-moderate, and .81 for any DSM-IV disorder. The coefficients in these equations were then used to generate predicted probabilities

for each NCS and NCS-R respondent for each nested outcome. These predicted probabilities were then used to impute discrete scores on the severity gradient. As described in more detail elsewhere (Kessler et al., in press-a), and briefly described in the next section, the method of Multiple Imputation (MI) (Rubin, 1987) was used to adjust significance tests for the imprecision of these imputations.

Analysis Methods

Data analysis was carried out using the Taylor series linearization method (Wolter, 1985), as implemented in the SUDAAN software system (Research Triangle Institute, 2002), to adjust for the weighting and clustering of the NCS-R data. In the case of the time trend analysis, MI was used to adjust for the imprecision of imputed disorder severity measures. This approach was implemented by generating ten independent and representative pseudo-samples from the original NCS-R sample, with predicted probabilities of severity converted into dichotomous case classifications based on probability distributions. Uncertainty in classification was reflected in variation across the 10 imputations and was included in standard errors by defining the estimated variance of each coefficient as the sum of the average design-adjusted within-replicate variance of the coefficient estimate and the variance of the estimated coefficients across the ten replicates. In the case of logistic regression, coefficients were exponentiated to generate odds-ratios (OR) with 95 percent confidence intervals (CIs). Significance of predictor sets was evaluated with Wald χ^2 tests using design-adjusted MI coefficient variance-covariance matrices.

Results

Prevalence and Severity

Data on the 12-month prevalence of core DSM-IV disorders in the NCS-R, originally reported elsewhere (Kessler et al., in press b), are presented in table 15.1. Twelve-month prevalence of any disorder is 26.2 percent, with somewhat more than half of these cases (14.4 percent) meeting criteria for only one disorder and smaller proportions for two (5.9 percent) or more (5.9 percent) disorders. Anxiety disorders are by far the most prevalent class of disorders (18.2 percent), followed by mood disorders (9.5 percent), impulse-control disorders (8.9 percent), and substance disorders (3.8 percent). The most common individual disorders are specific phobia (8.7 percent), social phobia (6.8 percent), and major depressive disorder (6.7 percent).

Twenty-two percent of respondents with at least one 12-month disorder are classified serious, 35.5 percent moderate, and 37.0 percent mild. The remaining 1.3 percent of 12-month cases are unclassified, as the severity distinction was made only for respondents with mental disorders, while the table also includes respondents with substance use disorders. These unclassified cases consist of the respondents diagnosed exclusively with a substance use disorder. On a base of 26.2 percent of the population, 22.0 percent serious translates into 5.8 percent of the population who meet criteria for SMI. Severity is strongly related to number of diagnoses, with the proportion classified serious ranging from 9.7 percent among respondents who meet criteria for exactly one diagnosis to 25.6 percent among those with two diagnoses, and 48.9 percent among those with three or more diagnoses. The distribution of severity across classes of disorder is quite different from the distribution of prevalence, with mood disorders having the highest percentage (44.8 percent) and anxiety disorders the lowest (22.5 percent) of cases classified serious. Individual disorders within each class with the highest percentage classified serious are panic disorder (45.1 percent) among the anxiety disorders, bipolar disorder (82.9 percent) among the mood disorders, oppositional-defiant disorder (49.6 percent) among the impulse-control disorders, and drug dependence (57.3 percent) among the substance use disorders.

The Implications of the Severity Gradient for Role Functioning

In an effort to provide external validation of the severity ratings, respondents who met criteria for a given disorder were asked how many days out of 365 in the past 12 months they were totally unable to work or carry out their other normal daily activities because of this disorder. To be conservative in combining these reports across multiple disorders in the subsample of respondents who met criteria for multiple disorders, we coded such respondents as having a score equal to their highest score for any single disorder rather than as the sum of their scores across disorders. A statistically significant gradient ($F_{2,5689} = 17.7$, $p < .001$) with substantial variation across the means was found for the mean

Table 15.1. Twelve-month prevalence and severity of DSM-IV disorders in the NCS-R (n = 9282)[1]

	Total		Severity[2]					
			Serious		Moderate		Mild	
	%	(se)	%	(se)	%	(se)	%	(se)
I. Anxiety Disorders								
Panic disorder	2.7	(0.2)	45.1	(3.3)	27.5	(2.7)	27.4	(2.9)
Agoraphobia without panic	0.8	(0.1)	37.3	(7.4)	33.3	(6.5)	29.5	(8.8)
Specific phobia	8.7	(0.4)	21.5	(1.9)	29.6	(1.9)	48.8	(2.0)
Social phobia	6.8	(0.3)	29.9	(2.0)	38.4	(2.5)	31.6	(2.5)
Generalized anxiety disorder	2.7	(0.2)	29.0	(3.2)	46.0	(4.1)	25.0	(3.1)
Post-traumatic stress disorder[3]	3.6	(0.3)	36.6	(3.4)	32.6	(2.2)	30.3	(3.4)
Obsessive-compulsive disorder[4]	1.1	(0.3)	41.6	(11.6)	26.1	(12.3)	32.4	(13.6)
Separation anxiety disorder[5]	0.9	(0.2)	43.3	(9.2)	24.8	(7.5)	31.9	(12.2)
Any anxiety disorder[6]	18.2	(0.7)	22.5	(1.5)	33.0	(1.3)	44.4	(2.0)
II. Mood Disorders								
Major depressive disorder	6.7	(0.3)	30.1	(1.7)	50.2	(2.2)	19.7	(2.1)
Dysthymia	1.5	(0.1)	49.7	(3.9)	32.1	(4.0)	18.2	(3.4)
Bipolar I-II disorders	2.6	(0.2)	82.9	(3.2)	17.1	(3.2)	0.0	(0.0)
Any mood disorder	9.5	(0.4)	44.8	(1.9)	40.2	(1.7)	15.1	(1.6)
III. Impulse-control Disorders								
Oppositional-defiant disorder[5]	1.0	(0.2)	49.6	(8.0)	40.3	(8.7)	10.1	(4.8)
Conduct disorder[5]	1.0	(0.2)	40.5	(11.1)	25.0	(7.2)	34.5	(9.5)
Attention-deficit/hyperactivity disorder[5]	4.1	(0.3)	41.3	(4.3)	35.2	(3.5)	23.5	(4.5)
Intermittent explosive disorder	2.6	(0.2)	23.6	(3.1)	74.6	(3.2)	1.8	(0.9)
Any impulse-control disorder[5, 7]	8.9	(0.5)	33.0	(2.8)	51.5	(3.2)	15.5	(2.5)
IV. Substance Disorders								
Alcohol abuse[3]	3.1	(0.3)	26.3	(2.8)	26.6	(3.2)	10.4	(2.7)
Alcohol dependence[3]	1.3	(0.2)	28.3	(4.8)	37.0	(5.4)	13.9	(3.6)
Drug abuse[3]	1.4	(0.2)	36.4	(4.9)	20.1	(4.2)	10.8	(3.1)
Drug dependence[3]	0.4	(0.1)	57.3	(8.0)	22.8	(7.0)	7.5	(4.0)
Any substance disorder[3]	3.8	(0.4)	27.3	(3.0)	26.1	(2.8)	9.9	(2.2)
V. Any Disorder								
Any[6]	26.2	(0.9)	22.0	(1.3)	35.5	(1.2)	37.0	(1.4)
One disorder[6]	14.4	(0.7)	9.7	(1.3)	31.1	(1.9)	52.4	(2.1)
Two disorders[6]	5.9	(0.3)	25.6	(1.9)	42.0	(2.2)	26.0	(2.1)
Three or more disorders[6]	5.9	(0.3)	48.9	(2.4)	39.9	(2.3)	10.1	(1.5)

[1]Reproduced, in part, from table 2 in Kessler et al. (in press-b). The definition of severity used here differs from the one used in that earlier report in that we focus here only on severity of mental disorders, while that report also included severity of substance use disorders in the definition.

[2]The severity measure is used to classify the severity of mental disorders, not substance use disorders. As a result, the percentages in the three severity columns sum to 100 percent across each row for the mental disorders, but not the substance use disorders. In the case of the substance use disorders, the sum represents the distribution of comorbid mental disorders among people with substance use disorders.

[3]Assessed only in the Part II NCS-R sample (n = 5,692).

[4]Assessed only in a random one-third subsample of the Part II NCS-R sample (n = 2,073).

[5]Assessed only in the Part II NCS-R sample among respondents in the age range 18–44 (n = 3,197).

[6]Estimated only in the Part II NCS-R sample. No adjustment is made for the fact that one or more disorders in the category were not assessed for all Part II respondents.

[7]The estimated prevalence of any impulse-control disorder is larger than the sum of the individual disorders because the prevalence of intermittent explosive disorder, the only impulse-control disorder that was assessed in the total sample, is reported here for the total sample rather than for the subsample of respondents among whom the other impulse-control disorders were assessed (Part II respondents in the age range 18–44). The prevalence of any impulse-control disorder, in comparison, is estimated in the latter subsample. Intermittent explosive disorder has a considerably higher estimated prevalence in this subsample than in the total sample.

number of days out of role among respondents who differed in their score on the severity gradient. Respondents classified as having SMI reported an average of 88.3 days out of role because of their worst mental disorder diagnosis during the 365 days before interview. This is much higher than the averages of respondents who are classified moderate (4.7) or mild (1.9).

Sociodemographic Correlates

As shown in table 15.2, significant sociodemographic correlates of having a core 12-month DSM-IV disorder in the NCS-R include young age, female gender, low education, low family income, never married, previously married, and unemployed-disabled (compared to the employed). Retired people have significantly lower odds of 12-month disorder than the employed. With the exception of gender and being retired, all these sociodemographic variables are also significantly related to SMI among 12-month cases. In addition, non-Hispanic blacks with a 12-month disorder have significantly elevated odds of SMI compared to non-Hispanic whites. The odds-ratios (ORs) of these significant sociodemographic variables in predicting SMI in the total sample are in the range 1.4 (non-Hispanic black compared to non-Hispanic white) to 4.1–4.2 (ages 18–29 and 30–44 compared to 60+).

Aggregate Time Trends

Time trend analysis originally reported elsewhere (Kessler et al., in press-a) found that 12-month prevalence of any DSM-IV disorder does not differ significantly between the baseline NCS (29.4 percent) and the NCS-R (30.5 percent; $z = 1.1$, $p = .271$). Table 15.3 presents the distributions for all four categories of the summary disorder gradient in the two surveys. The NCS-R severity distribution in this table differs from the distribution in table 15.2 because the trend analysis was carried out only among respondents in the common age range of the two surveys (18–54). No significant difference exists between the two surveys in the prevalence of SMI (5.3 percent in the NCS versus 6.3 percent in the NCS-R; $z = 1.1$, $p = .271$), moderate disorder (12.3 percent in the NCS versus 13.5 percent in the NCS-R; $z = 1.0$, $p = .298$), or mild disorder (11.8 percent in the NCS versus 10.8 percent in the NCS-R; $z = -0.9$, $p = .370$). In addition, we carried out analyses that investigated whether significant statistical interactions existed between time and sociodemographic variables in predicting prevalence. The motivation for doing this was the possibility that prevalence might have changed in some segments of society—possibly even increasing significantly in some segments and decreasing significantly in others—so that the population-wide trend was insignificant even though meaningful changes were occurring in important population segments. As shown in table 15.4, no evidence was found for such significant subgroup differences in time trends.

The Implications of the Severity Gradient for Future Risk

As reported in more detail elsewhere (Kessler et al., 2003), a consistent monotonic relationship was found between the illness severity categories in the baseline NCS and a series of outcomes in the NCS-2 re-interviews that were selected as indicators of clinically significant outcomes. These outcomes include being hospitalized for emotional problems at any time in the decade between the two interviews, being placed on work disability because of emotional problems at any time in the same interval, making a suicide attempt at any time in the same interval, and meeting criteria for SMI in the follow-up interview. Results are reported in table 15.5. As shown there, a more refined severity gradient was used here than in the aggregate analyses, which divided cases classified as having SMI into those with a severe-persistent mental illness (SPMI) and those with less severe SMI. The operational definition of SPMI is discussed elsewhere (Kessler et al., 2003).

The largest ORs in the table, associated with SPMI, are in the range 5.6–42.4, while the smallest ORs, associated with mild cases, are in the range 1.3–2.7. Three of the five ORs associated with mild cases are statistically significant at the .05 level. As table 15.6 shows, 10 statistically significant differences ($p < .05$, two-sided tests) out of 20 comparisons of pair-wise differences in outcomes are found across contiguous categories of the baseline illness severity gradient. Important for the purposes of our analysis, the differences between moderate versus mild cases are consistently smaller than either the differences between SPMI versus other SMI or other SMI versus moderate. The moderate versus mild distinction is statistically significant in only one comparison (predicting SMI in the NCS-2). The mild versus none distinction, in comparison, is significant in three comparisons and consistently larger than the moderate versus mild distinction.

Table 15.2. Sociodemographic correlates of having and 12-month DSM-IV disorder prevalence and of SMI among 12-month cases in the NCS-R (n = 9,282)

	Any 12-month disorder		SMI among 12-month cases		SMI in the total sample	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Age						
18–29	4.4*	(3.6–5.3)	1.5	(0.9–2.4)	4.1*	(2.7–6.2)
30–44	3.6*	(2.9–4.5)	1.7*	(1.1–2.7)	4.2*	(2.7–6.5)
45–59	2.6*	(2.0–3.3)	1.7*	(1.1–2.5)	3.2*	(2.2–4.6)
60+	1.0	—	1.0	—	1.0	—
χ^2_3 (p)	271.2*	(.000)	7.1	(.067)	48.7*	(.000)
Sex						
Female	1.4*	(1.2–1.6)	0.9	(0.7–1.1)	1.2	(0.9–1.4)
Male	1.0	—	1.0	—	1.0	—
χ^2_1 (p)	31.8*	(.000)	0.9	(.339)	2.2	(.142)
Race-ethnicity						
Hispanic	1.2	(0.8–1.6)	0.9	(0.6–1.4)	1.0	(0.7–1.5)
Non-Hispanic Black	0.9	(0.7–1.1)	1.6*	(1.1–2.2)	1.4*	(1.0–1.8)
Other	1.3	(0.9–1.7)	1.2	(0.7–2.0)	1.3	(0.8–2.1)
Non-Hispanic White	1.0	—	1.0	—	1.0	—
χ^2_1 (p)	3.6	(.311)	8.8*	(.032)	6.9	(.076)
Education						
< High school	1.3*	(1.1–1.7)	2.7*	(1.8–4.1)	2.9*	(2.0–4.2)
High school	1.2*	(1.0–1.5)	1.8*	(1.3–2.6)	2.0*	(1.4–2.8)
Some college	1.3*	(1.2–1.6)	1.6*	(1.1–2.3)	1.8*	(1.3–2.7)
College	1.0	—	1.0	—	1.0	—
χ^2_3 (p)	18.6*	(.000)	26.4*	(.000)	37.8*	(.000)
Marital status						
Never married	1.8*	(1.5–2.1)	1.4*	(1.0–1.8)	2.1*	(1.6–2.7)
Previously married	1.3*	(1.1–1.6)	1.8*	(1.4–2.3)	2.0*	(1.6–2.5)
Married-cohabitating	1.0	—	1.0	—	1.0	—
χ^2_2 (p)	53.7*	(.000)	25.7*	(.000)	53.8*	(.000)
Employment						
Student	1.3	(0.9–1.9)	0.7	(0.3–1.5)	0.9	(0.5–1.8)
Homemaker	1.0	(0.7–1.3)	1.4	(1.0–2.1)	1.4	(0.9–2.0)
Retired	0.4*	(0.3–0.5)	1.1	(0.6–1.7)	0.5*	(0.3–0.8)
Other	2.0*	(1.6–2.5)	4.2*	(3.2–5.5)	5.5*	(4.3–7.1)
Working	1.0	—	1.0	—	1.0	—
χ^2_4 (p)	161.4*	(.000)	153.9*	(.000)	247.4*	(.000)
Income						
Low	1.6*	(1.3–2.0)	2.5*	(1.8–3.6)	3.2*	(2.3–4.3)
Low average	1.5*	(1.2–1.9)	1.4*	(1.0–2.0)	1.7*	(1.2–2.4)
High average	1.4*	(1.1–1.6)	1.2	(0.8–1.7)	1.5*	(1.1–2.0)
High	1.0	—	1.0	—	1.0	—
χ^2_3 (p)	28.1*	(.000)	34.0*	(.000)	61.2*	(.000)
Urbanicity						
City > 2 million	1.1	(0.8–1.4)	1.3	(0.8–2.1)	1.4	(1.0–2.0)
City < 2 million	1.1	(0.9–1.5)	1.1	(0.8–1.7)	1.3	(0.9–1.8)
Suburb > 2 million	1.0	(0.8–1.4)	0.9	(0.6–1.3)	0.9	(0.6–1.3)
Suburb < 2 million	1.1	(0.9–1.4)	1.0	(0.7–1.4)	1.1	(0.9–1.5)
Adjacent/rural	1.0	—	1.0	—	1.0	—
χ^2_4 (p)	1.1	(.899)	4.7	(.321)	7.0	(.134)

*Significant at the .05 level, two-sided test

[1]The analysis was carried out in the Part II NCS-R sample (n = 5692) because some of the disorders were assessed only in the Part II NCS-R subsample.

[2]The analysis was carried out in the subsample of Part II NCS-R respondents who met criteria for any of the 12-month DSM-IV disorders listed in table 15.1.

Table 15.3. The distribution of severity of 12-month DSM-IV disorders in the baseline NCS (1990–92) and the NCS-R (2001–03) among respondents in the age range 18–54[1]

	Serious		Moderate		Mild		None		Any	
	%	(se)	%	(se)	%	(se)	%	(se)	%	(se)
I. Prevalence										
1990–02	5.3	0.6	12.3	0.9	11.8	0.8	70.6	1.2	29.4	1.2
2001–03	6.3	0.6	13.5	0.8	10.8	0.8	69.5	1.2	30.5	1.2
II. NCS-R: NCS Risk Ratios[2]	RR	(se)	RR	(se)	RR	(se)	RR	(se)		
2001–03 compared to 1990–92	1.18	0.16	1.10	0.09	0.91	0.10	—	—	1.04	0.05

[1]The retrospective classification of NCS data using DSM-IV criteria was based on multiple imputation (MI). See the text for a discussion. Standard errors are based on MI adjustments of design-based estimates. The association between time and severity in the total sample is $\chi^2_3 = 2.7$, p = .435.

[2]Risk ratios were calculated by dividing NCS-R prevalence by NCS prevalence. As this was done using MI, the estimates reported here are the averages of the ratios across the MI replicates. These do not necessarily equal the ratio of the average prevalence estimates across replicates. This is why the slight discrepancies exist between the RR estimates and the values one would obtain by calculating the ratios of the prevalence estimates.

Table 15.4. Significance of interactions between sociodemographics and time in predicting 12-month DSM-IV disorders among NCS and NCS-R respondents age 18–54

	Serious		Serious-Moderate		Any	
	χ^2	(p)	χ^2	(p)	χ^2	(p)
Age at interview	0.5	(.914)	2.7	(.443)	1.3	(.729)
Gender	0.1	(.753)	0.1	(.809)	0.0	(.926)
Race-ethnicity	0.8	(.840)	0.9	(.833)	0.5	(.918)
Marital status	0.4	(.833)	0.3	(.850)	0.0	(.981)
Education	0.4	(.942)	0.2	(.982)	0.3	(.958)
Family income	0.1	(.996)	0.5	(.912)	1.4	(.716)
Urbanicity	0.5	(.993)	0.4	(.995)	0.5	(.992)

Table 15.5. Associations (odds ratios) between baseline (1990–02) NCS severity and NCS-2 (2000–02) outcomes (n = 4,375)[1]

	Hospitalization			Work disability			Suicide attempt			SMI			Any		
	%	OR	(95% CI)	%	OR	(95% CI)	%	OR	(95% CI)	%	OR	(95% CI)	%	OR	(95% CI)
Severe	23.8	29.7*	(16.9–52.1)	6.1	5.6*	(2.2–14.4)	8.0	11.7*	(4.5–30.4)	28.9	15.4*	(9.9–24.0)	42.4	15.1*	(10.0–22.9)
Serious	9.7	10.1*	(4.8–21.3)	1.7	1.5	(0.5–4.3)	5.0	6.1*	(3.0–12.5)	22.1	10.6*	(6.0–18.5)	30.8	8.8*	(5.7–13.6)
Moderate	3.0	3.0*	(1.7–5.4)	1.4	1.3	(0.4–3.6)	2.2	2.9*	(1.2–7.4)	13.2	5.6*	(3.7–8.4)	16.4	3.8*	(2.7–5.5)
Mild	2.9	2.7*	(1.5–4.9)	1.5	1.3	(0.4–3.2)	1.6	2.0	(0.8–4.9)	6.1	2.6*	(1.8–3.8)	9.9	2.4*	(1.6–3.4)
Non-cases	1.0	1.0	—	1.0	1.0	—	0.7	1.0	—	2.5	1.0	—	4.5	1.0	—
χ^2_4	152.1*			17.0*			40.4*			194.0*			202.8*		

*Significant to the .05 level, two-sided test

[1]Reproduced with permission from Kessler et al. (2003). Entries in the % columns are unadjusted prevalences of the NCS-2 outcomes in subsamples defined by baseline 12-month NCS disorder severity. Entries in the OR and (95% CI) columns are odds ratios and design-corrected 95 percent confidence intervals obtained by exponentiating multiple logistic regression coefficients in equations that simultaneously included dummy variables for the baseline disorder severity categories and controls for age and sex to predict the NCS-2 outcomes.

Table 15.6. Associations (odds ratios) between contiguous pairs of baseline (1990–02) NCS disorder severity categories and NCS-2 (2000–02) outcomes (n = 4,375)[1]

	Hospitalization			Work disability			Suicide attempt			SMI			Any		
	%	OR	(95% CI)	%	OR	(95% CI)	%	OR	(95% CI)	%	OR	(95% CI)	%	OR	(95% CI)
Severe vs. serious	14.0*	2.9*	(1.5–5.9)	4.4*	3.8*	(1.3–11.7)	3.0	1.9	(0.7–5.2)	6.8	1.5	(0.8–2.7)	11.6*	1.7*	(1.1–2.6)
Serious vs. moderate	6.7*	3.4*	(1.5–7.7)	0.3	1.2	(0.4–3.3)	2.8	2.1	(0.7–6.3)	8.9	1.9	(1.0–3.5)	14.4*	2.3*	(1.5–3.5)
Moderate vs. mild	0.1	1.1	(0.5–2.2)	0.1	1.0	(0.4–2.3)	0.6	1.4	(0.5–4.2)	7.1*	2.1*	(1.4–3.3)	6.5*	1.6*	(1.1–2.4)
Mild vs. non–cases	1.9*	2.7*	(1.5–4.9)	0.5	1.3	(0.5–3.2)	0.9	2.0	(0.8–4.9)	3.6	2.6*	(1.8–3.8)	5.4*	2.4*	(1.6–3.4)

*Significant to the .05 level, two-sided test

[1]Reproduced with permission from Kessler et al. (2003). Entries in the % columns are differences in unadjusted prevalences of the NCS-2 outcomes between the subsamples being contrasted. Entries in the OR columns are ratios of contiguous ORs in table 15.2. Entries in the (95% CI) columns are design-corrected 95 percent confidence intervals of these ratios.

Discussion

Several limitations of the NCS family of surveys are relevant to the results reported in this chapter. First, the samples might underrepresent people with mental illness either because of sample frame exclusions (e.g., failing to include homeless people or institutionalized people in the sampling frame) or greater reluctance of mentally ill than other people to participate in a survey about mental illness. Evidence for bias of these types has been reported in other community surveys of mental illness (Allgulander, 1989; Eaton, Anthony, Tepper, & Dryman, 1992; Kessler, Little, & Groves, 1995), although no evidence for the nonresponse bias component of this problem was found in NCS or NCS-R nonresponse surveys (Kessler et al., 1995, 2004). To the extent that downward bias exists, though, the NCS-R estimates of 12-month prevalence and severity are likely to be conservative.

Second, survey participants may underreport 12-month prevalence. This possibility is consistent with evidence in the survey methodology literature that embarrassing behaviors are often underreported (Cannell, Marquis, & Laurent, 1977). Studies of experimental survey methods show that this problem can be reduced substantially by using strategies aimed at decreasing embarrassment (Kessler et al., 1998; Turner et al., 1998). As discussed in more detail elsewhere (Kessler & Ustun, 2004), a number of these strategies were used in the NCS family of surveys. To the extent that these strategies were unsuccessful, though, the NCS-R estimates of 12-month prevalence and severity are likely to be biased in a conservative direction.

Third, the CIDI is a lay-administered diagnostic interview rather than a clinician-administered interview, introducing possible bias into estimates of prevalence and severity. As reported elsewhere (Kessler et al., 2004), a clinical reappraisal study in which a probability sample of NCS-R respondents was blindly interviewed by trained clinicians with the Structured Clinical Interview for DSM-IV (SCID) (First, Spitzer, Gibbon, & Williams, 2002) found generally good individual-level concordance with diagnoses based on the CIDI and also found that CIDI lifetime prevalence estimates are, for the most part, lower than SCID prevalence estimates.

Fourth, the NCS-R included only a screen for the diagnoses of schizophrenia and other nonaffective psychoses. Although these are important disorders, they were excluded from the core NCS-R assessment because previous validation studies have shown these disorders to be dramatically overestimated in lay-administered interviews like the CIDI (Bebbington & Nayani, 1995; Eaton, Romanoski, Anthony, & Nestadt, 1991; Keith, Regier, & Rae, 1991; Kendler, Gallagher, Abelson, & Kessler, 1996; Spengler & Wittchen, 1988). These same studies also showed that the vast majority of respondents with clinician-diagnosed NAP meet criteria for CIDI anxiety, mood, or substance disorders and are consequently captured as cases even if NAP is not assessed. It remains possible, though, that the severity of some such cases are underestimated in the CIDI even if they are detected as cases, resulting in conservative bias in the estimation of severity.

Fifth, with regard to the trend analysis, severity was assessed indirectly with imputation due to the inconsistency of measures in the NCS-2 and NCS-R compared to the earlier NCS. This introduces the possibility of bias in trend estimates if our assumption of temporal consistency in the imputation equation coefficients is incorrect. The strong relationship of imputed values to direct measures of severity in the NCS-R and the use of MI to adjust significance

tests minimize concern about the first limitation, but we still have to bear in mind that the trend analyses must be considered tentative because of this indirect assessment.

Within the context of these limitations, the initial NCS-R prevalence results reviewed in this chapter are generally consistent with those of the two previous major psychiatric epidemiological surveys in the United States, the ECA Survey (Robins & Regier, 1991) and the NCS (Kessler et al., 1994), in finding that 12-month mental disorders are highly prevalent. The estimate that 26.2 percent of the population meets criteria for at least one 12-month DSM-IV disorder in the NCS-R is very close to estimates of 28.1 percent in the ECA (Regier et al., 1998) and 29.5 percent in the NCS (Kessler et al., 1994). In addition, the three most prevalent 12-month disorders in the NCS-R (specific phobia, social phobia, and major depressive disorder) are identical to the three most prevalent in the baseline NCS. Two of these three were also most prevalent in the ECA. The exception is social phobia, which was not comprehensively assessed in the ECA. The findings that 12-month anxiety disorders, as a class, are more prevalent than mood disorders and that mood disorders are more prevalent than substance disorders are also consistent with both the ECA and the baseline NCS.

The externalizing disorders considered in the NCS-R have not been included in previous epidemiological surveys of adults. Some limited information is available, however, on the prevalence of intermittent explosive disorder in the general population (Olvera, 2002), which is consistent with the NCS-R estimate that 2.6 percent of the population meets criteria for this disorder in a given year. We are aware of no independent information on the prevalence of the other impulse-control disorders among adults—oppositional-defiant disorder (ODD), conduct disorder (CD), and attention-deficit/hyperactivity disorder (ADHD)—although these disorders are routinely assessed in epidemiological surveys of children and adolescents (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Lahey et al., 2000; Scahill & Schwab-Stone, 2000).

As noted in the section on measures, NCS-R respondents were retrospectively asked about full criteria for these impulse-control disorders when they were children and were asked only a single question about 12-month prevalence regarding whether they still had "any" of the symptoms of the disorder during that interval. Twelve-month prevalence estimates of these disorders are consequently estimates of residual adult symptoms and not necessarily of full syndromes. The 12-month prevalence estimates of ODD and CD are only a small fraction of the estimates typically found in community epidemiological surveys of youth. The prevalence estimate of ADHD, in comparison, is approximately 50 percent as high as the estimates typically found in community epidemiological surveys of youth. This finding is consistent with independent evidence from follow-up studies of children treated for ADHD that up to half continue to have the disorder in adulthood (Pary et al., 2002).

The NCS-R results also support the conclusion of previous studies regarding the severity of 12-month disorders that a large proportion of 12-month cases are mild. Indeed, nearly twice as many 12-month NCS-R cases are classified mild (40.4 percent) as are classified serious (22.3 percent). Nonetheless, the 14.0 percent of the population estimated to have a 12-month serious or moderate DSM-IV disorder is a substantial proportion. The 5.7 percent of the population estimated to have a serious 12-month disorder (.223 x .262, based on results in table 15.1 that 26.2 percent of the sample meet criteria for at least one 12-month disorder and that 22.3 percent of this 26.2 percent meet criteria for a serious disorder) is almost identical to the estimated 12-month prevalence of SMI, using the SAMHSA definition of that term, among 18–54-year-old respondents in the baseline NCS (Kessler et al., 1996). The finding that mood disorders are more likely than anxiety disorders to be classified as serious is consistent with a cross-national comparative analysis of five earlier CIDI surveys that used a less precise measure of severity (Bijl et al., 2003), as well as with the result in the more recent WHO WMH Surveys (Demyttenaere et al., 2004). It is also striking that impulse-control disorders, which have not been assessed in previous community epidemiological studies of adult mental disorders, are found in over one-third of cases and have a higher proportion classified serious than either anxiety or substance disorders.

The results regarding sociodemographic correlates are broadly consistent with those in previous epidemiological surveys in finding that mental disorders are associated with a general pattern of disadvantaged social status, including being female, unmarried, having low socioeconomic status, and being non-Hispanic black (Bland, Orn, & Newman, 1988; Canino et al., 1987; Demyttenaere et al., 2004; Hwu, Yeh, & Cheng, 1989; Lee et al., 1990; Lépine et al., 1989; Wells, Bushnell, Hornblow, Joyce, & Oakley-Browne, 1989; WHO International Consortium in Psychiatric Epidemiology, 2000; Wittchen, Essau, von Zerssen, Krieg, & Zaudig, 1992). It is not clear whether the associations of achieved social statuses (i.e., marital status, socioeconomic status) with risk

of disorders are due to effects of environmental experiences on mental disorders, to effects of mental disorders on achieved social status, to unmeasured common biological causes, or to some combination. In the case of the ascribed social statuses (i.e., sex and race), the causal effects clearly flow from the statuses to the disorders, although the relative importance of environmental and biological mediators is unclear.

The finding that no change occurred either in the prevalence or in the severity of mental disorders between the baseline NCS (1990–2) and the NCS-R (2001–03) is striking, especially in light of independent evidence that treatment of mental illness increased dramatically during that same period (Wang et al., in press). Two explanations are consistent with these results. The first is that prevalence would have been higher in the early 2000s than the early 1990s were it not for increased treatment. The second is that the increased treatment over the decade did not cause a decrease in the prevalence of mental disorders. Consistent with the first possibility, the economic recession of the early 2000s began shortly before and deepened throughout the NCS-R field period. In addition, the 9/11 attacks occurred in the middle of the field period. It is plausible to think that mental disorders might have been more prevalent at this time because of these stressors were it not for increased treatment. Consistent with the second possibility, recent studies have shown that most patients in treatment for mental disorders receive treatments that are not consistent with evidence-based guidelines (Katz, Kessler, Lin, & Wells, 1998; Wang, Berglund, & Kessler, 2000; Wang, Demler, & Kessler, 2002). In addition, as most treatment is of fairly short duration, we might expect even effective treatment to influence episode duration more than 12-month prevalence. This cannot be evaluated directly, though, as episode duration was not assessed in the NCS.

The findings regarding conditional risk of serious mental health outcomes in NCS-2 as a function of disorder severity in the baseline NCS are sobering in that they clearly document the prognostic significance of mild baseline disorders. These findings call into question the suggestion that the DSM diagnostic system should exclude mild cases. This is not to say that more principled considerations, based on future epidemiological, biological, or taxometric studies, might not lead to the conclusion that diagnostic thresholds for certain DSM disorders should be modified upward. Nor is it to say that the problem that motivated some mental health policy analysts to propose narrowing the DSM criteria, that the number of people who meet current criteria is much larger than the number who can be treated with available treatment resources, is unimportant. However, the solution of defining the problem out of existence by excluding mild cases from the diagnostic system is ill conceived. The definition of a case should not be considered synonymous with need for treatment any more than with clinically significant distress or impairment (Spitzer & Wakefield, 1999). Instead, the problem of unmet need for treatment should be addressed by developing comprehensive triage rules that allocate available resources based on evidence-based assessments of the cost-effectiveness of available treatments across the severity threshold of the disorder. Severity gradients are widely used in this way in other branches of medicine (NCEP Expert Panel, 1993). In the absence if such rules, which currently do not exist, ad hoc decision-making is inevitable (Mechanic, 2003). In developing these rules for mental disorders, consideration should be given not only to current distress and impairment, but also to risk of progression from mild to more severe disorder. It is unclear whether these rules, once they are developed, would define treatment of mild cases as cost-effective. Even if they did not, though, mild cases should be retained in the definition of disorders both to acknowledge that mental disorders, like physical disorders, vary in severity and to remind us that the development of cost-effective treatments for mild disorders might prevent a substantial proportion of future serious disorders.

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REFERENCES

Alcohol, Drug Abuse, and Mental Health Administration. (1992). Alcohol, Drug Abuse and Mental Health Administration Reorganization Act. PL 102-321.

Allgulander, C. (1989). Psychoactive drug use in a general population sample, Sweden: Correlates with perceived health, psychiatric diagnoses, and mortality in an automated record-linkage study. *American Journal of Public Health, 79,* 1006–1010.

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders, 4th ed.* Washington, DC: Author.

Bebbington, P. E., & Nayani, T. (1995). The psychosis screening questionnaire. *International Journal of Methods in Psychiatric Research, 5,* 11–19.

Bijl, R. V., de Graaf, R., Hiripi, E., Kessler, R. C., Kohn, R., Offord, D. R., et al. (2003). The prevalence of treated and untreated mental disorders in five countries. *Health Affairs, 22,* 122–133.

Bland, R. C., Orn, H., & Newman, S. C. (1988). Lifetime prevalence of psychiatric disorders in Edmonton. *Acta Psychiatrica Scandinavica, 77,* 24–32.

Canino, G. J., Bird, H. R., Shrout, P. E., Rubio-Stipec, M., Bravo, M., Martinez, R., et al. (1987). The prevalence of specific psychiatric disorders in Puerto Rico. *Archives of General Psychiatry, 44,* 727–735.

Cannell, C. F., Marquis, K. H., & Laurent, A. (1977). A summary of studies of interviewing methodology: 1959–1970. In *Vital Health Statistics,* 2nd ed., Series 2(69).

Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry, 60,* 837–844.

Demyttenaere, K., Bruffaerts, R., Posada-Villa, J., Gasquet, I., Kovess, V., Lepine, J.-P., et al. (2004). Prevalence, severity and unmet need for treatment of mental disorders in the World Health Organization World Mental Health (WMH) surveys. *Journal of the American Medical Association, 291,* 2581–2590.

Eaton, W. W., Anthony, J. C., Tepper, S., & Dryman, A. (1992). Psychopathology and attrition in the Epidemiologic Catchment Area Study. *American Journal of Epidemiology, 135,* 1051–1059.

Eaton, W. W., Badawi, M., & Melton, B. (1995). Prodromes and precursors: Epidemiologic data for primary prevention of disorders with slow onset. *American Journal of Psychiatry, 152,* 967–972.

Eaton, W. W., Romanoski, A., Anthony, J. C., & Nestadt, G. (1991). Screening for psychosis in the general population with a self-report interview. *Journal of Nervous and Mental Disease, 179,* 689–693.

Endicott, J., Spitzer, R. L., Fleiss, J. L., & Cohen, J. (1976). The global assessment scale. A procedure for measuring overall severity of psychiatric disturbance. *Archives of General Psychiatry, 33,* 766–771.

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (2002). *Structured Clinical Interview for DSM-IV Axis I Disorders, Research Version, Non-patient Edition (SCID-I/NP).* New York: Biometrics Research, New York State Psychiatric Institute.

Hwu, H. G., Yeh, E. K., & Cheng, L. Y. (1989). Prevalence of psychiatric disorders in Taiwan defined by the Chinese diagnostic interview schedule. *Acta Psychiatrica Scandinavica, 79,* 136–147.

Katz, S. J., Kessler, R. C., Lin, E., & Wells, K. B. (1998). Medication management of depression in the United States and Ontario. *Journal of General Internal Medicine, 13,* 137–139.

Keith, S. J., Regier, D. A., & Rae, D. S. (1991). Schizophrenic disorders. In L. N. Robins & D. A. Regier (Eds.), *Psychiatric Disorders in America: The Epidemiologic Catchment Area Study* (pp. 33–52).: New York: Free Press.

Kendell, R. E. (2002). Five criteria for an improved taxonomy of mental disorders. In E. Helzer & J. J. Hudziak (Eds.), *Defining Psychopathology in the 21st Century DSM-V and Beyond* (pp. 3–17). Washington, DC: American Psychiatric Publishing.

Kendler, K. S., Gallagher, T. J., Abelson, J. M., & Kessler, R. C. (1996). Lifetime prevalence, demographic risk factors, and diagnostic validity of nonaffective psychosis as assessed in a US community sample. The National Comorbidity Survey. *Archives of General Psychiatry, 53,* 1022–1031.

Kessler, R. C., Berglund, P., Chiu, W. T., Demler, O., Heeringa, S., Hiripi, E., et al. (2004). The US National Comorbidity Survey Replication (NCS-R): Design and field procedures. *International Journal of Methods in Psychiatric Research, 13,* 69–92.

Kessler, R. C., Berglund, P. A., Zhao, S., Leaf, P. J., Kouzis, A. C., Bruce, M. L., et al. (1996). The 12-month prevalence and correlates of serious mental illness (SMI). In R. W. Manderscheid & M. A. Sonnenschein (Eds.), *Mental Health, United States, 1996* (pp. 59–70). Washington, DC: U.S. Government Printing Office.

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (in press-b). Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry.*

Kessler, R. C., Demler, O., Frank, R. G., Olfson, M., Pincus, H. A., Walters, E. E., et al. (in press-a). US prevalence and treatment of mental disorders: 1990–2003. *New England Journal of Medicine.*

Kessler, R. C., Little, R. J. A., & Groves, R. M. (1995). Advances in strategies for minimizing and adjusting for survey nonresponse. *Epidemiologic Reviews, 17,* 192–204.

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., et al. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Archives of General Psychiatry, 51,* 8–19.

Kessler, R. C., & Merikangas, K. R. (2004). The National Comorbidity Survey Replication (NCS-R). *International Journal of Methods in Psychiatric Research, 13,* 60–68.

Kessler, R. C., Merikangas, K. R., Berglund, P. A., Eaton, W. W., Koretz, D., & Walters, E. E. (2003). Mild disorders should not be eliminated from the DSM-V. *Archives of General Psychiatry, 60,* 1117–1122.

Kessler, R. C., & Ustun, T. B. (2004). The World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research, 13,* 93–121.

Kessler, R. C., Wittchen, H.-U., Abelson, J. M., McGonagle, K. A., Schwarz, N., Kendler, K. S., et al. (1998). Methodological studies of the Composite International Diagnostic Interview (CIDI) in the US National Comorbidity Survey. *International Journal of Methods in Psychiatric Research, 7,* 33–55.

Lahey, B. B., Schwab-Stone, M., Goodman, S. H., Waldman, I. D., Canino, G., Rathouz, P. J. et al. (2000). Age and gender differences in oppositional behavior and conduct problems: a cross-sectional household study of middle childhood and adolescence. *Journal of Abnormal Psychology, 109,* 488–503.

Lee, C. K., Kwak, Y. S., Yamamoto, J., Rhee, H., Kim, Y. S., Han, J. H., et al. (1990). Psychiatric epidemiology in Korea: Part I. Gender and age differences in Seoul. *Journal of Nervous and Mental Disease, 178,* 242–246.

Leon, A. C., Olfson, M., Portera, L., Farber, L., & Sheehan, D. V. (1997). Assessing psychiatric impairment in primary care with the Sheehan Disability Scale. *International Journal of Psychiatry in Medicine, 27,* 93–105.

Lépine, J. P., Lellouch, J., Lovell, A., Teherani, M., Ha, C., Verdier-Taillefer, M. G., et al. (1989). Anxiety and depressive disorders in a French population: Methodology and preliminary results. *Psychiatric Psychobiology, 4,* 267–274.

Manderscheid, R. W., Atay, J. E., Hernandez-Cartagana, M. R., Edmond, P. Y., Male, E., Parker, A. C. E., et al. (2001). Highlights of organized mental health services in 1998 and major national and state trends. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental Health, United States, 2000* (pp. 135–171). Washington, DC: U.S. Government Printing Office.

Mechanic, D. (2003). Is prevalence of mental disorder a good measure of need? *Health Affairs, 22,* 8–20.

Mechanic, D., & Bilder, S. (2004). Treatment of people with mental illness: A decade-long perspective. *Health Affairs, 23,* 84–95.

Narrow, W. E., Rae, D. S., Robins, L. N., & Regier, D. A. (2002). Revised prevalence estimates of mental disorders in the United States: Using a clinical significance criterion to reconcile 2 surveys' estimates. *Archives of General Psychiatry, 59,* 115–123.

National Advisory Mental Health Council. (1993). Health care reform for Americans with severe mental illnesses: Report of the National Advisory Mental Health Council. *American Journal of Psychiatry, 150,* 1447–1465.

NCEP Expert Panel. (1993). Summary of the second report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II). *Journal of the American Medical Association, 269,* 3015–3023.

Olfson, M., Marcus, S. C., Druss, B., Elinson, L., Tanielian, T., & Pincus, H. A. (2002). National trends in the outpatient treatment of depression. *Journal of the American Medical Association, 287,* 203–209.

Olvera, R. L. (2002). Intermittent explosive disorder: Epidemiology, diagnosis and management. *CNS Drugs, 16,* 517–526.

Pary, R., Lewis, S., Matuschka, P. R., Rudzinskiy, P., Safi, M., & Lippmann, S. (2002). Attention deficit disorder in adults. *Annals of Clinical Psychiatry, 14,* 105–111.

Preisig, M., Merikangas, K. R., & Angst, J. (2001). Clinical significance and comorbidity of subthreshold depression and anxiety in the community. *Acta Psychiatrica Scandinavica, 104,* 96–103.

Regier, D. A. (2000). Community diagnosis counts [Commentary]. *Archives of General Psychiatry, 57,* 223–224.

Regier, D. A., Kaelber, C. T., Rae, D. S., Farmer, M. E., Knauper, B., Kessler, R. C., et al. (1998). Limitations of diagnostic criteria and assessment instruments for mental disorders. Implications for research and policy. *Archives of General Psychiatry, 55,* 109–115.

Regier, D. A., & Narrow, W. E. (2002). Defining clinically significant psychopathology with epidemiologic data.

In J. E. Helzer & J. J. Hudziak (Eds.), *Defining Psychopathology in the 21st Century: DSM-V and Beyond* (pp. 19–30). Washington, DC: American Psychiatric Publishing.

Research Triangle Institute. (2002). SUDAAN: Professional Software for Survey Data Analysis [computer program] (Version 8.01). Research Triangle Park, NC: Author.

Robins, L. N., & Regier, D. A. (Eds.). (1991). *Psychiatric disorders in America: The Epidemiologic Catchment Area Study.* New York: Free Press.

Robins, L. N., Wing, J., Wittchen, H.-U., & Helzer, J. E. (1988). An epidemiologic instrument suitable for use in conjunction with different diagnostic systems and in different cultures. *Archives of General Psychiatry, 45,* 1069–1077.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70,* 41–55.

Rubin, D. B. (1987). *Multiple Imputation for Nonresponse in Surveys.* New York: John Wiley & Sons.

Scahill, L., & Schwab-Stone, M. (2000). Epidemiology of ADHD in school-age children. *Child and Adolescent Psychiatric Clinics of North America, 9,* 541–555.

Spengler, P. A., & Wittchen, H.-U. (1988). Procedural validity of standardized symptom questions for the assessment of psychotic symptoms: A comparison of the DIS with two clinical methods. *Comprehensive Psychiatry, 29,* 309–322.

Spitzer, R. L. (1998). Diagnosis and need for treatment are not the same. *Archives of General Psychiatry, 55,* 120.

Spitzer, R. L., & Wakefield, J. C. (1999). DSM-IV diagnostic criterion for clinical significance: Does it help solve the false positive problem? *American Journal of Psychiatry, 156,* 1856–1864.

Substance Abuse and Mental Health Services Administration. (1993). Final notice establishing definitions for (1) children with a serious emotional disturbance, and (2) adults with a serious mental illness. *Federal Register, 58,* 29422–29425.

Sullivan, P. F., Kessler, R. C., & Kendler, K. S. (1998). Latent class analysis of lifetime depressive symptoms in the national comorbidity survey. *American Journal of Psychiatry, 155,* 1398–1406.

Turner, C. F., Ku, L., Rogers, S. M., Lindberg, L. D., Pleck, J. H., & Sonenstein, F. L. (1998). Adolescent sexual behavior, drug use, and violence: Increased reporting with computer survey technology. *Science, 280,* 867–873.

Wang, P. S., Berglund, P., & Kessler, R. C. (2000). Recent care of common mental disorders in the United States: Prevalence and conformance with evidence-based recommendations. *Journal of General Internal Medicine, 15,* 284–292.

Wang, P. S., Demler, O., & Kessler, R. C. (2002). Adequacy of treatment for serious mental illness in the United States. *American Journal of Public Health, 92,* 92–98.

Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (in press). Twelve-month use of mental health services in the U.S.: Results from the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry.*

Wells, J. E., Bushnell, J. A., Hornblow, A. R., Joyce, P. R., & Oakley-Browne, M. A. (1989). Christchurch Psychiatric Epidemiology Study, part I: Methodology and lifetime prevalence for specific psychiatric disorders. *Australian and New Zealand Journal of Psychiatry, 23,* 315–326.

WHO International Consortium in Psychiatric Epidemiology. (2000). Cross-national comparisons of the prevalences and correlates of mental disorders. *Bulletin of the World Health Organization, 78,* 413–426.

Wittchen, H.-U., Essau, C. A., von Zerssen, D., Krieg, C. J., & Zaudig, M. (1992). Lifetime and six-month prevalence of mental disorders in the Munich Follow-up Study. *European Archives of Psychiatry and Clinical Neuroscience, 241,* 247–258.

Wolter, K. M. (1985). *Introduction to variance estimation.* New York: Springer-Verlag.

World Health Organization. (1991). *International classification of diseases (ICD-10).* Geneva, Switzerland: World Health Organization.

Chapter 16

Trends in Number of Persons with Mental Health and Substance Abuse Disorders and Payments for Their Services in Public and Private Sector Health Plans

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Introduction

This chapter presents trends for 1995 to 1998 on the number of people with mental health and/or substance abuse (MH/SA) disorders and the utilization and costs associated with treatment. Three data sources are used that represent the three largest payers of treatment for MH/SA disorders: Medicare, Medicaid, and the private sector. The Medicare estimates are national, the Medicaid estimates are for four States, and the private sector estimates are for a large sample of people covered by employer-sponsored insurance plans. By using claims data, these estimates present information on the actual care sought and the actual payments made in each system of care.

In addition to presenting trends, this chapter updates previous estimates of the number of people with MH/SA disorders and their associated health care utilization and payments. Larson and colleagues (1998) reported the first comprehensive assessment of the prevalence of MH/SA conditions among select

populations. The authors included estimates and the corresponding total payments of the diagnosed annual prevalence of MH/SA conditions and MH/SA-related utilization and payments using Medicaid data from Michigan, New Jersey, and Washington in 1993 and Medicare and private sector health plan data in 1994. These estimates were updated and supplemented by Finkelstein and colleagues (2004) using an additional year of data and an additional Medicaid State, Pennsylvania. This chapter presents information on two additional years of data beyond Finkelstein and colleagues. Not all details presented by Larson and colleagues (1998) and Finkelstein and colleagues (2004) are updated in this chapter. Instead, the interested reader is referred to the analytic tables that underlie many of these statistics, which are available at http://www.mhsapayments.org.

The period examined captures many of the events that shaped today's health care environment. Overall, the national economy was booming, as gross measures of economic productivity showed increases rarely seen in recent history; however, it is unclear what net effect this economic growth may have had on Medicaid enrollment. The economic growth was associated with reductions in welfare rolls and an increase in jobs, but this growth was concurrent with reductions in employer-sponsored private insurance and dramatic increases in health care costs. Legislative milestones included the introduction of nationwide welfare reform, the expansion of competition in Medicare plans, and the repeal of Supplemental Security Income (SSI) and Disability Insurance (DI) for substance abusers. Among the changes in financing were the growth of managed care and behavioral health carve-outs in all financing systems. There were profound changes in the availability and use of psychotropic medications, especially antidepressant and antipsychotic medications, throughout the 1990s. Estimating trends in the context of these milestone phenomena provides important information for understanding how utilization and payments may respond to changes in legislation and prescribing patterns in the future. Layered on top of these broad events were events specific to treatment for MH/SA conditions, which are discussed later in this chapter.

The next section describes the data and methods used in this analysis, followed by a section showing broad trends for the three data sources. This background is crucial to interpreting the trends on prevalence and payments for specific groups of claimants with MH/SA conditions presented in the final sections of this chapter.

Data and Methods

Data

Data for this study are drawn from the database used in the Medicare, Medicaid, and Managed Care Analysis (MMMCA) project, funded by the Center for Mental Health Services (CMHS) and the Center for Substance Abuse Treatment (CSAT) at the Substance Abuse and Mental Health Services Administration (SAMHSA). The three data sources used in this report are Medicare, Medicaid, and private sector health plans. Both the Medicare and Medicaid data were acquired from the Centers for Medicare and Medicaid Services (CMS). The Medicare files comprise the 1995–1998 years of the 5 percent Sample Beneficiary Standard Analytic Files (SAF) and the 5 percent Enrollment Database (EDB). The 5 percent files include all fee-for-service (FFS) claims for a 5 percent random sample of Medicare beneficiaries not enrolled in Medicare health maintenance organizations (HMOs). The Medicare files include claims for inpatient, outpatient, and other covered services as well as for eligibility and demographic data on individual Medicare beneficiaries. The Medicare estimates can be generalized to two beneficiary populations: elderly beneficiaries not enrolled in Medicare HMOs and those with qualifying disabilities who are eligible for SSI and DI (Social Security Administration, 2005).

By excluding HMO enrollees, all Medicare data are for people who received services reimbursed through FFS and who were not enrolled in a managed care plan at any point during the year of study. In general, the utilization information for the small proportion of managed care enrollees was not consistently reliable for analysis. Because the sample is a random sample, the data are readily extrapolated to the national level by multiplying estimates from the 5 percent sample by 20. Thus, this chapter reports national estimates for those in Medicare FFS.

Medicaid data are from the State Medicaid Research Files (SMRF), which have identical file layouts. We use SMRF data on FFS claims for Michigan, New Jersey, Pennsylvania, and Washington for the years 1995–1998. SMRF data include eligibility and demographic information for all enrollees, regardless of whether they are enrolled in FFS or managed care. The data also include paid claims for all services for individuals enrolled in the traditional FFS Medicaid program. Like the Medicare data, the managed care utilization and payments information was not consistently reliable for analysis. Thus, the analytic data set excludes any enrollee who was enrolled in Medicaid managed care at any point during a given

year of study. Because the Medicaid estimates are derived from FFS Medicaid claims within these States, they may not generalize to those in Medicaid managed care or to other States.

Unlike Medicare or private insurance data, Medicaid expenditure data include prescription drug payments. Medicaid typically covers prescription drugs, whereas Medicare does not. Although private insurance plans usually have prescription drug coverage, their payments are separated from other claims and thus are not included in the standard expenditure estimates.

Private insurance data are from MarketScan®, a database of claims, benefit design, and person-level enrollment information. The sampling frame comprises a convenience sample of Fortune 500 companies and is refreshed each year. Medstat creates and maintains this large private sector database from claims files submitted from private employers, insurance companies, and managed care vendors. This study uses data for those employers for whom both enrollment data and benefit design information were available for each year of the 1995–1998 study period.

Unlike the available Medicare and Medicaid databases, the private sector database includes utilization data for many individuals enrolled in certain forms of managed care, allowing for analyses that are not possible with the public sector databases. Reflecting this difference between the private and public sector, the sample exclusions for MarketScan are different from those for Medicaid and Medicare. In MarketScan, the various insurance plans were first categorized as being capitated or noncapitated. Capitation means the insurer pays a premium for each patient to cover services for that patient. Because the premium does not vary by level of service, capitated plans do not provide reliable payment information. Thus, payment estimates were not available for plans that were capitated, namely capitated point of service (POS) and HMO plans. Payment estimates were available for a large number of noncapitated plans, including those described as FFS (indemnity), preferred provider organizations (PPO), exclusive provider organizations (EPO), and noncapitated POS. Only claimants who switched between a capitated plan and a noncapitated plan were excluded from the analysis sample. All other claimants, both capitated and noncapitated, were included in the sample. So that the MarketScan estimates can be compared with those for Medicare and Medicaid, enrollees in MarketScan noncapitated plans are also referred to as FFS enrollees.

Another feature that distinguishes the private sector data source from the two public sector sources is that it is a convenience sample that is not nationally representative. Moreover, because the convenience sample is refreshed from year to year, the mix of participating employers changes. The mix of employers in turn determines the number of claimants in the sample and their associated payments. Thus, year-to-year trends in the total number of claimants or payments in this sample are not informative, because each year's estimates depend on which employers participate in the convenience sample in that year. However, as will be described below, these data can be used to examine trends other than for the total number of claimants or for total payments.

Analysis Samples

The samples are constructed similarly to Larson and colleagues (1998) and Finkelstein and colleagues (2004) so that comparisons can be made between the estimates presented here and those presented previously. For each year of data, the main sample of interest (i.e., MH/SA claimants) comprises claimants with at least one primary diagnosis indicative of an MH/SA disorder, at least one procedure indicative of an MH/SA disorder regardless of the diagnosis, or at least one claim from an MH/SA specialty provider regardless of the diagnosis or procedure. Accordingly, each claim (and corresponding payment) is classified as either MH/SA or non-MH/SA. Note that MH/SA conditions are not identified by using information on prescription drug utilization because many medications have dual purposes.

Three other samples were created for the MMMCA project to serve as comparisons to the MH/SA sample: a random sample of all claimants, a sample of claimants with diabetes, and a sample of claimants with asthma. The methods for creating these samples are detailed in the reference documentation found at http://www.mhsapayments.org. For this study, we use one of the comparison samples, the random sample, to examine prescription drug payments in the final section.

Methods

Using the claims data from our analysis samples, we calculated a series of statistics related to MH/SA and non-MH/SA utilization and payments. These estimates include total claimants and payments, the proportion of claimants and payments accounted for by MH/SA conditions, and average payments for a number of groups. The payment estimates were not

adjusted for inflation and are therefore reported in nominal terms. All relevant trends in estimates are discussed in the text, and trends in key estimates are presented graphically. The appendix includes detailed tables of estimates.

Although the method for identifying MH/SA claimants was uniform across all data sources, two major differences across the data sources need to be considered when comparing trends and rates of utilization and payments across programs. First, there are major differences in population characteristics across programs: Medicare data are representative of the elderly and those with certain disabilities; Medicaid data are limited to low-income and medically needy people, whose characteristics vary considerably from State to State; and private sector data include only those with employer-based coverage and their families.

Second, the scope of health care benefits and the structure of insurance vary and thus influence the type of health care claims observed in each data source. In addition to varying across the three sources, the scope of benefits varies within Medicaid and MarketScan. For Medicaid, benefits vary across States; for MarketScan, benefits vary across employer plans. Benefits also vary over time within each data source. Just as benefit coverage varies in these dimensions, so does the structure, such as copayments, coinsurance rates, and deductibles.

Because the private sector data source, MarketScan, is a convenience sample, we do not present certain trends for these data. In MarketScan, the number of claimants in any year is determined largely by which employers happen to be included in the data for that year. Thus, for this data source, trends in the total number of claimants and payments from one year to the next are not meaningful. However, trends in average payments and proportions of claimants and payments are presented. By including total claimants or payments in the denominator, average and proportion estimates explicitly account for any idiosyncratic differences from year to year in the convenience sample.

Broad Trends in Fee for Service (FFS)

Broad Trends in FFS Claimants

To provide perspective for the trends presented in the remainder of the chapter, this section describes broad trends from 1995 to 1998 for the larger samples of which MH/SA claimants are a subset. Understanding these trends is important because they inevitably shape trends in MH/SA claimants and payments. Figures that show total estimates of claimants or payments omit MarketScan claimants. Because this convenience sample changes from year to year, trends in estimates of total MarketScan claimants/payments reflect the characteristics of the employers that happen to be included in the sample, and thus year-to-year movements in total claimants/payments are not meaningful. Wherever MarketScan is omitted in a figure, the single-year estimate for MarketScan in 1998 is provided in the text for comparison. Trends of claimants/payments expressed as averages and proportions avoid the problems encountered when presenting trends of total claimants/payments. Thus, trends in MarketScan averages and proportions are meaningful and are shown. For all sources, detailed numerical values are reported in the appendix tables at the end of the chapter.

Figure 16.1 presents trends in the number of FFS claimants for Medicare and Medicaid (see table

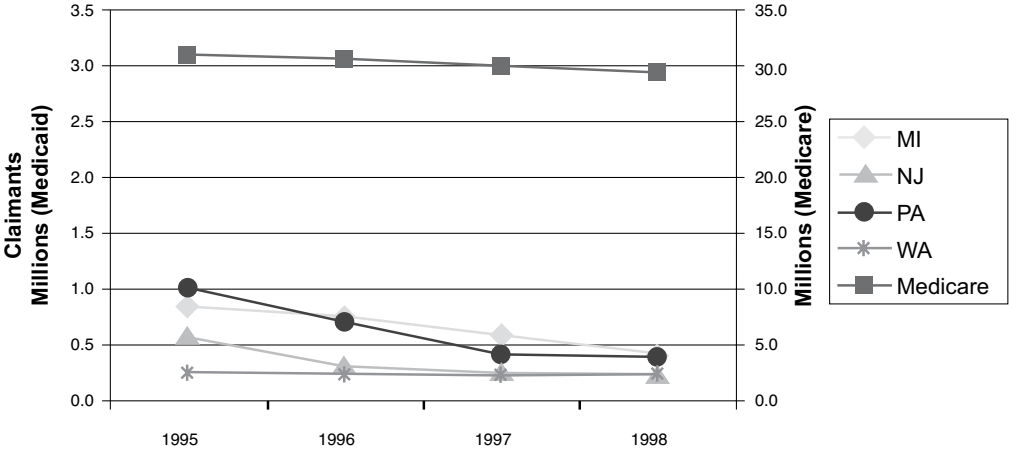


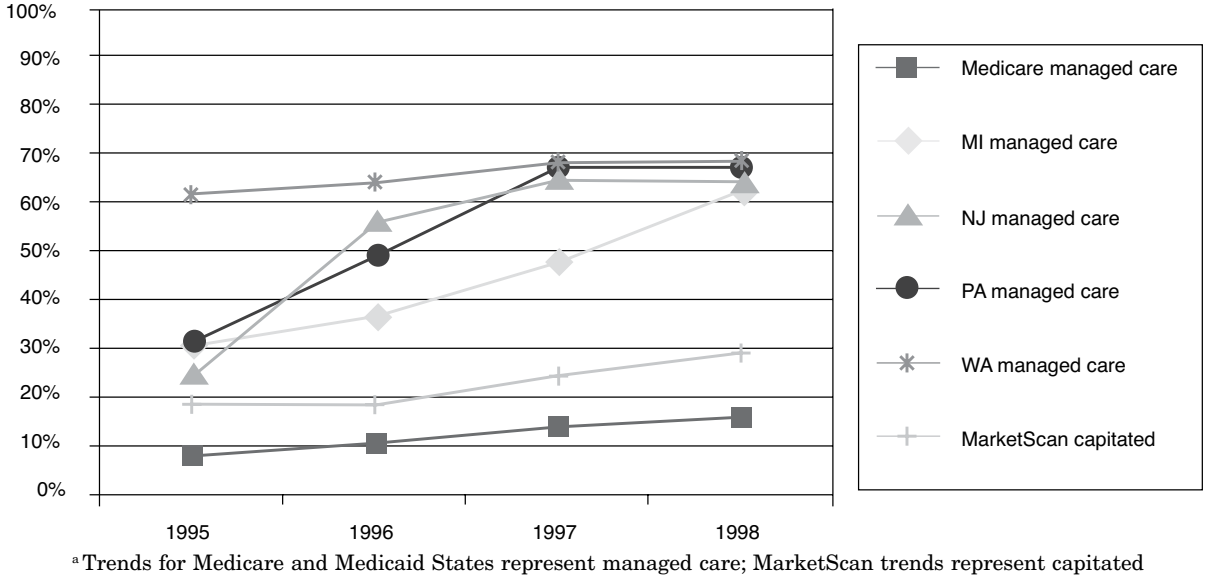
Figure 16.1. Fee-for-Service Claimants in Medicare and Medicaid.

A-1 for detailed numerical values). Because payment information for Medicare and Medicaid is only available for FFS claims, these FFS claimants form the denominator for many of the estimates presented throughout this chapter and are the effective samples from which we draw utilization and payment information. The number of FFS claimants in both Medicare and Medicaid decreased over the study period. For Medicare, the number of FFS claimants decreased from 31.1 million in 1995 to 29.5 million in 1998. For Medicaid, all four States show downward trends in total number of FFS claimants. Indeed, three of the four States' claimant counts were halved: Pennsylvania's claimants decreased from almost 1,005,000 in 1995 to fewer than 387,000 in 1998; Michigan's claimants decreased from 855,000 in 1995 to 406,000 in 1998; and New Jersey's claimants decreased from 557,000 in 1995 to 234,000 in 1998. The number of FFS claimants in Washington decreased only slightly, from 257,000 in 1995 to 231,000 in 1998.

Although trends in claimants are not reported for MarketScan because it is a convenience sample, a single-year estimate helps provide perspective. In 1998, approximately 1.3 million MarketScan claimants were in noncapitated plans. Some utilization and payment information was available for MarketScan claimants in managed care. Only a subset of managed care plans—those that had capitated payments—provided no reliable utilization and payment information. Thus, the 1.3 million MarketScan claimants in noncapitated plans in 1998 are those for whom we could extract reliable utilization and payment information.

We examined three possible explanations for the decrease in claimants: (1) a drop in overall program enrollment, (2) an increase in the proportion of enrollees in managed care rather than in FFS, and (3) a decrease in the proportion of enrollees who made a claim. The analyses suggested that explanations 2 and 3 explain the decrease in FFS claimants. Trends not presented here show that a drop in overall program enrollment (explanation 1) did not occur. In all sources, the trend of total enrollees remained fairly constant over time (see table A-2).

Figure 16.2 describes trends in the proportion of claimants in Medicare managed care, Medicaid managed care, and MarketScan capitated plans (see table A-2). By including estimates of the proportion of MarketScan claimants in capitated plans, the figure provides useful information on the trend in the proportion of claimants for whom no payment or utilization information is available. Figure 16.2 shows increases across all sources in the proportion of claimants for whom no payment information is available because of managed care or capitation. This finding supports explanation 2 for the decrease in FFS claimants for the three Medicaid States shown in figure 16.1. The most dramatic examples of the trend are seen among the same three Medicaid States that experienced decreases in FFS claimants: the proportion of enrollees who were in managed care doubled or more than doubled in Michigan, New Jersey, and Pennsylvania. Washington also had increases in the proportion of managed care enrollment, although at a less dramatic rate. The proportion of claimants in Washington was high throughout the period, whereas, for the other



[a] Trends for Medicare and Medicaid States represent managed care; MarketScan trends represent capitated plans, a subset of managed care.

Figure 16.2. Managed Care/Capitated Enrollees as a Percentage of All Enrollees.[a]

three Medicaid States, the proportion in 1995 was much lower (30 percent or below) and then rose to almost as high as Washington's in 1998. The pattern in these trends supports the idea that managed care penetration in Michigan, New Jersey, and Pennsylvania was catching up with Washington during the 1995–1998 period.

Although a much smaller proportion of Medicare enrollees were in managed care in each year, similar to three of the Medicaid States, the rate of increase in enrollment was significant. In 1995, 8 percent of all Medicare enrollees were enrolled in managed care at some point during the year; by 1998, the proportion was 16 percent.

An ongoing MMMCA project task is examining whether trends toward enrolling Medicaid recipients in managed care rather than FFS bias payments (Tompkins & Perloff, forthcoming). This study examined the impact of changes over time in managed care penetration rates on mean Medicaid FFS payment rates per recipient using MMMCA project data on Michigan for the years 1993–1997. The need for such a study is particularly acute because many researchers suspect that in the case of Medicaid, healthier claimants tend to move to managed care, whereas less healthy claimants remain in FFS. If this is the case, then both MH/SA and non-MH/SA payments may be artificially high when examining just the FFS population. The results indicated that there was some increase in total Medicaid payments, which are the sum of payments for MH/SA services and payments for non-MH/SA services. However, the impact on MH/SA payment rates showed no systematic patterns of greater increases in spending rates for MH/SA services in association with increased managed care penetration rates. These results suggest that for Michigan there is little evidence that MH/SA payments are biased upward as fewer people remain in FFS.

Evidence supporting the third possible explanation for the decrease in FFS claimants (a decrease in the proportion of enrollees who made a claim) was mixed. Relative to FFS enrollment, the proportion of FFS claimants in the Medicare and MarketScan sources was stable: the proportion in Medicare remained flat at approximately 86 percent; and the MarketScan proportion dipped to 60 percent in 1996 but otherwise stayed stable at between 66 and 68 percent in 1995, 1997, and 1998 (see table A-3). However, the same three Medicaid States that had a decrease in FFS claimants had decreases in the proportion of enrollees who made a claim. These decreases were much smaller than the changes in the proportion of claimants in managed care, described above.

Broad Trends in FFS Payments

Figure 16.3 shows FFS payments for all claimants in Medicare (extrapolated from the 5 percent sample) and Medicaid (see table A-4). Again, because MarketScan was a convenience sample, trends in total claimants and payments are not informative and are omitted from the figure. The figure shows that, although FFS enrollment and the number of claimants were decreasing, FFS payments were increasing in Medicare from $144.7 billion in 1995 to nearly $161.2 billion in 1998.

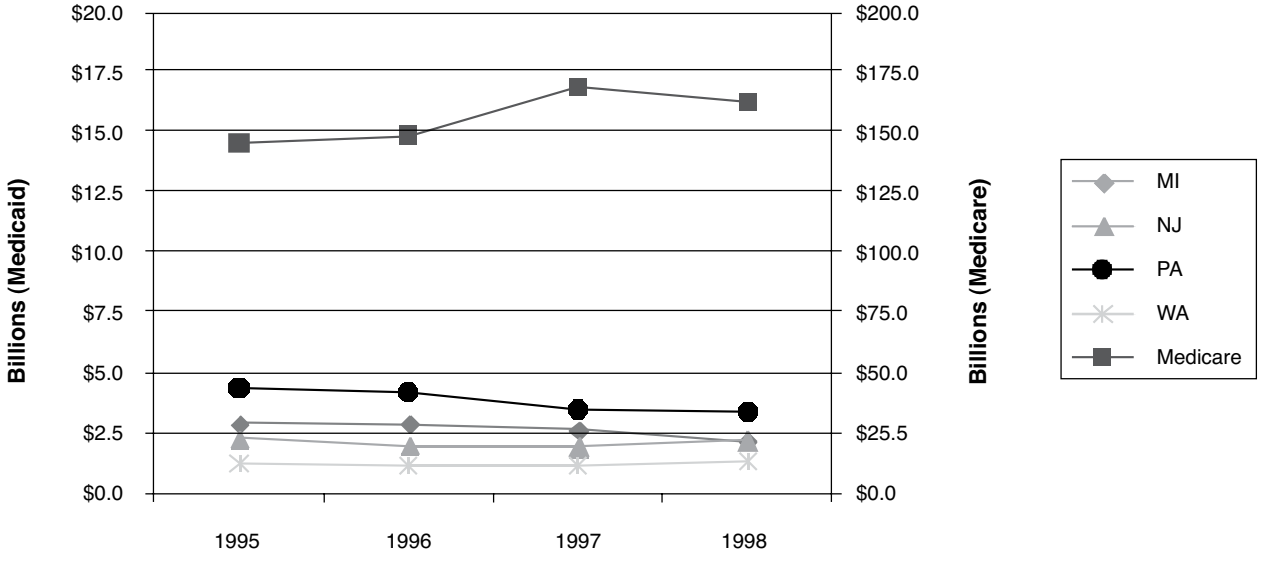


Figure 16.3. Total Payments for All Claimants in Medicare and Medicaid (FFS).

Medicaid FFS payments in 1998 were either lower than or the same as payments in 1995. For example, payments in Pennsylvania, the State with the highest total payments, decreased from $4.3 billion in 1995 to $3.3 billion in 1998. Within these comparisons, however, the trends in these payments varied across the States. From 1995 to 1997, trends in payments were similar in all four States, with decreasing payments. But in 1998, the trend in payments varied across the States: payments in New Jersey and Washington increased, payments in Michigan continued to decline at the same rate, and payments in Pennsylvania leveled out with a slight decrease. For comparison, the single-year estimate in MarketScan for FFS payments for all claimants was approximately $3.1 billion in 1998.

The differences in payment trends may reflect idiosyncrasies in States' histories in legislation and program financing. If, for example, welfare reform was the prime influence in driving payments, trends for States that initiated welfare reform at the same time would likely move together. Pennsylvania and Washington initiated welfare reform in 1996 (New Jersey and Michigan had already initiated reform in 1992); however, the payment trends in these two States were in opposite directions. Among many other possible factors accounting for the differential trend are differences in the nature of welfare reform and differential paths of expansion in Medicaid managed care.

Summary

The findings in this section of broad trends in FFS provide important perspective that frames the trends for population subgroups that are presented below. Trends in Medicare, Medicaid, and MarketScan data from 1995 to 1998 all showed increases in the proportion of enrollees in managed care/capitated plans. Coupled with relatively minor decreases in the proportion of enrollees who made a claim, the growth in enrollment in capitated and managed care plans drove the number of enrollees in FFS plans down during this period. The exception to the downward trend in FFS enrollees was Washington, for which the trend was stable. However, the patterns in these trends may reflect the idea that, during the period studied, managed care penetration in Michigan, New Jersey, and Pennsylvania was catching up with the high rate of penetration apparent in Washington since 1995. The trend toward managed care and capitated payment plans has certainly reduced the size of the samples for which payment and utilization information is available.

Up to 1997, payments in all four States decreased. However, in 1998, payments in New Jersey, Pennsylvania, and Washington either increased slightly or leveled out, whereas payments in Michigan continued to decrease. The payment trends indicate that Medicaid payments not only are subject to national influences, such as the 1996 welfare reform, but also are determined by States' histories in legislation and program financing. Thus, to better understand the forces behind these trends, analyses should account for a number of important concurrent factors. Additional years of data will also prove informative.

Trends in FFS for Population Subgroups

This section examines trends on specific issues of interest to stakeholders and policy makers. Trends in numbers of claimants and payments are examined for the following population subgroups: (a) MH/SA claimants, (b) co-occurring MH/SA claimants, and (c) prescription drug claimants. Depending on the funding source, a variety of influences from 1995 to 1998 affected MH/SA claimants. In particular, managed care carve-out contracts for behavioral health grew noticeably in Medicaid and the private sector; debates on coverage parity came to the fore; and both Medicaid and Medicare were affected by the 1997 repeal of SSI and DI for people with disabilities and substance abuse conditions, as well as by continued movement toward both deinstitutionalizing care and enrolling people with MH conditions in SSI and DI.

Trends in Number of and Payments for MH/SA Claimants

Number of MH/SA Claimants. Figure 16.4 presents the number of MH/SA claimants in Medicare and Medicaid. For Medicare, the total number of MH/SA claimants increased from 3.5 million in 1995 to 4.0 million in 1998 (see table A-5). For Medicaid, the number of claimants decreased in all four States, with Michigan and Pennsylvania decreasing by about 69,000 and 100,000, respectively, and New Jersey and Washington decreasing slightly by about 21,000 and 4,000, respectively. Trends in total claimants are not presented for MarketScan because they are not informative; however, the single-year

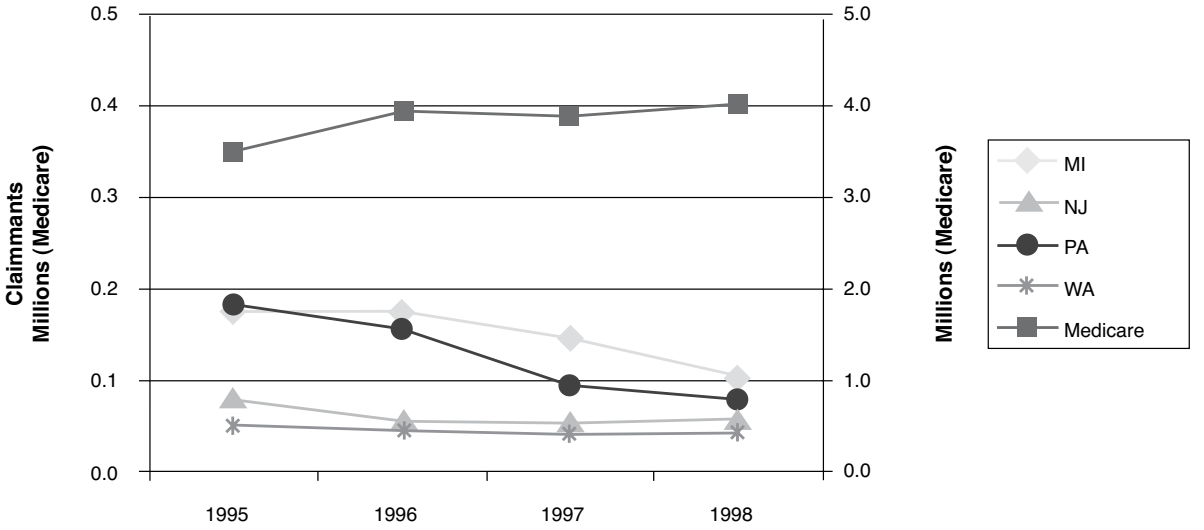


Figure 16.4. MH/SA Claimants in Medicare and Medicaid (FFS).

estimate is informative and provides a useful comparison. In 1998, MarketScan had nearly 135,000 MH/SA claimants, about 30,000 claimants more than the largest Medicaid State in that year.

Figure 16.5 presents MH/SA claimants as a proportion of total claimants (see table A-6). Relative to total claimants, the proportion of claimants with an MH/SA disorder was increasing in all sources except Washington and MarketScan. A trend toward a higher representation of MH/SA claimants was seen in Medicare, where the proportion increased from 11 percent to 14 percent of total claimants. This trend also appeared in three of the four Medicaid States, despite the nominal decreases in the total number of MH/SA claimants. New Jersey experienced a particularly large increase in this proportion, from 14 percent in 1995 to 24 percent in 1998. In MarketScan, the proportion of claimants who were MH/SA over the period remained stable at about 10 percent.

Payments for MH/SA Claimants. Figure 16.6 presents trends in total health care payments for MH/SA claimants (see table A-7). These payments do not include MH/SA prescription drug payments because, at the time of writing, MH/SA prescription drugs were not separately identified in the data. Total health care payments include both payments for MH/SA services and payments for non-MH/SA services. As shown in Figure 16.6, total payments for MH/SA claimants were increasing in Medicare but were level or decreasing in three of the four Medicaid States. Total Medicare payments increased from $39.8 billion in 1995 to $46.4 billion in 1998. Note that the increase seen in Medicare coincides with

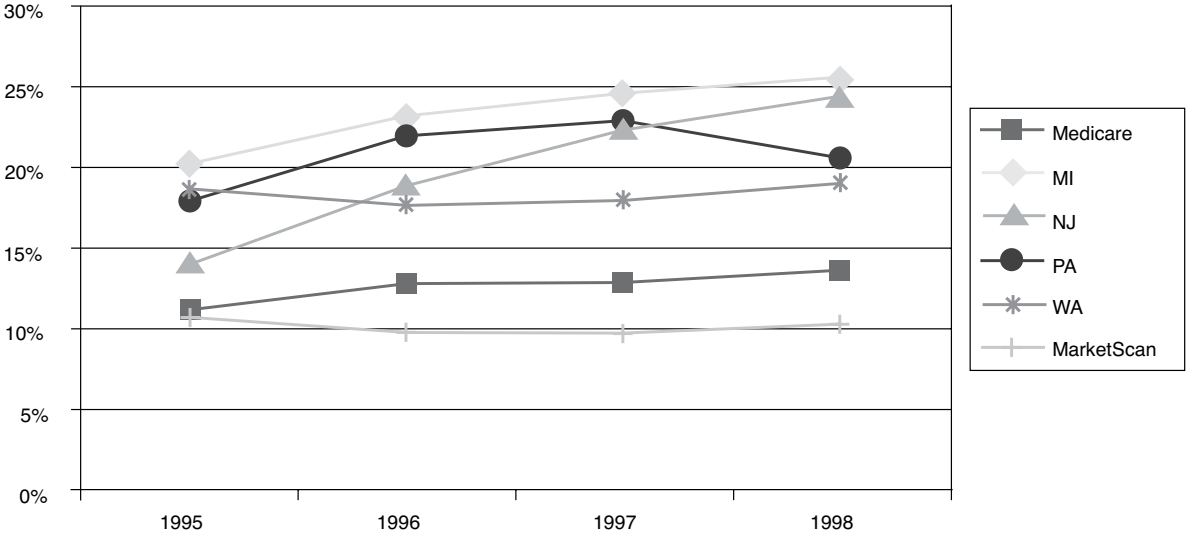


Figure 16.5. MH/SA Claimants as a Percentage of Total Claimants (FFS).

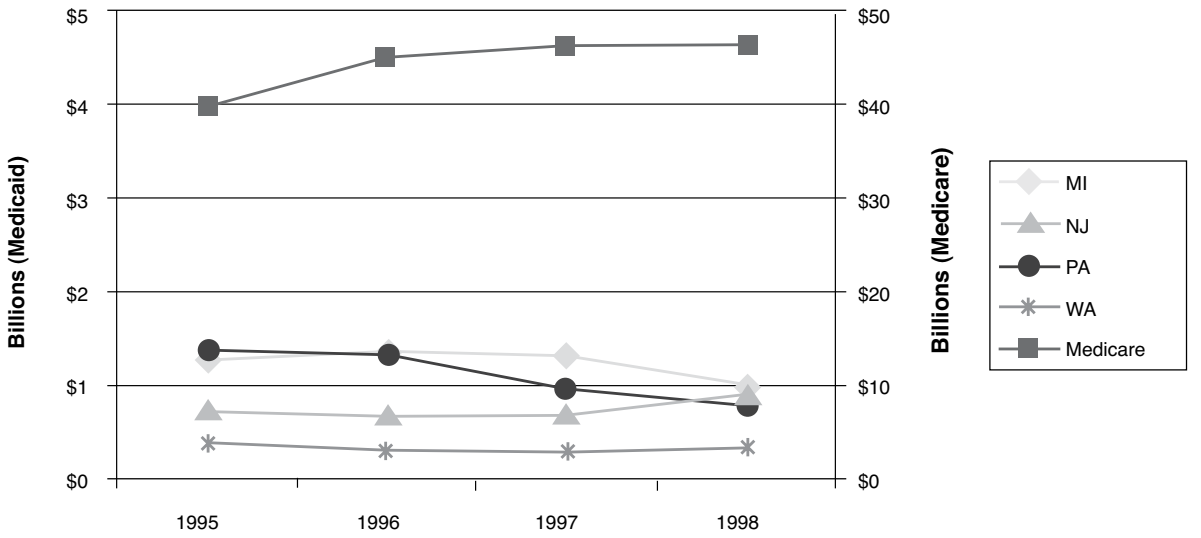


Figure 16.6. Total Payments for MH/SA Claimants in Medicare and Medicaid (FFS).

the increases seen in the total number of MH/SA claimants for this source, as described above.

In contrast, Medicaid payments in Michigan decreased by about $0.3 billion, from almost $1.3 billion in 1995 to almost $1 billion in 1998, and decreased in Pennsylvania by almost $0.6 billion. Payments remained stable at slightly less than $0.4 billion in Washington, and increased for only one of the four States, New Jersey, from $0.7 billion to $0.9 billion. The decreases in MH/SA payments in Michigan and Pennsylvania parallel the decreases in the total number of MH/SA claimants in these States, whereas the increase in New Jersey's payments occurred despite a decrease in that State's MH/SA claimants. For comparison, the MarketScan estimate for 1998 was slightly over $0.6 billion.

In analyses not shown here, total payments were also broken out into payments specific to MH/SA conditions (see table A-8). For all sources, trends in MH/SA payments appeared very similar to trends in total payments. Similar to total payments, Medicare MH/SA payments were level, with small fluctuations around $7.1 billion. MH/SA payments in the Medicaid States also mirrored total payments: Michigan, Pennsylvania, and Washington had decreases in MH/SA payments, and New Jersey had increases in MH/SA payments. Michigan, the State with the largest number of MH/SA payments, decreased by nearly $200 million, from $623.3 million in 1995 to $436.9 million in 1998. Pennsylvania decreased by nearly $250 million, from $597.2 million in 1995 to $353.7 million in 1998. Washington decreased by more than $90 million, from $124.4 million in 1995 to nearly $33.2 million in 1998. Only New Jersey increased, by about $50 million, from $306.6 million in 1995 to $356.5 million in 1998. Finally, in 1998 about $150 million of the $600 million in payments for people with MH/SA conditions in MarketScan were for MH/SA conditions.

Figure 16.7 shows the average total health care payments per MH/SA claimant for all sources (see table A-9). This figure combines the information on claimants in figure 16.4 with the information on payments in figure 16.6. Average payments were stable in Medicare, increasing only about $100 between 1995 and 1998 from $11,475 per claimant to $11,583, respectively. The stable trend in average payments reflects the fact that the rate of increase in payments and the rate of increase in claimants was approximately the same over the study period. MarketScan showed a steady increase in average total payment, from $3,858 to $4,460. As perspective, recall that total payments in MarketScan in 1998 were $0.6 billion.

Average payments increased in three of the four Medicaid States. In Michigan and Pennsylvania, average payments increased by about $2,500 from approximately $7,500 in 1995 to approximately $10,000 in 1998. As noted previously, both total payments and the number of claimants decreased for these Medicaid States over the study period. Thus, the increase in average payments must have reflected a greater proportionate decrease in the number of claimants than the decrease in the total payments. The most dramatic increase in average payments was seen in New Jersey, where the payment per claimant nearly doubled over the 4-year period, from $9,400 in 1995 to $15,844 in 1998. This increase was a function of increasing total payments and a decreasing number of claimants. For Washington, average payments re-

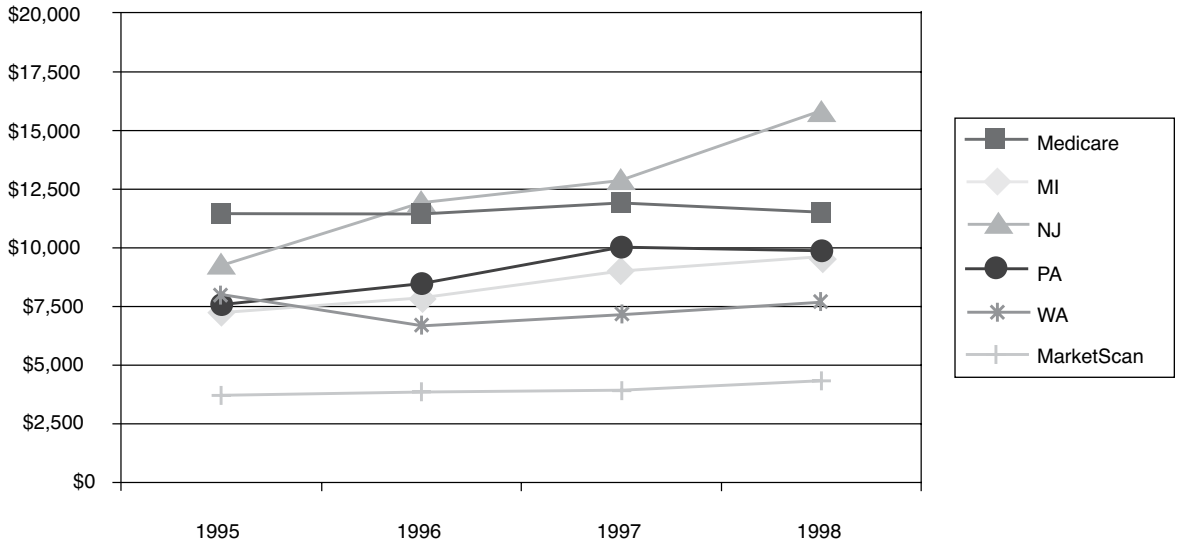


Figure 16.7. Average Total Payment per MH/SA Claimant (FFS).

mained stable over the study period, increasing by about $100 from $7,970 in 1995 to $7,817 in 1998. This stability in the average payment reflects stability in both payments and the number of claimants in that State.

In regard to payments specifically for MH/SA conditions, figure 16.8 shows the average MH/SA payments per MH/SA claimant (see table A-10). Although systemwide MH/SA payments remained stable in Medicare, the average MH/SA payment per MH/SA claimant decreased slightly. Average payments in Medicare decreased from $2,049 per MH/SA claimant in 1995 to $1,772 per claimant in 1998, a difference of $277. MarketScan payments decreased from $1,185 in 1995 to $1,130 in 1998, a difference of $55. It is notable that these decreases in average payments occurred in an era of greatly increasing health care costs. Thus, any level or decreasing trends may well reflect overall reductions in the number of services received.

Figure 16.8 also shows that the average payment increased in three of the four Medicaid States. Michigan's average payment increased by $632, from $3,599 in 1995 to $4,231 in 1998. The increase in the average MH/SA payment in Pennsylvania was more dramatic, rising from $3,320 in 1995 to $5,697 in 1998. Trends in average MH/SA payments in these two States were determined by the number of claimants decreasing at a faster rate than payments. The average MH/SA payment per claimant in New Jersey also increased dramatically, from $3,908 in 1995 to $6,232 in 1998. This trend for New Jersey

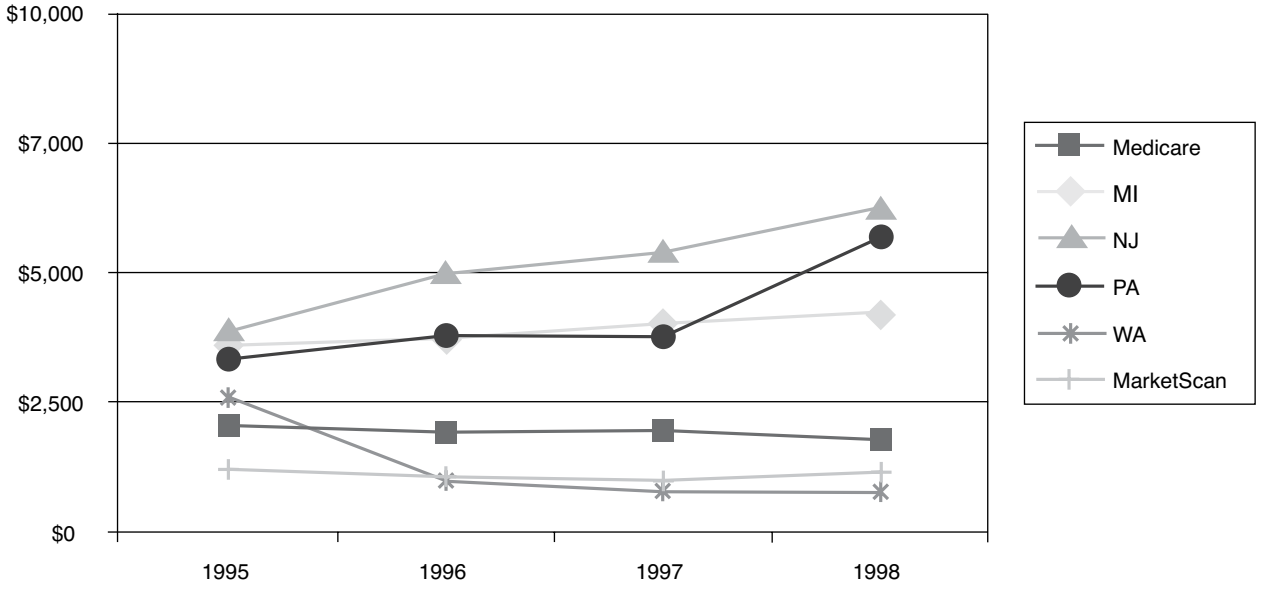


Figure 16.8. Average MH/SA Payment per MH/SA Claimant (FFS).

similarly follows the trends in average total health care payments shown above, and was driven by a combination of increasing payments and a decreasing number of claimants. In Washington, the average payment decreased by about $1,600 between 1995 and 1996, and then decreased at a slower rate through 1997 and 1998. Again, because of rising health care costs, any decrease in payments likely reflects decreases in receipt of services.

To further examine the general upward average payment trends for MH/SA claimants—for all health care services and for MH/SA services in particular—we examined trends in the composition of payments for the population. Examining these trends may provide further evidence on differential changes in the composition of the populations in each data source. The results indicated that the proportion of MH/SA payments as a percentage of total payments was stable in Medicare, MarketScan, and one of the four Medicaid States (Michigan) (see table A-11). Among the other Medicaid States, Pennsylvania and Washington showed decreases and New Jersey showed an increase. In Pennsylvania, the proportion decreased from 14 percent to 11 percent; in Washington, the proportion decreased from 10 percent in 1995 to 3 percent in 1998. In New Jersey, the proportion increased from 13 percent to 16 percent.

Summary: MH/SA Claimants. In the four Medicaid States, the trends in the number of MH/SA claimants between 1995 and 1998 largely followed the downward trends in these States for all FFS claimants. In Medicare, while the number of all FFS claimants decreased, the number of MH/SA claimants increased. By 1998 the number of MH/SA claimants in each State varied between 44,000 in Washington and 103,000 in Michigan. By 1998, approximately 4 million Medicare claimants had an MH/SA condition. Total payments for the MH/SA samples followed the trends in the number of claimants. By 1998, Medicare payments had risen to $46 billion; payments for Medicaid ranged between $345 million in Washington and $1 billion in Michigan.

For each source, differences in trends between the overall FFS sample and MH/SA claimants likely reflect differential changes in the composition of the FFS population. For Medicare, there was an upward trend in the proportion of claimants with an MH/SA condition, as was the case for Medicaid in Michigan and New Jersey. However, whereas both average total and average MH/SA Medicare payments decreased for this sample, these average payments increased for Michigan and New Jersey. In the face of per unit increases in health care (Anderson, Reinhardt, Hussey, & Petrosyan, 2003) reductions in average payments almost certainly reflect reductions in service use.

Among the factors underlying these trends is the possible selection of claimants by health status into either managed care or FFS. This explanation is consistent with both the increase in the average payments of claimants with MH/SA conditions and the variations across sources. As noted in the introduction, MMMCA project analyses suggest that the onset of managed care may not have adversely affected average MH/SA payments. However, further analysis for each data source is needed to clarify the nature, extent, and consequences of any selection into managed care.

Trends in Number of and Payments for Co-occurring MH/SA Claimants

This section focuses on the population of individuals who filed claims for both MH and SA services in the same year, known as co-occurring MH/SA claimants. Co-occurring MH/SA conditions are of particular concern to policy makers because they are seen to be common, complex, and costly (SAMHSA, 2005). Because significant numbers of people with co-occurring MH/SA conditions have severe mental illness and are covered by public insurance, this subset of people with MH/SA may have been particularly affected by a number of factors over the period studied, including the removal of SSI and DI in 1997, the increasing movement toward deinstitutionalizing people with mental illness, the movement toward enrolling people with mental illness in public programs, and the increase in Medicaid managed care.

Co-occurring conditions are also of interest because providers are increasingly integrating services to address both MH and SA conditions concurrently for patients presenting with both conditions within a short span of time (see discussions in Bellack & DiClemente, 1999; Drake & Mueser, 2001; Drake, Mercer-McFadden, Mueser, McHugo, & Bond, 1998; Drake, Mueser, Brunette, & McHugo, 2004; Havassy, Alvidrez, & Owen, 2004; Hellerstein, Rosenthal, & Miner, 2001; Mueser, Bellack, & Blandchard, 1992; Primm et al., 2000; and Siegfried, 1998). In the past, these two conditions typically have been treated sequentially, with either the MH condition or the SA condition being treated first.

Trends are presented on the number of MH/SA claimants with co-occurring disorders and on payments made for co-occurring MH/SA claimants. For this analysis, a co-occurring claimant is someone

who had claims for both an MH disorder as the primary diagnosis and an SA disorder as the primary diagnosis during the same year.

Co-occurring MH/SA Claimants. Trends in the number of co-occurring MH/SA claimants in FFS followed the trends for the larger MH/SA sample: the number increased slightly in Medicare but decreased in all other sources (see table A-12). In Medicare, the number of co-occurring MH/SA claimants in 1995–1998 rose from 136,000 to 145,000. Meanwhile, all four Medicaid States showed decreases, with Pennsylvania and Michigan having the largest decreases in co-occurring claimants. Pennsylvania decreased by more than half, from 11,400 co-occurring MH/SA claimants in 1995 to 4,900 in 1998. Michigan also decreased by more than half, from 8,200 claimants in 1995 to 3,800 in 1998. New Jersey and Washington showed less dramatic decreases. For comparison, there were approximately 3,000 co-occurring MH/SA claimants in MarketScan in 1998. Because the proportion of MH/SA claimants who had co-occurring conditions was stable during the study period (between 2.5 and 3 percent), the decrease in the number of co-occurring claimants in Medicaid FFS likely reflected the general trend in enrollment toward managed care and away from FFS during the study period.

Payments for Co-occurring MH/SA Claimants. Trends in total payments for co-occurring MH/SA claimants were somewhat different from the broader sample of MH/SA claimants (see table A-13). In Medicare, payments for co-occurring claimants did not change, in contrast to the upward trend for all MH/SA claimants. Total Medicare payments for this population were about $2.4 billion in 1995 and about $2.6 billion in 1998. Co-occurring MH/SA claimants in Medicaid States generally experienced decreases in payments that were proportionally much larger than those for the broader MH/SA sample. In Pennsylvania and Michigan Medicaid, total payments for co-occurring claimants decreased by more than 50 percent: from $119.4 to $52.9 million for Pennsylvania and from $83.7 to $38.5 million for Michigan. The proportionate decrease in payments in New Jersey was less drastic but still sizeable: payments decreased by 27 percent from $93.3 to $77.4 million. In Washington, the trend was quite different: payments were $33.6 million in 1995, then decreased to $26.5 million in 1996, and finally increased in 1998 to return to the 1995 level at $32.8 million. Trends in total claimants and payments are not presented for MarketScan. However, single-year estimates provide perspective; in MarketScan, payments for the 3,000 claimants with co-occurring MH/SA conditions in 1998 were $28 million.

Trends in MH/SA payments for co-occurring MH/SA claimants were similar to the trends in total payments (see table A-14). MH/SA payments in Medicare remained unchanged (at about $1.1 billion) and decreased in all four Medicaid States. Similar to total payments, the decreases were most dramatic in Pennsylvania and Michigan: MH/SA payments decreased from $68.5 million in 1995 to $26.2 million in 1998 in Pennsylvania and from $42.8 million to $15.3 million in Michigan. The decreases in MH/SA payments in New Jersey and Washington were less dramatic, falling to approximately $30 million and $10 million, respectively. In MarketScan, payments for the 3,000 co-occurring claimants in 1998 were about $15 million.

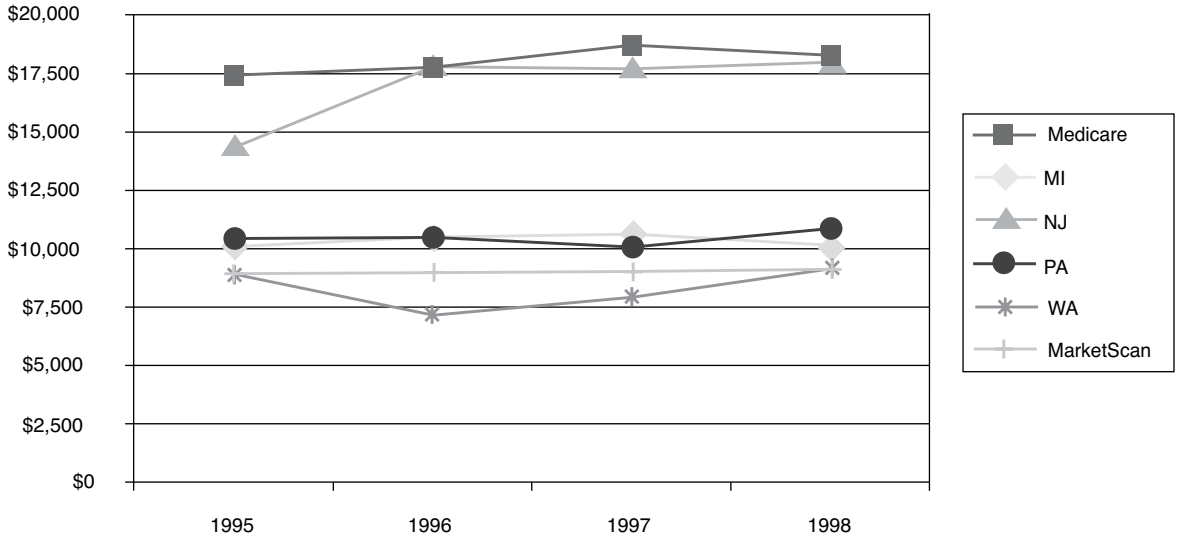


Figure 16.9. Average Total Payment per Co-occurring MH/SA Claimant (FFS).

In addition to trends in total payments, trends in average payments are informative. Average payments, for example, allow a ready comparison between the co-occurring and the broader MH/SA population. Figure 16.9 shows for each data source the average total payments (which combine payments for MH/SA conditions and non-MH/SA conditions) for co-occurring MH/SA claimants (see table A-15). As described for the broader MH/SA sample above, this average for Medicare co-occurring claimants increased from approximately $17,400 in 1995 to more than $18,200 in 1998.

Average payments for co-occurring claimants changed considerably in only one of the Medicaid States over the 4-year study period. New Jersey's average payment increased from about $14,000 to peak at $17,910 in 1998. This increase was driven by the number of claimants in that State decreasing faster than total payments. In two Medicaid States and in MarketScan, the average total payment was unchanged. Averages remained between $10,000 and $11,000 for Medicaid in both Pennsylvania and Michigan. The stability of the average indicates that the rate of decrease in the payments and the rate of decrease in the claimants were approximately the same over the study period.

Mirroring trends in total payments, average payments for all health care conditions decreased for claimants in Washington with co-occurring MH/SA in 1996. Finally, average health care payments were consistently at about $9,000 per year for co-occurring MH/SA claimants in MarketScan.

Figure 16.9 indicates that average payments for co-occurring claimants were higher in each year than for the broader MH/SA sample (see figure 16.7), regardless of the data source. For example, average total payments for co-occurring MH/SA claimants were at least $6,000 higher than the broader MH/SA sample. Likewise, co-occurring claimants' average payments in MarketScan are at least $5,000 higher in every year.

Figure 16.10 shows the average MH/SA payment per co-occurring MH/SA claimant (see table A-16). As with average total payments, payments for co-occurring claimants are higher for each year in every data source. The average MH/SA payment per co-occurring MH/SA claimant declined in all sources except New Jersey. The average payment was stable in Medicare but decreased in three of four Medicaid States and in MarketScan. In Medicare, the average remained below $8,000 per co-occurring MH/SA claimant in all years except 1996, when it peaked at $8,192. The stability of the Medicare average reflects the stability in both the number of claimants and amount of payments. The reductions in average MH/SA payments in Medicaid States in the face of increasing health care costs may well reflect reductions in service receipt among this population.

An example of the declining average MH/SA payments in three of the Medicaid States is the decline in Pennsylvania from $6,007 in 1995 to $5,405 in 1998. These downward trends in payments reflect the fact that the number of claimants in these States was decreasing less rapidly than the payments. A similar trend in average MH/SA payment per co-occurring MH/SA claimant was found for MarketScan, where the average MH/SA payment decreased from $5,463 in 1995 to $4,705 in 1998. Again, the trends in payments and claimants suggest that the rate of

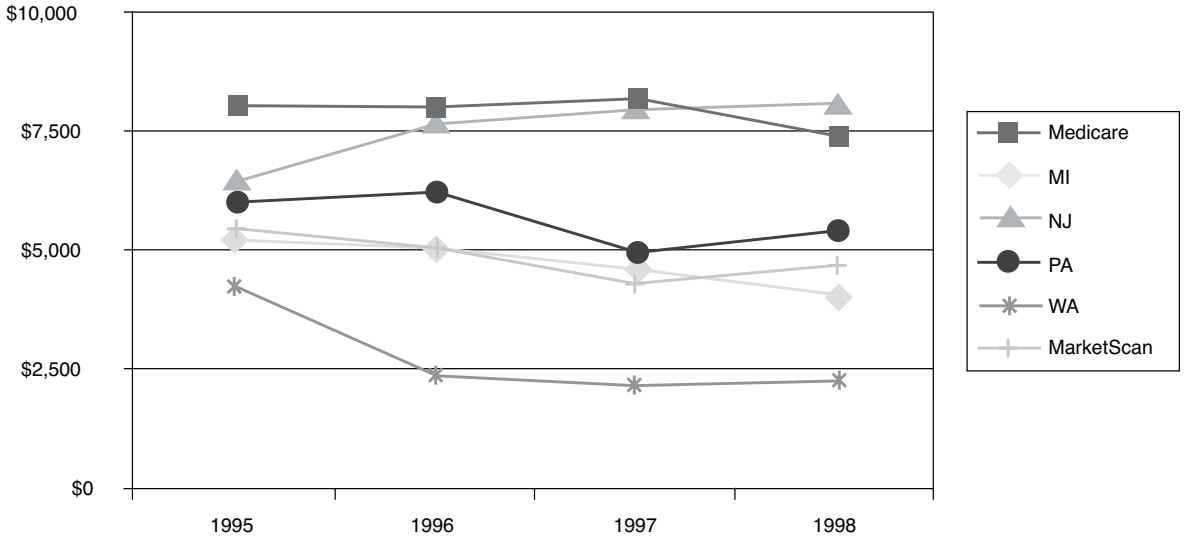


Figure 16.10. Average MH/SA Payment per Co-occurring MH/SA Claimant (FFS).

decrease in payments was higher than the rate of decrease in the claimants. The average Medicaid payment in New Jersey was the exception to these downward trends. This converse trend reflects the fact that, unlike the other three States, in New Jersey the number of claimants fell more rapidly than the payments. In New Jersey, the Medicaid average increased from $6,438 in 1995 to $8,045 in 1998.

In addition to whether they cost more to treat than the broader MH/SA population, an important question regarding co-occurring MH/SA claimants is whether their share of resources is increasing. The trends shown in figure 16.11 indicate that their share of resources is generally not increasing (see table A-17). The figure shows MH/SA payments for co-occurring MH/SA claimants as a proportion of all MH/SA payments. Rather than showing an increase, figure 16.11 demonstrates that in three of four Medicaid States and in MarketScan, the proportion of MH/SA payments for co-occurring claimants was decreasing. These decreases occurred despite the fact that the proportion of claimants accounted for by co-occurring claimants is stable. In MarketScan, the proportion decreased from 14 percent of all MH/SA payments in 1995 to 10 percent in 1998. In an example of the Medicaid States, the proportion decreased from 11 percent in 1995 to 7 percent in 1998 in Pennsylvania. The exception is Washington, where the proportion of MH/SA payments for co-occurring MH/SA claimants increased substantially, from 13 percent in 1995 to 24 percent in 1998. In Medicare, the proportion of MH/SA payments was stable at approximately 15 percent.

Summary: Co-occurring MH/SA Claimants. Claimants with co-occurring MH/SA conditions are of particular interest to policy makers and providers. The data examined in this report indicate that, during the 1995–1998 study period, the number of co-occurring claimants increased slightly in Medicare but decreased in Medicaid. As with claimants in general, these trends may reflect the penetration of managed care. Average payments for co-occurring claimants were higher than for the broader set of MH/SA claimants. However, an important finding is that the proportion of MH/SA payments for co-occurring MH/SA claimants was stable or decreasing relative to total MH/SA payments, except for Medicaid in Washington. Thus, although those with co-occurring MH/SA conditions continued to be more expensive, in many cases their share of health care resources decreased in the study period.

In regard to the trends in the broader sample of MH/SA claimants and payments, further analysis is required to understand the contribution of a number of possible influences on these trends. These influences include whether claimants select into managed care by health status; legislative changes at the State and national levels, such as the removal of SSI and DI in 1997; and the two-pronged movement toward deinstitutionalizing people with mental illness and enrolling them in public programs.

In addition, analysis should examine alternative explanations for the general downward trend in the share of MH/SA payments accounted for by co-occurring MH/SA conditions. Further research should evaluate the contribution of several alternative explanations, including those with co-occurring conditions receiving the care they require, a needs

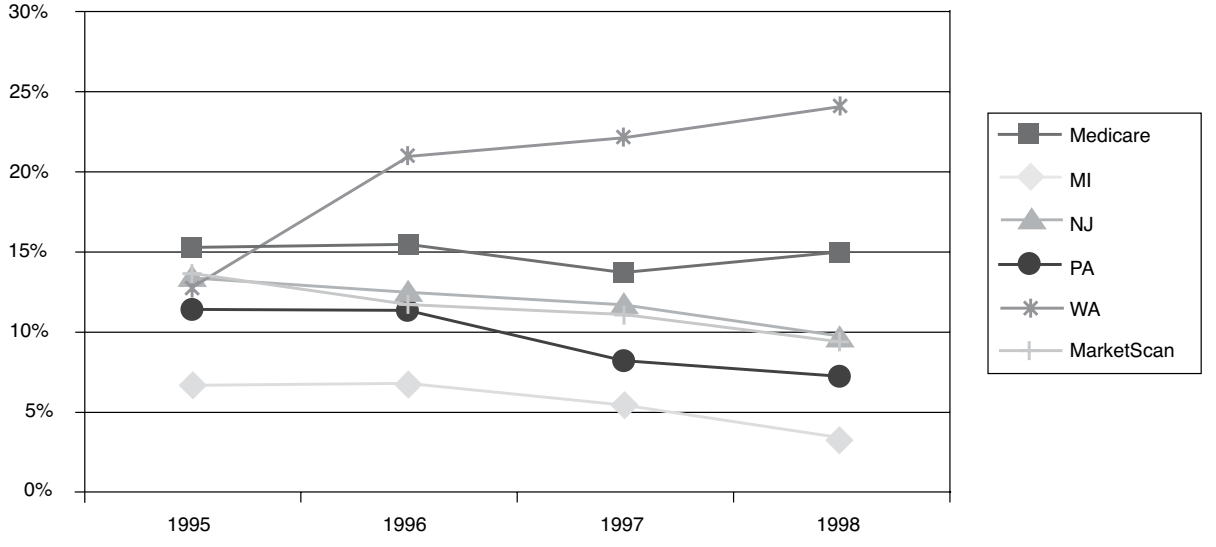


Figure 16.11. Proportion of MH/SA Payments Attributable to Co-occurring MH/SA Claimants (FFS).

gap for those with such conditions, and a changing case mix of the co-occurring population. Future analyses should also reveal which modalities of care and which services, in particular, are decreasing.

Trends in Prescription Drugs in Medicaid

It is widely recognized that the increase in prescription drug costs throughout the 1990s helped fuel increasing health care costs (e.g., Kleinke, 2001). The boom in psychotropic medications—antidepressants and antipsychotics, in particular—has heightened the focus on MH conditions (e.g., Frank, Conti, & Goldman, 2005). Despite the attention from policy makers, providers, and researchers, few studies use claims-level data to address this issue. This section takes a first step to address this need by describing trends for two series of data on prescription drugs in Medicaid: (a) the number of prescription drug claimants and (b) prescription drug payments. For each of the four Medicaid States, comparisons are made between the MH/SA sample and a random sample of all claimants (including MH/SA claimants). Medicare is omitted from discussion in this section because it did not pay for prescription drugs during the years included. MarketScan is omitted because, at the time of writing, prescription drug payments were not included for the private sector data in the MMMCA project database. Future analyses will include more detailed prescription drug data for the private sector.

Note that all trends presented in this section are for all prescription drugs regardless of their purpose. At the time of this report, we were unable to break out prescription drug payments by the type of drug. Thus, trends for psychotropic drugs are not presented separately from other prescription drugs. However, more detailed estimates are forthcoming and will be available in subsequent years.

Number of Prescription Drug Claimants. For three of the Medicaid States, the number of prescription drug claimants decreased from 1995 to 1998 (see table A-18). The most dramatic change was in Pennsylvania, where the number of prescription drug claimants decreased by more than 500,000, from 822,551 claimants in 1995 to 310,577 in 1998. The number of prescription drug claimants decreased by nearly half in Michigan and New Jersey. The exception was Washington, where the trend remained stable. Similar to many of the trends in the number of claimants presented in this chapter, these Medicaid trends are likely shaped by increasing managed care penetration throughout the period. Moreover, the prevalence of prescription drug claimants relative to total claimants was stable at approximately 80 percent for all four of the Medicaid States (see table A-19).

In all four Medicaid States, the trends of prescription drug claimants with MH/SA disorders followed patterns similar to trends for all prescription drug claimants (see table A-20). Figure 16.12 demonstrates this finding. The number of prescription drug claimants with MH/SA disorders decreased most dramatically in Pennsylvania, from 158,000 in 1995 to 69,000 in 1998. Similar to all prescription drug claimants, there were also substantial decreases in Michigan and New Jersey; the number remained stable in Washington.

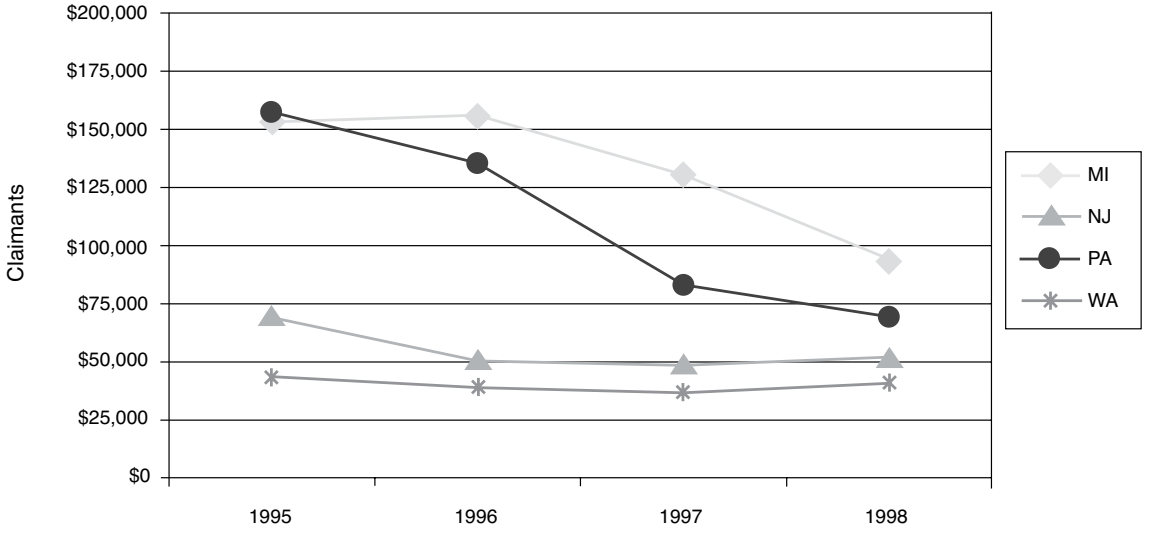


Figure 16.12. Prescription Drug Claimants with MH/SA Disorders (FFS).

We examined two other sets of trends in the data (not shown): the proportion of MH/SA claimants with a prescription drug claim (see table A-21) and the proportion of prescription drug claimants with an MH/SA disorder (see table A-22). The data indicate that, in all four Medicaid States, the proportion of MH/SA claimants with a prescription drug claim was high—between 87 and 93 percent in 1997—and varied by only one percentage point across the years. The second set of additional trends suggests that the proportion of all prescription claimants with an MH/SA disorder increased. In New Jersey, the proportion of prescription drug claimants with MH/SA disorders nearly doubled, from 15 percent in 1995 to 27 percent in 1998. Michigan and Pennsylvania saw more modest increases, and Washington remained stable. By 1998, the proportion of prescription drug claimants with MH/SA disorders was between 22 and 29 percent across the States.

Payments for Prescription Drug Claimants. Across the four Medicaid States, total payments for prescription drugs in Medicaid were stable or increasing (not shown in figures; see table A-23). In Michigan and Pennsylvania, payments were stable—at approximately $300 million and $500 million, respectively—despite decreases in the number of claimants. Also, despite a decreasing number of claimants, payments in New Jersey actually increased from about $281 million in 1995 to $346.7 million in 1998. In Washington, payments to a stable number of claimants increased from $157.4 million in 1995 to $290.7 million in 1998.

Figure 16.13 shows prescription drug payments for MH/SA claimants in Medicaid (see table A-24). The trends in payments in New Jersey and Washington mirror the upward trends for all prescription drug claimants. In New Jersey, for example, payments increased by over $40 million, from $95 million in 1995 to more than $135 million in 1998. The trends for Pennsylvania and Michigan were the inverse of one another. In Michigan, payments increased from 1995 to 1997 and then decreased in 1998; in Pennsylvania, payments decreased between 1995 and 1997 and then increased in 1998.

The decreasing or stable number of MH/SA claimants with prescription drug claims combined with often increasing payments for these claimants suggests that average payments for MH/SA claimants with prescription drug claims were rising. Figure 16.14 shows that this was the case in Michigan, for example (see table A-25). Figure 16.14 also compares these payments with payments for a random sample of prescription drug claimants in Michigan. The findings for Michigan are broadly representative of the other three Medicaid States. The trends indicate three findings. First, the yearly increase in the average payment was higher for the MH/SA sample than the random samples. Second, payments for MH/SA claimants were consistently higher than payments for random sample claimants. In the case of Michigan, the MH/SA average payment increased from $867 in 1995 to $1,601 in 1998, an increase of $734, or about $245 per year. The random sample average grew more slowly from $442 per prescription drug claimant in 1995 to $893 in 1998, an increase of $451, or about $150 per year. Third, the

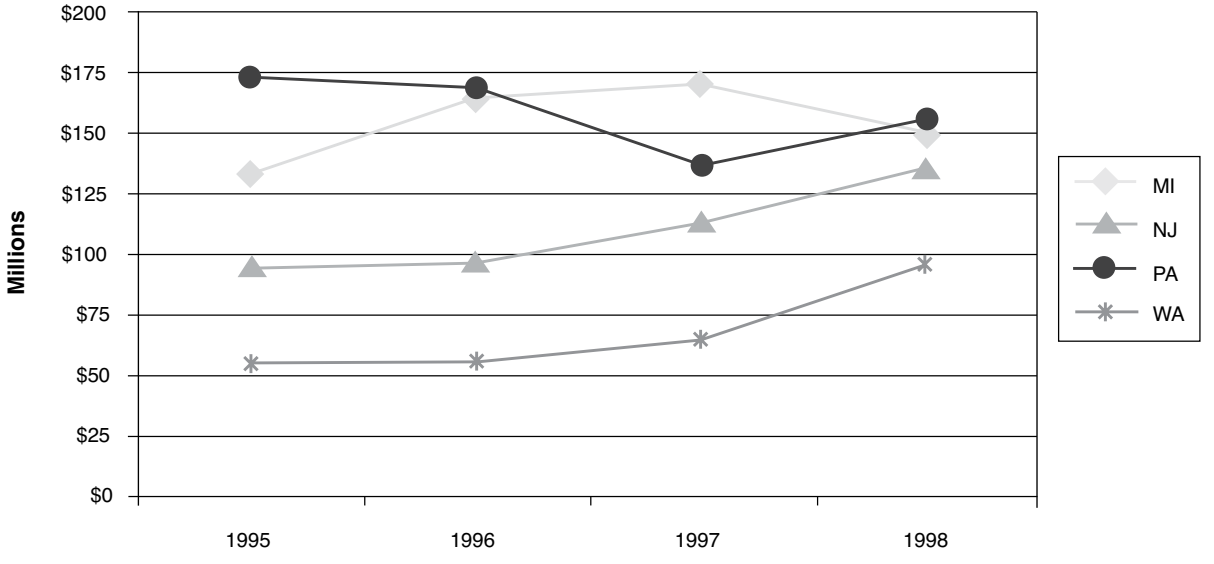


Figure 16.13. Prescription Drug Payments for MH/SA Claimants (FFS).

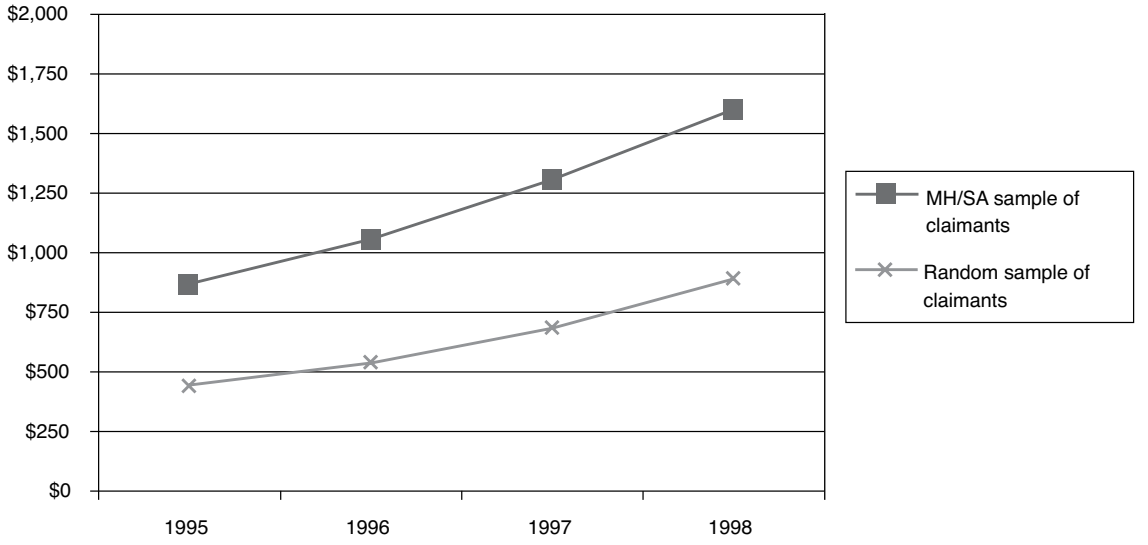


Figure 16.14. Average Prescription Drug Payment per Prescription Drug Claimant in Michigan (FFS).

yearly increases, expressed as percentage increases over the prior year, were slightly higher for the random sample: the MH/SA sample increased annually by between 22 percent and 24 percent, whereas the random sample increased annually by between 22 percent and 30 percent. Finally, additional analyses found that the proportion of total health care payments accounted for by drug claims grew at a similar rate for the MH/SA and random samples (see table A-26).

Summary: Prescription Drug Claimants. Throughout the 1990s, the literature notes that payments for prescription drugs rose considerably. Psychotropic medications, particularly antidepressants and antipsychotics, may have significantly contributed to this rise in payments. This section examines prescription drug trends for the four Medicaid States for claimants with MH/SA conditions and compares them to a random sample of claimants. Examining differences in trends for these two samples is a necessary first step to understanding whether the costs of medication are particularly high for people with MH/SA conditions. Trends in the number of MH/SA claimants with an FFS prescription drug payment followed the larger MH/SA sample in FFS, showing a substantial decrease with the exception of Washington. Relative to total claimants, the prevalence of prescription drug claimants was stable in all four States. These trends were likely driven by the growth in managed care throughout the study period.

Total payments to all claimants for prescription drugs were stable in two of the Medicaid States but were increasing in the other two Medicaid States. Compared with random sample claimants in all four States, the average prescription drug payment per prescription drug claimant was higher for the MH/SA sample. MH/SA claimants also exhibited higher increments in payments, but, taken as percentage increases over the prior year, average prescription drug payments increased at a lower rate for MH/SA claimants. In addition, the proportion of total health care payments that are accounted for by prescription drugs increased in all four States at approximately the same rate for the MH/SA samples and the random samples, the proportion being slightly higher for MH/SA claimants than for random sample claimants. Thus, trends in prescription drug payments for MH/SA claimants seem to be in step with prescription drug payments for the broader sample.

These preliminary analyses indicate at least two directions for further research. The first is to disaggregate prescription drug payments into drug types to examine trends. MMMCA project reports demonstrate how these data can be disaggregated to examine specific classes of drugs. Cowell, Cummings, Bray, and Manderscheid (2004) and Finkelstein et al. (2004) have successfully analyzed antidepressant medications using these data for a single year, for example. Second, by again disaggregating the data into drug types, analyses should examine the degree to which MH/SA medications replace inpatient treatment. As documented in Mark and Coffey (2003), researchers have speculated that such a substitution may have occurred among those with MH/SA conditions.

Discussion and Conclusion

This chapter draws on the unique features of the MMMCA project database to present trends on claimants and payments for people with MH/SA conditions for the period 1995–1998. It also focuses on trends for two subsets of this population that are of particular interest to policy makers, providers, and researchers: those with co-occurring MH and SA conditions, and those who have a prescription drug claim. The data represent the claims from the three most important payment systems in the United States: Medicare, Medicaid, and the private sector.

The data reveal that MH/SA conditions are prevalent. Depending on the payment source, between 10 and 20 percent of claimants had evidence of an MH/SA condition over the study period. Medicare spending by those with MH/SA conditions in 1998 was $46 billion. Medicaid spending for those with MH/SA conditions varied across the four States, from $1 billion in Michigan to $400 million in Washington.

Perhaps more revealing are the findings from the trends that take advantage of the longitudinal nature of the data. The main findings from the trends can be summarized as follows:

- The proportion of enrollees with managed care information that can be used to analyze payments has decreased over time as enrollees have moved from FFS to managed care coverage. However, results from ongoing analyses suggest that this change in service provision may not have unduly altered average payments for MH/SA services.

- FFS payments for all claimants increased in Medicare and the private sector sample, and were stable or decreasing in the four Medicaid States. For the Medicaid States in general, average total payments increased as the decrease in claimants outpaced the decrease in payments.

- An increasing proportion of claimants in Medicaid and Medicare had an MH or SA condition. Within the MH/SA population, the prevalence of claimants with co-occurring MH and SA disorders has remained stable or decreased over time. The average total payments for these claimants have remained stable or increased over time.

- Average prescription drug payments for Medicaid MH/SA claimants have remained consistently higher than payments for a random sample of all claimants. However, the increase in prescription drug payments for MH/SA claimants was in step with the increase seen for a random sample of claimants.

The analyses presented here face five potential limitations that may bias the estimates presented. First, because the results are based on claims data for a limited period, we cannot identify those who may have a given condition but who did not have a claim for it in the study period. It is likely that many individuals who have an MH or SA condition did not seek care for that condition during the reporting period. Second, MH/SA conditions may be underreported in claims data both because their reimbursement is frequently less generous and because of the stigma associated with them. Third, if a specific MH/SA service is not reimbursable under a specific program, then no evidence of that service will be included in the data, even if the patient received the service. For example, for private sector plans that do not cover drug abuse treatment, no record would be generated for enrolled individuals who sought these services. Fourth, these estimates focus solely on payments made by health plans on behalf of enrollees. They do not include out-of-pocket payments made by enrollees, payments by other providers (e.g., State agencies or third-party insurers), and payments associated with noncovered services. Fifth, because of the quality of the managed care data, the analyses are limited to FFS claimants in Medicare and Medicaid and to noncapitated enrollees in MarketScan. Thus, the estimates do not apply to many people with managed care coverage. In future work, we will explore managed care encounter records as they become available for reliable data that would make the estimates apply to a broader population of enrollees. Despite these potential limitations, the trends are very informative, and future work will continue to update the trends as data become available.

To exploit the longitudinal nature of the data, further analyses would have to account for important events that greatly influenced health care provision in general as well as events that influenced MH/SA care in particular. Throughout the 4 years examined here, events that affected health care provision in general included nationwide welfare reform, the expanding national economy, and increasing health care costs. Because of the interrelated nature of welfare reform, economic growth, and increasing health care costs, it may be difficult to disentangle their separate effects on utilization using MMMCA project data. However, understanding their presence

in the background helps in interpreting many of the trends in payments.

Nationwide welfare reform, enacted in August 1996, no doubt shaped Medicaid enrollment. Before the reform—known as the August 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA)—one condition of Medicaid receipt was welfare receipt. PRWORA eliminated this relationship. PRWORA also limited the time that people could receive welfare and gave recipients incentives to work. Specific provisions within PRWORA and within State programs allowed people continued coverage under Medicaid once they found work (Garrett & Holahan, 2000). However, evidence suggests that welfare recipients were often confused by eligibility rules. Many people who became employed and left welfare did not maintain Medicaid coverage (Ku & Bruen, 1999).

Two additional features of welfare reform may have influenced the trends examined in this chapter. The first is that the nature and timing of reform varied greatly across States. For example, a number of States obtained waiver programs to initiate reform early. Two such States, Michigan and New Jersey, had waivers and enacted reform in 1992 (Ellwood & Ku, 1998; Koralek, Pindus, Capizzano, & Bess, 2001; Michigan Family Independence Agency, 2005). The second feature is that the reform was accompanied by national- and State-level expansions in Medicaid and related programs for vulnerable populations. The State Child Health Insurance Program (SCHIP) of 1997, for example, expanded coverage for low-income children. A voluntary program funded by matching State contributions with relatively generous Federal contributions, SCHIP was operated by some States as a separate program and by others as a Medicaid expansion. Whereas Washington and Pennsylvania used a separate program, Michigan and New Jersey combined separate programs with an expansion in Medicaid (Ullman, Hill, & Almeida, 1999). Thus, the impact of these expansions on Medicaid roles is likely to vary across States. However, expansions in Medicaid likely lead to general increases in enrollment.

It is difficult to separate the influence of the growing national economy in the 1990s on Medicaid from the influence of welfare reform. A body of literature examines the degree to which the decline in welfare roles in the 1990s could be attributed to the success of the 1996 welfare reform and how much could be attributed to the improving economy (e.g., Blank, 2002; Council of Economic Advisors, 1999; Figlio & Ziliak, 1999; Moffitt, 1999;Schoeni & Blank, 2000; Wallace & Blank, 1999; Ziliak & Figlio, 2000). Economic growth led to job growth, which in turn likely deflated welfare roles. If welfare and Medicaid were still linked—despite the delinking measures of the 1996 welfare reform—then the reduction in welfare roles may have reduced Medicaid enrollment. However, our trends showing stable enrollment in Medicaid from 1995 to 1998 provide little evidence on whether this is the case.

As the economy grew through the 1990s, so did the cost of health care services (Anderson et al., 2003). Recognizing this across-the-board increase in health care costs helps us to interpret the payment trends presented above. These findings can then fuel broader research questions. Because payments are the product of prices and service use, level or declining trends in payments in the face of rising prices likely indicate reductions in service use. For example, the decrease in average payments for MH/SA care in Medicare and in Washington Medicaid almost certainly reflects reductions in the use of services. Other findings presented in this chapter are also consistent with reductions in the use of services and thus may suggest that further research examine service use. For example, the trends presented above contradict the assumption that those with co-occurring MH and SA conditions necessarily use more health care resources. In three of the Medicaid States, the share of MH/SA payments attributable to those with co-occurring conditions decreased between 1995 and 1998. At least three alternative explanations are possible: their service use is diminishing over time; the needs of co-occurring claimants are increasingly being met; and the case mix of the sample is changing over time. Further research would help identify which of these explanations is true for co-occurring MH/SA claimants.

In addition to events that affected health care in general, several factors directly influenced the provision of MH/SA care—managed care becoming the standard form of coverage for most insured Americans, the enactment of MH/SA coverage legislation, changes in coding and enrollment practices, and ongoing changes in the use and acceptance of medications. Future work with the MMMCA project data used in this chapter should either control for or assess the influence of these factors.

During the 1990s, concern over controlling costs led to significant growth in managed care (e.g., Jensen, Morrisey, Gaffney, & Liston, 1997), particularly in the private sector and Medicaid. Although the Medicare Plus Choice (M+C) program was introduced in 1997 to incorporate managed care into Medicare (Christensen, 1998), it was not successful in enrolling beneficiaries (Gold, 2003). The growth

of managed care in Medicaid and the private sector had some specific implications for MH/SA treatment. Increasingly, MH/SA services became covered by behavioral health carve-out contracts (Findlay, 1999; Goldman, McCulloch, & Strum, 1998; Mechanic & McAlpine, 1999). Under carve-out contracts, a health insurance payer (an employer or a State Medicaid program) "carves out" certain types of benefits from a general medical plan. Many of these carve-outs were coupled with specific managed care provisions. Although the effects on claims payments continue to be debated, evidence suggests that the diffusion of technology in medicine helped to reduce payments (Cutler & Sheiner, 1997). There are some indications that such cost reductions were also realized for MH service provision (Goldman, McCulloch, & Strum, 1998); however, it is unclear whether service provision diminished at the same time (Jensen et al., 1997). With regard to the MH/SA claimants in the MMMCA database, it is possible that the composition of the Medicaid population changed greatly from State to State because of selection into FFS or managed care plans. Although analyses to date have indicated that potential selection has little effect on MH/SA payments, managed care continued to grow, so these analyses need to be updated.

Future work with the MMMCA project data may also examine differential utilization and prevalence for broad diagnosis groups. Two factors may have influenced the relative prevalence of SA and MH conditions. First, the 1997 repeal of SSI and DI for those who had a disability and an SA condition affected Medicaid enrollment (Gresenz, Watkins, & Podus, 1998). The DI program was designed to replace the income of a family's primary wage earner who had become disabled. The SSI program was designed to help low-income people who are elderly, blind, or disabled. The significance for the data studied here is that, after 24 months on DI, recipients would qualify for Medicare. In many States, a person who became eligible for SSI immediately became eligible for Medicaid. Thus, greater restrictions on the eligibility for SSI and DI reduced enrollment in both Medicare and Medicaid. However, the qualifying diagnoses of many people may have been reclassified in the face of this legislation. Watkins, Podus, Lombardi, and Burnam (2001) use longitudinal data to suggest that such a reclassification may have mitigated reductions in enrollment.

Another factor influencing the relative prevalence of substance abuse and mental health conditions can be attributed to an ongoing process, which began in the 1980s, of moving the environment of care for people with severe mental illness from institutions into the community. This movement continued during the study period and was coupled with an increase in the degree to which mental health care providers actively helped clients gain eligibility (Bilder & Mechanic, 2003). The proportion enrolled in the SSI and DI programs because of an MH disorder grew by more than 75 percent between 1991 and 1999 (Bilder & Mechanic, 2003).

The MMMCA data are also an unusually rich source for examining the growth of prescription drug payments. During the study period, there were significant changes in prescribing practices and the use of medications that would have affected the Medicaid and private sector estimates. Medicare did not cover prescription medications in standard settings; coverage was provided only in inpatient and certain institutional settings. While prescription drug costs in general continued to rise throughout the 1990s (Baugh, Pine, Blackwell, & Ciborowski, 2004; Kaiser Family Foundation, 2001), psychotropic drug costs in particular increased dramatically (Mark & Coffey, 2003; Zuvekas, 2001). Frank, Conti, and Goldman (2005) assert that an increase in treated prevalence of MH conditions between the late 1970s and 1996 can be attributed to increased use of psychotropic medications. The use of antidepressants and antipsychotic medications burgeoned throughout this period; the rate of antidepressant use, for example, is estimated to have tripled between 1988/1994 and 1999/2000 (DHHS, 2004).

The trends presented above on prescription drugs represent first steps toward more informative analyses of these trends. There are several possible directions for future research. One near-term goal is to disaggregate prescription drug payments into drug types to examine trends. At the time of this writing, the MMMCA project was separating out psychotropic medication expenditures, for example. Future analyses could also examine how MH/SA medications interact with modalities of care. Mark and Coffey (2003) attribute declining national trends in spending on MH/SA care, for example, to reductions in inpatient spending. The MMMCA data are a promising resource for examining whether prescription drugs are substitutes for certain MH/SA services.

REFERENCES

Anderson, G. F., Reinhardt, U. E., Hussey, P. S., & Petrosyan, V. (2003). It's the prices, stupid: Why the United States is so different from other countries. *Health Affairs, 22*(3), 89–105.

Baugh, D. K., Pine, P. L., Blackwell, S., & Ciborowski, G. (2004). Medicaid prescription drug spending in the 1990s: A decade of change. *Health Care Financing Review, 25*(3), 5–23.

Bellack, A. S., & DiClemente, C. C. (1999). Treating substance abuse among patients with schizophrenia. *Psychiatric Services, 50*(1), 75–80.

Bilder, S., & Mechanic, D. (2003). Navigating the disability process: Persons with mental disorders applying for and receiving disability benefits. *The Milbank Quarterly, 81*(1), 75–106.

Blank, R. (2002). Evaluating welfare reform in the United States. *Journal of Economic Literature, XL* (December), 1105–1166.

Christensen, S. (1998). Medicare+Choice provisions in the Balanced Budget Act of 1997. *Health Affairs, 17*(4), 224–231.

Council of Economic Advisors (1999). *Technical report: The effects of welfare policy and the economic expansion on welfare caseloads: An update.* Washington, DC: Author.

Cowell, A. J., Cummings, J., Bray, J., & Manderscheid, R. (2004). *Medicaid costs associated with classes of antidepressants* (MMMCA project report prepared for SAMHSA). Research Triangle Park, NC: RTI International.

Cutler, D., & Sheiner, L. (1997). *Managed care and the growth of medical expenditures.* NBER Working Paper No. W6140. Cambridge, MA: National Bureau of Economic Research.

Drake, R. E., & Mueser, K. T. (2001). Managing comorbid schizophrenia and substance abuse. *Current Psychiatry Reports, 3*(5), 418–422.

Drake, R. E., Mercer-McFadden, C., Mueser, K. T., McHugo, G. J., & Bond, G. R. (1998). Review of integrated mental health and substance abuse treatment for patients with dual disorders. *Schizophrenia Bulletin, 24*(4), 589–608.

Drake, R. E., Mueser, K. T., Brunette, M. F., & McHugo, G. J. (2004). A review of treatments for people with severe mental illnesses and co-occurring substance use disorders. *Psychiatric Rehabilitation Journal, 27*(4), 360–374.

Ellwood, M. R., & Ku, L. (1998). Welfare and immigration reforms: Unintended side effects for Medicaid. *Health Affairs, 17*(3), 137–151.

Figlio, D. N., & Ziliak, J. P. (1999). Welfare reform, the business cycle, and the decline in AFDC caseloads. In S. H. Danziger (Ed.), *Economic conditions and welfare reform* (pp. 17–48). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Findlay, S. (1999). Managed behavioral health care in 1999: An industry at a crossroads. *Health Affairs, 18*(5), 116–124.

Finkelstein, E., Bray, J., Larson, M. J., Miller, K., Tompkins, C., Keme, A., et al. (2004). Prevalence of, and payments for, mental health and substance abuse disorders in public and private sector health plans. In R. W. Manderscheid & M. Henderson (Eds.), *Mental health, United States, 2002* (pp. 165–185). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Frank, R. G., Conti, R. M., & Goldman, H. H. (2005). Mental health policy and psychotropic drugs. *The Milbank Quarterly, 83*(2), 271–298.

Garrett, B., & Holahan, J. (2000). Health insurance coverage after welfare. *Health Affairs, 19*(1), 175–184.

Gold, M. (2003). Can managed care and competition control Medicare costs? *Health Affairs,* Apr 2, W3-176–W3-188.

Goldman, W., McCulloch, J., & Strum, R. (1998). Costs and use of mental health services before and after managed care. *Health Affairs, 17*(2), 40–52.

Gresenz, C. R., Watkins, K., & Podus, D. (1998). Supplemental security income (SSI), disability insurance (DI), and substance abusers. *Community Mental Health Journal, 34*(4), 337–350.

Havassy, B. E., Alvidrez, J., & Owen, K. K. (2004). Comparisons of patients with comorbid psychiatric and substance use disorders: Implications for treatment and service delivery. *American Journal of Psychiatry, 161*(1), 139–145.

Hellerstein, D. J., Rosenthal, R. N., & Miner, C. R. (2001). Integrating services for schizophrenia and substance abuse. *Psychiatric Quarterly, 72*(4), 291–306.

Jensen, G. A., Morrisey, M. A., Gaffney, S., & Liston, D. K. (1997). The new dominance of managed care: Insurance trends in the 1990s. *Health Affairs, 16*(1), 125–136.

Kaiser Family Foundation. (2001). *Prescription drug trends.* Retrieved June 13, 2005, from http://www.kff.org/rxdrugs/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=48305.

Kleinke, J. D. (2001). The price of progress: Prescription drugs in the health care market. *Health Affairs, 20*(5), 43–60.

Koralek, R., Pindus, N., Capizzano, J., & Bess, R. (2001). *Recent changes in New Jersey welfare and work, child care, and child welfare systems* (Assessing the New Federalism, State Update, No. 7). Washington, DC: The Urban Institute.

Ku, L., & Bruen, B. (1999). *The continuing decline in Medicaid coverage* (Assessing the New Federalism, Policy Brief A-37). Washington, DC: The Urban Institute.

Larson, M. J., Farrelly, M. C., Hodgkin, D., Miller, K., Lubalin, J. S., Witt, E., et al. (1998). Payments and use of services for mental health, alcohol and other drug abuse disorders: Estimates from Medicare, Medicaid, and private health plans. In R. W. Manderscheid & M. Henderson (Eds.), *Mental Health, United States, 1998* (pp. 124–141). Washington, DC: U.S. Government Printing Office.

Mark, T. L., & Coffey, R. M. (2003). What drove private health insurance spending on mental health and substance abuse care, 1992–1999? *Health Affairs, 22*(1), 165–172.

Mechanic, D., & McAlpine, D. D. (1999). Mission unfulfilled: Potholes on the road to mental health parity. *Health Affairs, 18*(5), 7–21.

Michigan Family Independence Agency. (2005). *Welfare reform in Michigan 1992?2002: A decade of progress.* Retrieved June 16, 2005, from http://www.michigan.gov/documents/Decade_15548_7.pdf.

Moffitt, R. A. (1999). The effect of pre-PRWORA waivers on AFDC caseloads and female earnings, income, and labor force behavior. In S. H. Danziger (Ed.), *Economic conditions and welfare reform* (pp. 91–118). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Mueser, K. T., Bellack, A. S., & Blanchard, J. J. (1992). Comorbidity of schizophrenia and substance abuse: Implications for treatment. *Journal of Consulting and Clinical Psychology, 60*(6), 845–856.

Primm, A. B., Gomez, M. B., Tzolova-Iontchev, I., Perry, W., Vu, H. T., & Crum, R. M. (2000). Mental health versus substance abuse treatment programs for dually diagnosed patients. *Journal of Substance Abuse Treatment, 19*(3), 285–290.

Schoeni, R., & Blank, R. (2000). *What has welfare reform accomplished? Impacts on welfare participation, employment, income, poverty, and family structure* (NBER Working Paper 7627). Cambridge, MA: National Bureau of Economic Research.

Siegfried, N. (1998). A review of comorbidity: Major mental illness and problematic substance use. *Australian and New Zealand Journal of Psychiatry, 32*(5), 707–717.

Social Security Administration. (2005). *Disability evaluation under social security* (Blue book—January 2005). Retrieved July 20, 2005, from http://www.ssa.gov/disability/professionals/bluebook/.

Substance Abuse and Mental Health Services Administration. (2005). *Report to Congress on the prevention and treatment of co-occurring substance abuse disorders and mental disorders.* Retrieved June 20, 2005, from http://alt.samhsa.gov/reports/congress2002/index.html.

Tompkins, C., & Perloff, J. (forthcoming). The impact of managed care on fee-for-service expenditures in four state Medicaid programs (MMMCA project report prepared for SAMHSA). Waltham, MA: Brandeis University.

U.S. Department of Health and Human Services. (2004). *National Center for Health Statistics. Health, United States, 2004 with chartbook on trends in the health of Americans.* Hyattsville, MD: Author.

Ullman, F., Hill, I., & Almeida, R. (1999). *CHIP: A look at emerging state programs* (Assessing the New Federalism, Policy Brief A-35). Washington, DC: The Urban Institute.

Wallace, G., & Blank, R. M. (1999). What goes up must come down? Explaining recent changes in public assistance caseloads. In S. H. Danziger (Ed.), *Economic conditions and welfare reform* (pp. 49–90). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Watkins, K. E., Podus, D., Lombardi, E., & Burnam, A. (2001). Changes in mental health and service use after termination of SSI benefits. *Psychiatric Services, 52*(9), 1210–1215.

Ziliak, J. P., & Figlio, D. N. (2000). *Geographic differences in AFDC and food stamp caseloads in the welfare reform era* (Working paper 180). Evanston, IL: Joint Center for Research on Poverty.

Zuvekas, S. H. (2001). Trends in mental health services use and spending, 1987–1996. *Health Affairs, 20*(2), 214–224.

Appendix Tables

Notes for all appendix tables:

Medicare data are from CMS's 5 percent SAF and 5 percent EDB. Data for Michigan, New Jersey, Pennsylvania, and Washington are from CMS's SMRF. Private insurance data are from MarketScan®, a database of claims, benefit design, and person-level enrollment information in a convenience sample of Fortune 500 companies.

Because MarketScan is a convenience sample that is refreshed annually, year-to-year comparisons should not be made for MarketScan totals.

Table A-1. Fee-for-Service (FFS) Claimants, 1995–1998 (corresponds with figure 16.1)

	1995	1996	1997	1998
Medicare	31,094,780	30,681,800	30,019,420	29,455,460
Michigan	855,410	756,553	592,136	405,539
New Jersey	556,793	300,064	239,679	234,338
Pennsylvania	1,004,698	704,131	413,342	386,532
Washington	256,515	243,178	224,990	231,490
MarketScan	1,065,812	1,447,789	1,302,014	1,302,071

Table A-2. Managed Care/Capitated Enrollees as a Percentage of All Enrollees, 1995–1998 (corresponds with figure 16.2)

	1995	1996	1997	1998
Medicare managed care				
Managed care enrollees	3,342,880	4,457,380	5,658,540	6,664,440
All enrollees	39,460,320	39,967,820	40,359,060	40,728,460
Percent	8%	11%	14%	16%
Michigan managed care				
Managed care enrollees	438,063	519,286	654,639	840,417
All enrollees	1,435,180	1,409,165	1,361,040	1,357,521
Percent	31%	37%	48%	62%
New Jersey managed care				
Managed care enrollees	225,425	514,178	585,303	576,272
All enrollees	905,794	919,645	902,831	897,730
Percent	25%	56%	65%	64%
Pennsylvania managed care				
Managed care enrollees	564,590	872,333	1,164,311	1,167,258
All enrollees	1,774,807	1,768,951	1,735,440	1,743,824
Percent	32%	49%	67%	67%
Washington managed care				
Managed care enrollees	524,791	575,046	620,712	610,159
All enrollees	859,535	906,735	914,627	895,455
Percent	61%	63%	68%	68%
MarketScan capitated				
Capitated enrollees	291,074	439,099	556,829	700,157
All enrollees	1,908,316	2,842,615	2,511,232	2,625,411
Percent	15%	15%	22%	27%

Table A-3. FFS Claimants as a Percentage of FFS Enrollees, 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Medicare				
Total claimants	31,094,780	30,681,800	30,019,420	29,455,460
Total enrollees	36,117,440	35,510,440	34,700,520	34,064,020
Percent	86%	86%	87%	86%
Michigan				
Total claimants	855,410	756,553	592,136	405,539
Total enrollees	997,117	889,879	706,401	517,104
Percent	86%	85%	84%	78%
New Jersey				
Total claimants	556,793	300,064	239,679	234,338
Total enrollees	680,369	405,467	317,528	321,458
Percent	82%	74%	75%	73%
Pennsylvania				
Total claimants	1,004,698	704,131	413,342	386,532
Total enrollees	1,210,217	896,618	571,129	576,566
Percent	83%	79%	72%	67%
Washington				
Total claimants	256,515	243,178	224,990	231,490
Total enrollees	334,744	331,689	293,915	285,296
Percent	77%	73%	77%	81%
MarketScan				
Total claimants	1,065,812	1,447,789	1,302,014	1,302,071
Total enrollees	1,617,242	2,403,516	1,954,403	1,925,254
Percent	66%	60%	67%	68%

Table A-4. Total Payments for All Claimants (FFS), 1995–1998 (corresponds with figure 16.3)

	1995	1996	1997	1998
Medicare	$144,727,534,978	$147,716,061,244	$168,026,299,054	$161,150,233,248
Michigan	$2,903,608,512	$2,857,468,383	$2,639,129,725	$2,141,057,935
New Jersey	$2,283,084,696	$1,989,342,873	$1,949,193,494	$2,206,962,861
Pennsylvania	$4,323,297,204	$4,166,664,349	$3,413,963,544	$3,338,472,204
Washington	$1,261,949,236	$1,165,828,173	$1,156,343,200	$1,316,439,907
MarketScan	$2,203,424,868	$3,147,449,339	$3,006,306,985	$3,072,692,957

Table A-5. MH/SA Claimants (FFS), 1995–1998 (corresponds with figure 16.4)

	1995	1996	1997	1998
Medicare	3,470,560	3,914,560	3,868,380	4,009,340
Michigan	173,187	174,672	145,338	103,250
New Jersey	78,454	56,843	53,657	57,202
Pennsylvania	179,873	154,667	94,578	79,603
Washington	47,873	43,210	40,662	44,160
MarketScan	114,132	141,564	126,677	134,613

Table A-6. MH/SA Claimants as a Percentage of Total Claimants (FFS), 1995–1998 (corresponds with figure 16.5)

	1995	1996	1997	1998
Medicare				
MH/SA claimants	3,470,560	3,914,560	3,868,380	4,009,340
Total claimants	31,094,780	30,681,800	30,019,420	29,455,460
Percent	11%	13%	13%	14%
Michigan				
MH/SA claimants	173,187	174,672	145,338	103,250
Total claimants	855,410	756,553	592,136	405,539
Percent	20%	23%	25%	25%
New Jersey				
MH/SA claimants	78,454	56,843	53,657	57,202
Total claimants	556,793	300,064	239,679	234,338
Percent	14%	19%	22%	24%
Pennsylvania				
MH/SA claimants	179,873	154,667	94,578	79,603
Total claimants	1,004,698	704,131	413,342	386,532
Percent	18%	22%	23%	21%
Washington				
MH/SA claimants	47,873	43,210	40,662	44,160
Total claimants	256,515	243,178	224,990	231,490
Percent	19%	18%	18%	19%
MarketScan				
MH/SA claimants	114,132	141,564	126,677	134,613
Total claimants	1,065,812	1,447,789	1,302,014	1,302,071
Percent	11%	10%	10%	10%

Table A-7. Total Payments for MH/SA Claimants (FFS), 1995–1998 (corresponds with figure 16.6)

	1995	1996	1997	1998
Medicare	$39,823,812,760	$45,170,614,180	$46,201,182,720	$46,440,828,120
Michigan	$1,280,083,815	$1,372,422,262	$1,315,140,390	$997,928,155
New Jersey	$734,752,079	$682,160,998	$693,898,824	$906,310,703
Pennsylvania	$1,364,296,311	$1,320,758,690	$954,221,911	$790,205,634
Washington	$381,550,025	$294,479,679	$299,252,434	$345,217,165
MarketScan	$440,339,310	$560,555,467	$516,985,464	$600,310,458

Table A-8. MH/SA Payments for MH/SA Claimants (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Medicare	$7,111,687,920	$7,469,611,900	$7,514,538,200	$7,103,681,720
Michigan	$623,301,442	$643,102,637	$588,191,865	$436,897,369
New Jersey	$306,623,050	$283,753,982	$290,245,400	$356,506,213
Pennsylvania	$597,208,988	$583,828,996	$356,677,952	$353,661,141
Washington	$124,386,277	$42,274,034	$32,081,184	$33,152,949
MarketScan	$135,211,021	$148,978,812	$123,956,898	$152,064,839

Table A-9. Average Total Payment per MH/SA Claimant (FFS), 1995–1998 (corresponds with figure 16.7)

	1995	1996	1997	1998
Medicare	$11,475	$11,539	$11,943	$11,583
Michigan	$7,391	$7,857	$9,049	$9,665
New Jersey	$9,365	$12,001	$12,932	$15,844
Pennsylvania	$7,585	$8,539	$10,089	$9,927
Washington	$7,970	$6,815	$7,360	$7,817
MarketScan	$3,858	$3,960	$4,081	$4,460

Table A-10. Average MH/SA Payment per MH/SA Claimant (FFS), 1995–1998 (corresponds with figure 16.8)

	1995	1996	1997	1998
Medicare	$2,049	$1,908	$1,943	$1,772
Michigan	$3,599	$3,682	$4,047	$4,231
New Jersey	$3,908	$4,992	$5,409	$6,232
Pennsylvania	$3,320	$3,775	$3,771	$5,697
Washington	$2,598	$978	$789	$751
MarketScan	$1,185	$1,052	$979	$1,130

Table A-11. MH/SA Payments as a Percentage of Total Payments (FFS), 1995–1998
(no corresponding figure)

	1995	1996	1997	1998
Medicare				
MH/SA claimants	$7,111,687,920	$7,469,611,900	$7,514,538,200	$7,103,681,720
Total claimants	$144,727,534,978	$117,542,148,451	$168,026,299,054	$161,150,233,248
Percent	5%	6%	4%	4%
Michigan				
MH/SA claimants	$623,301,442	$643,102,637	$588,191,865	$436,897,369
Total claimants	$2,903,608,512	$2,857,468,383	$2,639,129,725	$2,141,057,935
Percent	21%	23%	22%	20%
New Jersey				
MH/SA claimants	$306,623,050	$283,753,982	$290,245,400	$356,506,213
Total claimants	$2,283,084,696	$1,989,342,873	$1,949,193,494	$2,206,962,861
Percent	13%	14%	15%	16%
Pennsylvania				
MH/SA claimants	$597,208,988	$583,828,996	$356,677,952	$353,661,141
Total claimants	$4,323,297,204	$4,166,664,349	$3,413,963,544	$3,338,472,204
Percent	14%	14%	10%	11%
Washington				
MH/SA claimants	$124,386,277	$42,274,034	$32,081,184	$33,152,949
Total claimants	$1,261,949,236	$1,165,828,173	$1,156,343,200	$1,316,439,907
Percent	10%	4%	3%	3%
MarketScan				
MH/SA claimants	$135,211,021	$148,978,812	$123,956,898	$152,064,839
Total claimants	$2,203,424,868	$3,147,449,339	$3,006,306,985	$3,072,692,957
Percent	6%	5%	4%	5%

Table A-12. Co-occurring MH/SA Claimants (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Medicare	136,000	145,000	126,980	144,860
Michigan	8,243	8,946	7,158	3,787
New Jersey	6,459	4,747	4,318	4,319
Pennsylvania	11,406	10,843	5,973	4,854
Washington	3,742	3,640	3,231	3,520
MarketScan	3,394	3,495	3,201	3,075

Table A-13. Total Payments for Co-occurring MH/SA Claimants (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Medicare	$2,366,071,340	$2,573,479,780	$2,369,332,740	$2,639,590,640
Michigan	$83,688,572	$94,344,154	$76,728,025	$38,467,321
New Jersey	$93,300,451	$84,676,800	$76,626,758	$77,355,235
Pennsylvania	$119,395,516	$114,249,425	$60,590,176	$52,886,278
Washington	$33,569,404	$26,606,415	$26,090,894	$32,831,785
MarketScan	$30,628,092	$31,770,067	$29,182,511	$28,224,873

Table A-14. MH/SA Payments for Co-occurring MH/SA Claimants (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Medicare	$1,087,408,680	$1,156,937,040	$1,040,187,480	$1,072,013,760
Michigan	$42,803,478	$44,892,640	$33,056,342	$15,302,225
New Jersey	$41,585,128	$35,919,236	$34,504,554	$34,746,311
Pennsylvania	$68,516,357	$66,995,058	$29,548,101	$26,237,207
Washington	$16,008,660	$8,891,021	$7,116,615	$7,987,302
MarketScan	$18,543,019	$17,641,357	$13,846,950	$14,467,784

Table A-15. Average Total Payment per Co-occurring MH/SA Claimant (FFS), 1995–1998 (corresponds with figure 16.9)

	1995	1996	1997	1998
Medicare	$17,398	$17,748	$18,659	$18,222
Michigan	$10,153	$10,546	$10,719	$10,158
New Jersey	$14,445	$17,838	$17,746	$17,910
Pennsylvania	$10,468	$10,537	$10,144	$10,895
Washington	$8,971	$7,309	$8,075	$9,327
MarketScan	$9,024	$9,090	$9,117	$9,179

Table A-16. Average MH/SA Payment per Co-occurring MH/SA Claimant (FFS), 1995–1998 (corresponds with figure 16.10)

	1995	1996	1997	1998
Medicare	$7,996	$7,979	$8,192	$7,400
Michigan	$5,193	$5,018	$4,618	$4,041
New Jersey	$6,438	$7,567	$7,991	$8,045
Pennsylvania	$6,007	$6,179	$4,947	$5,405
Washington	$4,278	$2,443	$2,203	$2,269
MarketScan	$5,463	$5,048	$4,326	$4,705

Table A-17. Proportion of MH/SA Payments Attributable to Co-occurring MH/SA Claimants (FFS), 1995–1998 (corresponds with figure 16.11)

	1995	1996	1997	1998
Medicare				
MH/SA payments for co-occurring MH/SA claimants	$1,087,408,680	$1,156,937,040	$1,040,187,480	$1,072,013,760
MH/SA payments for all MH/SA claimants	$7,111,687,920	$7,469,611,900	$7,514,538,200	$7,103,681,720
Percent	15%	15%	14%	15%
Michigan				
MH/SA payments for co-occurring MH/SA claimants	$42,803,478	$44,892,640	$33,056,342	$15,302,225
MH/SA payments for all MH/SA claimants	$623,301,442	$643,102,637	$588,191,865	$436,897,369
Percent	7%	7%	6%	4%
New Jersey				
MH/SA payments for co-occurring MH/SA claimants	$41,585,128	$35,919,236	$34,504,554	$34,746,311
MH/SA payments for all MH/SA claimants	$306,623,050	$283,753,982	$290,245,400	$356,506,213
Percent	14%	13%	12%	10%
Pennsylvania				
MH/SA payments for co-occurring MH/SA claimants	$68,516,357	$66,995,058	$29,548,101	$26,237,207
MH/SA payments for all MH/SA claimants	$597,208,988	$583,828,996	$356,677,952	$353,661,141
Percent	11%	11%	8%	7%
Washington				
MH/SA payments for co-occurring MH/SA claimants	$16,008,660	$8,891,021	$7,116,615	$7,987,302
MH/SA payments for all MH/SA claimants	$124,386,277	$42,274,034	$32,081,184	$33,152,949
Percent	13%	21%	22%	24%
MarketScan				
MH/SA payments for co-occurring MH/SA claimants	$18,543,019	$17,641,357	$13,846,950	$14,467,784
MH/SA payments for all MH/SA claimants	$135,211,021	$148,978,812	$123,956,898	$152,064,839
Percent	14%	12%	11%	10%

Table A-18. Prescription Drug Claimants (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Michigan	700,791	615,217	477,033	322,848
New Jersey	458,469	242,685	198,005	194,543
Pennsylvania	822,551	572,942	334,233	310,577
Washington	199,562	186,307	176,633	188,281

Table A-19. Prescription Drug Claimants as a Percentage of Total Claimants (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Michigan				
Prescription drug claimants	700,791	615,217	477,033	322,848
Total claimants	855,410	756,553	592,136	405,539
Percent	82%	81%	81%	80%
New Jersey				
Prescription drug claimants	458,469	242,685	198,005	194,543
Total claimants	556,793	300,064	239,679	234,338
Percent	82%	81%	83%	83%
Pennsylvania				
Prescription drug claimants	822,551	572,942	334,233	310,577
Total claimants	1,004,698	704,131	413,342	386,532
Percent	82%	81%	81%	80%
Washington				
Prescription drug claimants	199,562	186,307	176,633	188,281
Total claimants	256,515	243,178	224,990	231,490
Percent	78%	77%	79%	81%

Table A-20. Prescription Drug Claimants with MH/SA Disorders (FFS), 1995–1998 (corresponds with figure 16.12)

	1995	1996	1997	1998
Michigan	153,931	156,309	130,907	93,425
New Jersey	70,367	51,043	48,800	51,746
Pennsylvania	158,606	136,245	83,284	69,289
Washington	43,369	39,206	37,242	41,014

Table A-21. Proportion of MH/SA Claimants with a Prescription Drug Claim (FFS), 1995–1998
(no corresponding figure)

	1995	1996	1997	1998
Michigan				
MH/SA claimants with a prescription drug claim	153,931	156,309	130,907	93,425
All MH/SA claimants	173,187	174,672	145,338	103,250
Percent	89%	89%	90%	90%
New Jersey				
MH/SA claimants with a prescription drug claim	70,367	51,043	48,800	51,746
All MH/SA claimants	78,454	56,843	53,657	57,202
Percent	90%	90%	91%	90%
Pennsylvania				
MH/SA claimants with a prescription drug claim	158,606	136,245	83,284	69,289
All MH/SA claimants	179,873	154,667	94,578	79,603
Percent	88%	88%	88%	87%
Washington				
MH/SA claimants with a prescription drug claim	43,369	39,206	37,242	41,014
All MH/SA claimants	47,873	43,210	40,662	44,160
Percent	91%	91%	92%	93%

Table A-22. Proportion of Prescription Drug Claimants with an MH/SA Claim (FFS), 1995–1998
(no corresponding figure)

	1995	1996	1997	1998
Michigan				
Prescription drug claimants with an MH/SA claim	153,931	156,309	130,907	93,425
All prescription drug claimants	700,791	615,217	477,033	322,848
Percent	22%	25%	27%	29%
New Jersey				
Prescription drug claimants with an MH/SA claim	70,367	51,043	48,800	51,746
All prescription drug claimants	458,469	242,685	198,005	194,543
Percent	15%	21%	25%	27%
Pennsylvania				
Prescription drug claimants with an MH/SA claim	158,606	136,245	83,284	69,289
All prescription drug claimants	822,551	572,942	334,233	310,577
Percent	19%	24%	25%	22%
Washington				
Prescription drug claimants with an MH/SA claim	43,369	39,206	37,242	41,014
All prescription drug claimants	199,562	186,307	176,633	188,281
Percent	22%	21%	21%	22%

Table A-23. Prescription Drug Payments (FFS), 1995–1998 (no corresponding figure)

	1995	1996	1997	1998
Michigan	$309,824,932	$332,478,031	$326,854,114	$288,264,203
New Jersey	$280,955,809	$272,125,134	$301,814,031	$346,682,590
Pennsylvania	$520,644,639	$483,043,671	$394,208,594	$506,021,710
Washington	$157,395,396	$168,458,062	$195,409,266	$290,735,139

Table A-24. Prescription Drug Payments for MH/SA Claimants (FFS), 1995–1998 (corresponds with figure 16.13)

	1995	1996	1997	1998
Michigan	$133,482,287	$164,984,094	$171,275,154	$149,618,812
New Jersey	$95,016,816	$97,096,260	$113,157,469	$135,682,473
Pennsylvania	$173,276,133	$169,279,726	$136,917,984	$156,001,394
Washington	$54,299,194	$55,371,852	$65,297,445	$95,283,298

Table A-25. Average Prescription Drug Payment per Prescription Drug Claimant (FFS), 1995–1998 (corresponds with figure 16.14)

	1995	1996	1997	1998
Michigan				
MH/SA sample of claimants	$867	$1,055	$1,308	$1,601
Random sample of claimants	$442	$540	$685	$893
New Jersey				
MH/SA sample of claimants	$1,350	$1,902	$2,319	$2,622
Random sample of claimants	$613	$1,121	$1,524	$1,782
Pennsylvania				
MH/SA sample of claimants	$1,092	$1,242	$1,644	$2,251
Random sample of claimants	$633	$843	$1,179	$1,629
Washington				
MH/SA sample of claimants	$1,252	$1,412	$1,753	$2,323
Random sample of claimants	$789	$904	$1,106	$1,544

Table A-26. Prescription Drug Payments as a Percentage of Total Payments (FFS), 1995–1998
(no corresponding figure)

	1995	1996	1997	1998
Michigan				
MH/SA sample of claimants				
Prescription drug payments	$133,482,287	$164,984,094	$171,275,154	$149,618,812
Total payments	$1,280,083,815	$1,372,422,262	$1,315,140,390	$997,928,155
Percent	10%	12%	13%	15%
Random sample of claimants				
Prescription drug payments	$126,704,384	$154,999,057	$161,991,879	$148,613,450
Total payments	$1,187,444,552	$1,332,132,843	$1,307,976,752	$1,103,813,805
Percent	11%	12%	12%	13%
New Jersey				
MH/SA sample of claimants				
Prescription drug payments	$95,016,816	$97,096,260	$113,157,469	$135,682,473
Total payments	$734,752,079	$682,160,998	$693,898,824	$906,310,703
Percent	13%	14%	16%	15%
Random sample of claimants				
Prescription drug payments	$80,077,449	$105,950,181	$138,884,396	$171,975,797
Total payments	$650,720,122	$774,537,929	$896,951,543	$1,094,788,744
Percent	12%	14%	15%	16%
Pennsylvania				
MH/SA sample of claimants				
Prescription drug payments	$173,276,133	$169,279,726	$136,917,984	$156,001,394
Total payments	$1,364,296,311	$1,320,758,690	$954,221,911	$790,205,634
Percent	13%	13%	14%	20%
Random sample of claimants				
Prescription drug payments	$188,435,698	$214,538,507	$182,570,703	$210,190,431
Total payments	$1,564,720,857	$1,850,577,911	$1,581,116,531	$1,386,728,865
Percent	12%	12%	12%	15%
Washington				
MH/SA sample of claimants				
Prescription drug payments	$54,299,194	$55,371,852	$65,297,445	$95,283,298
Total payments	$381,550,025	$294,479,679	$299,252,434	$345,217,165
Percent	14%	19%	22%	28%
Random sample of claimants				
Prescription drug payments	$59,342,878	$60,450,881	$71,335,369	$111,956,075
Total payments	$475,793,456	$418,355,401	$422,130,283	$506,933,717
Percent	12%	14%	17%	22%

Chapter 17

Mood Disorder Prevalence Among Young Men and Women in the United States

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This report investigates lifetime prevalence estimates of major depressive episode, dysthymia, and bipolar disorder using the Third National Health and Nutrition Examination Survey (NHANES III) among young men and women.

NHANES III, conducted from 1988 to 1994, is a large, nationally representative cross-sectional sample of the United States. A population-based sample of 8,602 men and women 17 to 39 years of age completed interviews, of whom 7,667 (89.1 percent) also completed mood disorder assessments. Mood disorder assessments came from the Diagnostic Interview Schedule (DIS) administered as one component of the NHANES III examination. Lifetime prevalence estimates were assessed for young men and women by selected sociodemographic and health characteristics.

Lifetime prevalence estimates of any mood disorder were 14.5 percent among young women and 8.4 percent among young men. Lifetime prevalence of major depressive episode (MDE), major depressive episode with severity (MDE-s), dysthymia, and MDE-s with dysthymia were all higher among young women. Lifetime prevalence of any bipolar disorder was similar for men and women. The associations between prevalence of mood disorders and sociodemographic and health characteristics, including race-ethnicity, education, income, marital status, self-reported health status, smoking status, hypertension, and asthma, were generally similar for men and women. Prevalence estimates of any mood disorder were over 20 percent among women with asthma or hypertension; men and women who were widowed, separated, or divorced; and those reporting fair or poor health.

These data provide national prevalence estimates on mood disorders for young American men and women by selected sociodemographic and health characteristics, and identify subgroups for whom estimates are particularly high.

Introduction

The 1999 Surgeon General's Report on Mental Health recognized the magnitude of the problem associated with mental illness (U.S. Department of Health and Human Services, 1999). In 2002, the president created the New Freedom Commission on Mental Health (President's New Freedom Commission on Mental Health, 2003), which reported that the United States spent $71 billion on treating mental illnesses in 1997 (Coffey et al., 2000). The report further found that persons with mental illness have unmet health care needs and experience barriers to care. Unipolar major depressive disorder (MDD), dysthymia, and bipolar I-II disorders comprise mood disorders. MDD is a chronic illness (Angst, 1986;

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Keller et al., 1984, 1992; Judd et al., 1998) and is one of the most prevalent psychiatric disorders (Kessler et al., 1994). In the National Co-morbidity Survey-Replication (NCS-R) (Kessler et al., 2005), conducted in 2001 to 2003, the lifetime prevalence of any mood disorder among persons aged 18 years and older was nearly 21 percent.

Besides the NCS-R, there are few population-based surveys in the United States that use structured psychiatric interviews to identify mood disorders. The Epidemiologic Catchment Area Study (ECA) (Robins & Regier, 1991), conducted from 1980 to 1985, the National Comorbidity Survey (NCS) Kessler et al., 1994), conducted from 1990 to 1992, and the Third National Health and Nutrition Examination Survey (NHANES III) (Jonas, Brody, Roper, & Narrow, 2003), conducted from 1988 to 1994, are surveys of this type. Prior to the ECA, NCS, NCS-R, and NHANES III, prevalence data on mood disorders were largely based on patient samples (Boyd & Weissman, 1981) or community samples (Dean, Surtees, & Sashidharian, 1993; Surtees, Sashidarian, & Dean, 1986; Weissman & Myers, 1978).

This chapter expands on a study of the lifetime prevalence of selected mood disorders, including major depressive episode, dysthymia, and bipolar disorder in young adults 17–39 years of age using the NHANES III (Jonas, Brody, Roper, & Narrow, 2003). It presents lifetime prevalence estimates of mood disorders for young men and women, focusing on the differences associated with sociodemographic and health characteristics.

Methods

Survey Sample

The National Center for Health Statistics, Centers for Disease Control and Prevention, conducted the NHANES III from 1988 to 1994. NHANES III used a complex, multistage sampling design of the civilian, noninstitutionalized U.S. population. Survey sample weights were used to produce estimates representative of the noninstitutionalized civilian U.S. population. Non-Hispanic Blacks and Mexican-Americans were oversampled. Further details about the survey and its methods have been published elsewhere (National Center for Health Statistics, 1994). During a household interview, 8,602 persons who were 17–39 years of age completed a series of questionnaires administered by trained interviewers. Respondents were then invited to undergo extensive physical examinations and further health assessments in special mobile examination trailers. Of these 8,602 persons, 7,968 participated in the examination that included the Diagnostic Interview Schedule (DIS) administered in a private room. Valid assessments for the DIS were obtained for 7,667 subjects. The overall examination response rate (7,968/8,602) was 92.6 percent. The response rate for the DIS (7,667/7,968) was 96.2 percent, yielding a cumulative rate of 89.1 percent. Comparisons of the distributions of age, sex, and race-ethnicity were virtually identical between the 8,602 persons with completed questionnaires and the 7,667 persons with valid DIS assessments. These 7,667 persons (3,493 men and 4,174 women) were used as the study sample for these analyses.

Mood Disorders

The DIS (Robins, Helzer, Croghan, Williams, & Spitzer, 1981), administered as one component of the NHANES III (Jonas et al., 2003), is a structured psychiatric interview schedule. The depression and mania modules from the DIS were administered. Both the depressive and manic syndromes consist of symptoms that tend to jointly occur and can persist from weeks to years. The DIS was developed for use by trained lay interviewers in two versions: one that employs the same criteria used by clinicians as found in the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (DSM-III) (American Psychiatric Association, 1980) and another that employs the same criteria used by clinicians as found in the *Diagnostic and Statistical Manual of Mental Disorders, Revised Edition* (DSM-III-R) (American Psychiatric Association, 1987). There were several changes in diagnostic criteria in the DSM-III-R. A criterion was added for bipolar disorder, which required impairment in occupational or usual social contexts. For dysthymia, the number of persistent symptoms required was reduced from three to two. Additional exclusionary criteria for dysthymia specified that there must not have been evidence for MDE during the first 2 years of the disturbance or any evidence of mania. The DSM-III version of the DIS was used in the NHANES III.

Lifetime prevalence estimates were assessed for six mood measures: (1) major depressive episode (MDE), (2) major depressive episode with severity (MDE-s), (3) dysthymia, (4) MDE-s with dysthymia, (5) any bipolar disorder, and (6) any mood disorder. Lifetime prevalence was defined as the proportion of the sample that ever experienced a given disorder.

Descriptions and a brief synopsis of DSM-III definitions for these disorders follow:

1. Unlike transient moods of sadness or elation that are considered normal and occur frequently in the general population, MDE was defined as persistent (for at least 2 weeks) lowered mood plus at least four of the following eight symptom groups: change in appetite or weight, sleep disturbance, changes in psychomotor activity, loss of ability to experience pleasure and interest, fatigue, feelings of worthlessness or guilt, difficulty in concentrating, and preoccupation with death or a wish to die. If MDE criteria were met but solely due to bereavement, then the respondent was not classified as having MDE.

2. Severity criteria were also applied to MDE. The condition was defined as severe if the respondent answered "yes" to at least one of the following questions concerning the episode: Did you tell a doctor? Did you tell any other professional? Did you take medicine more than once? Did symptoms interfere with your life or activities a lot? A respondent was classified as having MDE-s if the MDE and severity criteria defined above were both met.

3. Dysthymia is a chronic (of at least 2 years' duration) disturbance of mood involving either depressed mood or loss of interest or pleasure in most activities along with some of the symptoms used to diagnose major depressive episode. While the depressed mood may be interrupted by periods of normal mood for up to a few weeks, the essential aspect is its chronicity. Dysthymia was defined as a chronic (depressed mood plus at least three of seven symptom groups (see second through eighth MDE symptoms).

4. Respondents could be diagnosed with both conditions (MDE-s and dysthymia).

5. "Any bipolar disorder" was defined as having Bipolar Disorder, Type I or Bipolar Disorder, Type II (Atypical Bipolar Disorder). "Any bipolar disorder" is diagnosed when the criteria for MDE have been met but in addition an episode of mania has ever occurred. The essential feature of mania is a distinct period when the predominant mood is either elevated, expansive, or irritable and there are associated symptoms, including hyperactivity, pressure of speech, flight of ideas, inflated self-esteem, decreased need for sleep, destructibility, and excessive involvement in activities that have a high potential for painful consequences. Often the activities are flamboyant, bizarre, or disorganized. In the NHANES III, the majority of cases of any bipolar disorder (86.3 percent) met the criteria for Bipolar Disorder, Type I.

6. Respondents could meet the criteria for one or more of MDE, dysthymia, or any bipolar disorder. Thus, any mood disorder was defined as the diagnosis of one or more of MDE, dysthymia, or any bipolar disorder. Further details regarding the diagnosis of these mood disorders have been published elsewhere (Robins et al., 1981).

Sociodemographic and Health Characteristics

Selected sociodemographic and health characteristics potentially associated with mood disorders were assessed: age (17–19 years, 20–29 years, 30–39 years), gender, race-ethnicity (non-Hispanic White, non-Hispanic Black, Mexican-American), completed years of education (11 years or less, 12 years, 13 or more years), marital status (married, widowed/separated/divorced, never married), current smoking status (smoker, nonsmoker), and self-reported health status (excellent/very good, good, fair/poor). A history of asthma and hypertension was based on self-report of ever being diagnosed by a doctor.

Race-ethnicity was categorized according to the NHANES III analytic guidelines (Jonas et al., 2003) as non-Hispanic White, non-Hispanic Black, Mexican-American, and other. This latter group (other) includes all other race/ethnic groups not captured in the first three categories (e.g., Asian, non-Mexican-American Hispanics). For the race-ethnicity variable specifically, only the first three categories were included due to the small sample size in the "other" group. The "other" race-ethnicity group was included in the totals for the remaining sociodemographic and health measures. Income categories were defined using the poverty income ratio (PIR), which was the ratio of the total family income to the poverty threshold for the year of the interview (low: PIR < 1.3, middle: PIR > = 1.3 and < 3.5, high: PIR > = 3.5). Details on the other sociodemographic and health characteristics have been published elsewhere (National Center for Health Statistics, 1994). Table 17.1 shows sample sizes of these sociodemographic and health characteristics for men and women.

Statistical Analysis

SAS (SAS Institute, 1985) and SUDAAN (Shah, Barnwell, & Biegler, 21) were used to perform statistical analysis. Survey sampling weights were used in all the analyses reported to produce estimates that were representative of the civilian, noninstitutionalized U.S. population. SUDAAN incorporates the sample weights and adjusts for the survey's stratified multistage sample design in calculating the appropriate standard errors (SEs). Lifetime prevalence estimates, expressed as percentages, are reported for all respondents and by gender for the six mood disorders described above. Gender-specific prevalence estimates are reported for selected mood disorders by sociodemographic and health characteristics. Significance testing was conducted employing *t* tests (paired contrasts) and used SUDAAN. All contrasts described are significant at the $p < .05$ level unless otherwise noted.

Table 17-1. Sample sizes of sociodemographic and health characteristics for men and women from the Third National Health and Nutrition Examination Survey (NHANES III)

	Men	Women
Race-Ethnicity		
White-Non-Hispanic (ref)	951	1238
Black-Non-Hispanic	1113	1426
Mexican-American	1285	1334
Education		
0-11 years	988	1044
12 years	994	1307
13 or more years (ref)	976	1224
Income[1]		
Low	1130	1582
Middle	1479	1596
High (ref)	571	657
Marital Status		
Married (ref)	1743	2133
Widowed, Separated Divorced	192	513
Never Married	1552	1519
Self-reported Health Status		
Excellent, Very Good (ref)	1710	1857
Good	1285	1584
Fair, Poor	498	732
Current Smoking Status		
Smoker	1201	1046
Nonsmoker (ref)	2291	3127
Asthma - Yes	226	288
Asthma - No (ref)	3267	3885
Hypertension/HBP - Yes	330	527
Hypertension/HBP - No (ref)	3070	3619

Notes: Sample sizes do not equal study sample totals due to missing data.

[1]Income categories were defined using the poverty income ratio (PIR), the ratio of the total family income to the poverty threshold for the year of interview. Low income: PIR < 1.3; Middle: PIR > = 1.3 and < 3.5; High: PIR > = 3.5.

Results

Lifetime Prevalence of Mood Disorders

The overall lifetime prevalence estimates for each mood disorder are shown in Figure 17.1. The most common diagnoses in the NHANES III were MDE (8.6 percent), MDE-s (7.7 percent), and dysthymia (6.2 percent). Compared to these conditions, any bipolar disorder was less common (1.6 percent). The proportion with a history of both dysthymia and MDE-s (3.4 percent) was roughly half that of either disorder individually. More than one in nine persons had a history of any mood disorder.

The prevalence of all mood disorders was considerably higher among women than among men, with the exception of any bipolar disorder (figure 17.2). For the overall sample, prevalence estimates observed for age of respondent, race-ethnicity, education, income, marital status, self-reported health status, smoking status, asthma status, and hypertension status have been reported elsewhere (Jonas et al., 2003).

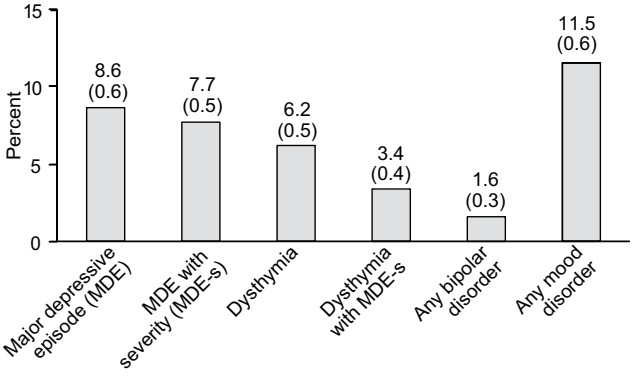
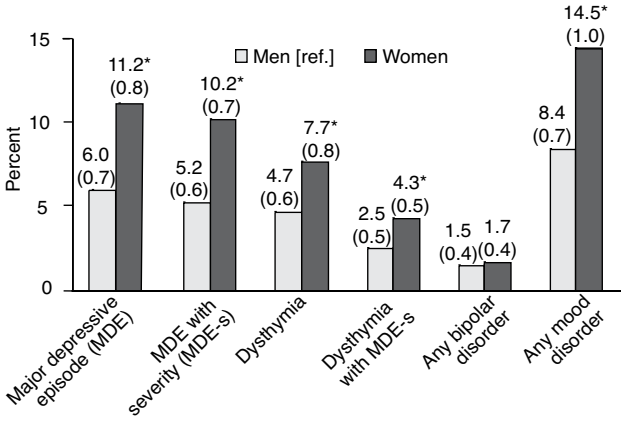


Figure 17.1. Lifetime Prevalence (Standard Error) of Mood Disorders Among 17- to 39-Year-Old Respondents.

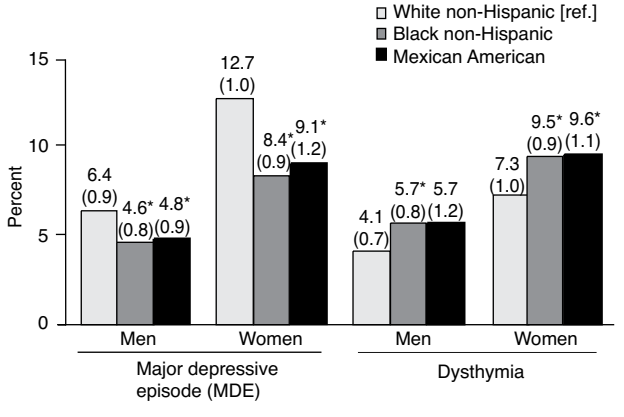
Selected Mood Disorders for Men and Women by Sociodemographic and Health Characteristics

In addition to gender, sociodemographic and health characteristics are associated with the prevalence of mood disorders. Race and ethnicity, for example, are important factors. Prevalence of MDE was lower for non-Hispanic Black and Mexican-American women than for non-Hispanic White women (figure 17.3). In contrast, non-Hispanic Black women had a higher prevalence of dysthymia than non-Hispanic Whites. Similar results were found among men: non-Hispanic Blacks and Mexican-Americans had lower prevalence of MDE and higher prevalence of dysthymia than non-Hispanic Whites.



NOTES: *p < 0.05; [ref.] = reference group.

Figure 17.2. Lifetime Prevalence (Standard Error) of Mood Disorders Among 17- to 39-Year-Old Respondents by Sex.

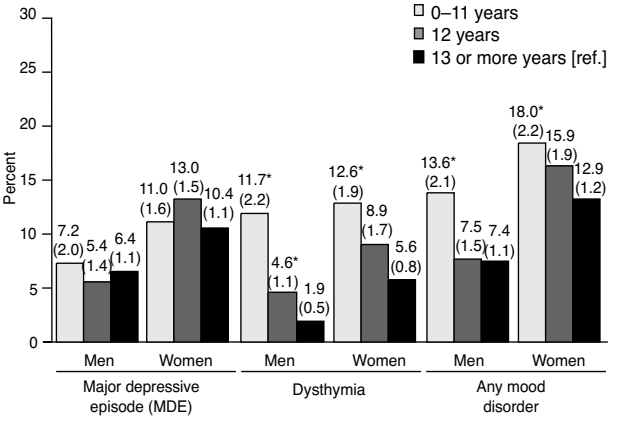


NOTES: *p < 0.05; [ref.] = reference group.

Figure 17.3. Lifetime Prevalence (Standard Error) of Mood Disorders Among 17- to 39-Year-Old Respondents by Sex and Race-Ethnicity.

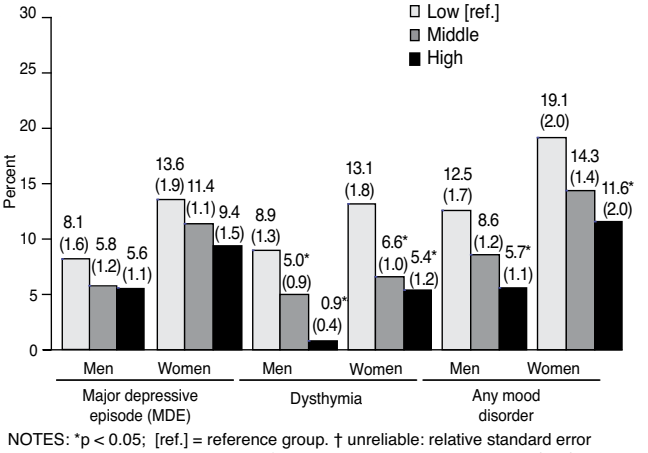
Education levels are also associated with the prevalence of mood disorders. Thus, women with 13 or more years' education had lower prevalence rates of dysthymia than those with less education (figure 17.4). Prevalence of any mood disorder was also higher among women with less than 12 years of education compared to those with 13 or more years of education. Similar patterns were found among men for dysthymia and for any mood disorder. However, no associations were found among these educational groups with respect to major depressive episode.

The prevalence of mood disorders varies too by PIR. Women from low-PIR families had a greater prevalence of MDE, dysthymia, and any mood disorder than those from higher-PIR families (figure 17.5) Prevalence patterns for men were generally similar.



NOTES: *p < 0.05; [ref.] = reference group.

Figure 17.4. Lifetime Prevalence (Standard Error) of Mood Disorders Among 20- to 39-Year-Old Respondents by Sex and Education.

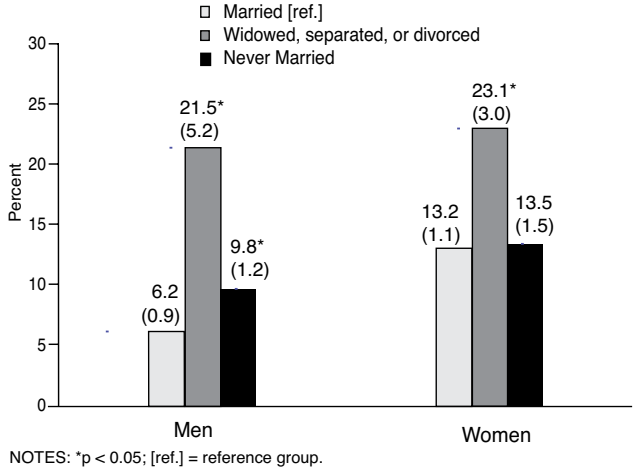


NOTES: *p < 0.05; [ref.] = reference group. † unreliable: relative standard error > 30%. [1]Income categories were defined using the poverty income ratio (PIR), the ratio of the total family income to the poverty threshold for the year of interview. Low: PIR < 1.3, Middle: PIR ≥ 1.3 and <3.5, High: PIR ≥ 3.5.

Figure 17.5. Lifetime Prevalence (Standard Error) of Mood Disorders Among 17- to 39-Year-Old Respondents by Sex and Income.[1]

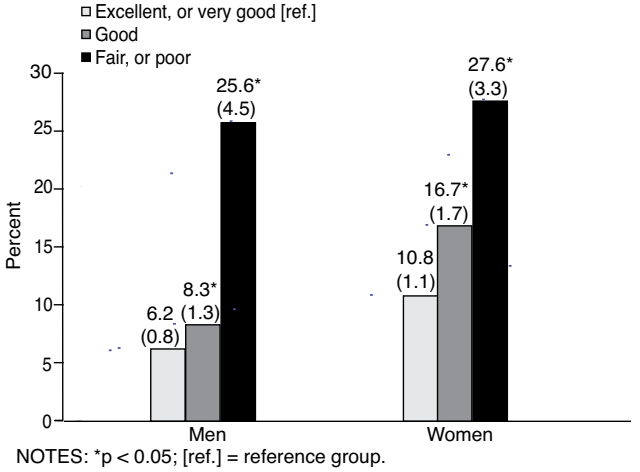
Men and women who were widowed, separated, or divorced were more likely to experience any mood disorder than their married counterparts (figure 17.6). In addition, never-married men had higher prevalence of any mood disorder than married men.

Turning to health status characteristics, prevalence of any mood disorder was higher among men and women who rated their health as "good" and "fair/poor" as compared to the reference group "excellent, very good" (figure 17.7). Prevalence of any mood disorder was also greater among smokers than nonsmokers (figure 17.8), and among asthmatics than nonasthmatics (figure 17.9). Similarly, men and women with hypertension had higher prevalence of any mood disorder than normotensives (figure 17.10).



NOTES: *p < 0.05; [ref.] = reference group.

Figure 17.6. Lifetime Prevalence (Standard Error) of Any Mood Disorder Among 17- to 39-Year-Old Respondents by Sex and Marital Status.



NOTES: *p < 0.05; [ref.] = reference group.

Figure 17.7. Lifetime Prevalence (Standard Error) of Any Mood Disorder Among 17- to 39-Year-Old Respondents by Sex and Self-Reported Health Status.

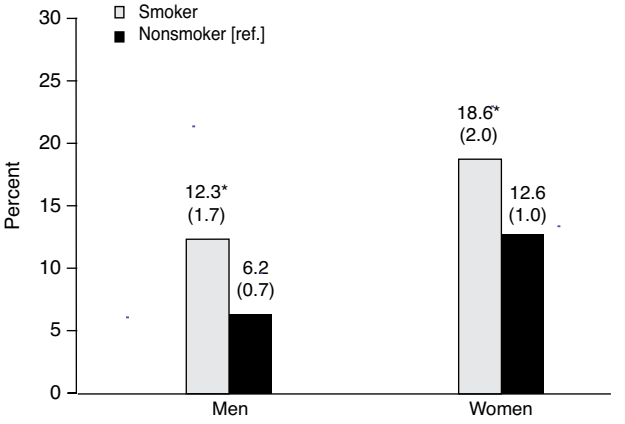
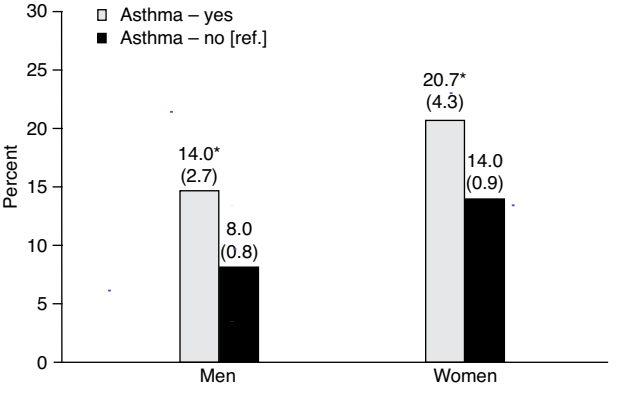


Figure 17.8. Lifetime Prevalence (Standard Error) of Any Mood Disorder Among 17- to 39-Year-Old Respondents by Sex and Current Smoking Status.



NOTES: *p < 0.05; [ref.] = reference group.

Figure 17.9. Lifetime Prevalence (Standard Error) of Any Mood Disorder Among 17- to 39-Year-Old Respondents by Sex and Asthma.

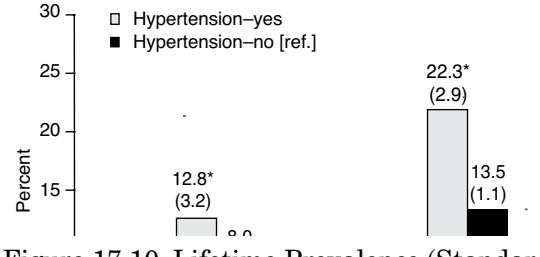


Figure 17.10. Lifetime Prevalence (Standard Error) of Any Mood Disorder Among 17- to 39-Year-Old Respondents by Sex and Hypertension.

Discussion

The lifetime prevalence estimates of mood disorders found in this report show a sizeable number of significant prevalence differences by the sociodemographic and health characteristics examined. The gender-stratified analyses presented here generally confirm findings from other studies using structured psychiatric interviews and have been discussed elsewhere (Jonas et al., 2003). There are some notable pockets of high prevalence of mood disorder among men and women where the prevalence is greater than 20.0 percent. For example, regarding marital status, the prevalence of any mood disorder for widowed, separated, and divorced men and women was 21.5 percent and 23.1 percent, respectively. The prevalence of any mood disorder among men and women reporting fair or poor health was 25.6 percent and 27.6 percent, respectively. Among women with a history of asthma or hypertension, prevalence estimates for any mood disorder were 20.7 percent and 22.3 percent, respectively. These pockets of high prevalence may indicate subgroups particularly at risk.

This investigation has several strengths. The NHANES III is a large and carefully constructed, nationally representative survey. The oversampling of Non-Hispanic Blacks and Mexican Americans provided more stable estimates for these race-ethnicity subgroups. The selected sociodemographic and health subgroups provide stable estimates of prevalence for the mood disorders analyzed. The gender-specific mood disorder prevalence estimates and differences by the sociodemographic and health characteristics presented may give insight into subgroups that are particularly at risk. The DIS, as a diagnostic assessment instrument, has been shown to be reliable and has evidence of concurrent validity (Wittchen, Semler, & Von Zerssen, 1985). The structured psychiatric interview format of the DIS enabled the diagnosis of these mood disorders based on criteria specified in DSM-III (Robins et al., 1981).

Several methodological limitations must be noted in the estimation of prevalence. Most notably, the NHANES III mood disorder assessment was available only for adults 17–39 years of age. The NHANES III is a cross-sectional survey that relies solely on retrospective reports to assess the lifetime prevalence of mood disorders. These reports were subject to recall bias that could have been magnified due to retrospective time frames that included ever experiencing a given symptom. Diagnostic assessment was based on a single structured interview administered by nonclinicians. On the other hand, even clinical diagnoses are made by assessment of symptoms in an interview, and there is some evidence that clinical diagnoses in community settings may overestimate prevalence (Wittchen et al., 1985). Improved precision in prevalence estimation would also have been possible if ancillary information from significant family and friends in addition to institutional records could have been obtained. In addition, lack of some specific markers among the sociodemographic and health subgroups (e.g., single parenthood) limits the ability of these analyses to pinpoint clusters of high-prevalence mood disorders. Furthermore, because of the cross-sectional design of NHANES III, no conclusions can be drawn about the causality of the relationships observed.

Despite these limitations, the NHANES III provides a comprehensive picture of the prevalence of mood disorders in a large, nationally representative sample of young men and women. The gender-specific prevalence estimates show that certain population subgroups may be at excess risk. These mood disorders can have concurrent emotional, social, and cognitive complications as well as potentially increase comorbid chronic disease and disability and diminish productivity. Continued investigation of their prevalence and related sociodemographic and health characteristics is recommended. Of particular interest is whether the higher prevalence of mood disorders among young women relative to young men continues in later life.

REFERENCES

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. revised). Washington, DC: Author.

Angst, J. (1986). The course of mood disorders. *Psychopathology, 19*(Suppl. 2), 47–52.

Boyd, J. H., & Weissman, M. M. (1981). Epidemiology of mood disorders: A re-examination and future direction. *Archives of General Psychiatry, 38,* 1039–1046.

Coffey, R. M., Mark, T., King, E., Harwood, H., McKusick, D., Genuardi, J., et al. (2000). *National estimates of expenditures for mental health and substance abuse treatment, 1997.* SAMHSA Publication SMA-00-3499. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Dean, C., Surtees, G., & Sashidharian, S. P. (1983). Comparison of research diagnostic systems in an Edinburgh community sample. *British Journal of Psychiatry, 142,* 247–256.

Jonas, B. S., Brody, D., Roper, M., & Narrow, W. (2003). Prevalence of mood disorders in a national sample of young American adults. *Social Psychiatry and Psychiatric Epidemiology*, *38*, 618–624.

Judd, L. L., Akiskal Heller, P. J., Endicott, J., Coyell, W., Paulus, M. P., Kunovac, J. L., et al. (1998). A prospective 12-year study of subsyndromal and syndromal depressive symptoms in unipolar major depressive disorders. *Archives of General Psychiatry, 55*, 694–700.

Keller, M. B., Lavori, P. W., Mueller, T. I., Endicott, J., Coryell, W., Hirschfeld, R. M. A. , & Shay, T. (1992). Time to recovery, chronicity and levels of psychopathology in major depression: A 5-year prospective follow-up of 431 subjects. *Archives of General Psychiatry, 49*, 809–816.

Keller, M. B., Lerman, G. L., Lavori, P. W., Cryell, W., Endicott, J., & Taylor, J. (1984). Long-term outcome of episodes of major depression: Clinical and public health significance. *JAMA*, *252*, 788–792.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593–602.

Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshelman, S., et al. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Study. *Archives of General Psychiatry, 51*, 8–19.

National Center for Health Statistics. (1994). *Plan and operation of the Third National Health and Nutrition Examination Survey, 1988-94.* Vital Health Statistics 1(32). Hyattsville, MD: U.S. Department of Health and Human Services.

The President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America. Final report.* DHHS Pub. No. SMA-03-3832. Rockville, MD: U.S. Department of Health and Human Services.

Robins, L., Helzer, J. E., Croghan, J., Williams, J. B. W., & Spitzer, R. L. (1981). NIMH Diagnostic Interview Schedule. Version III. Rockville, MD: National Institute of Mental Health.

Robins, L. N., & Regier, D. A. (1991). *Psychiatric disorders in America: The Epidemiologic Catchment Area Study.* New York: Free Press.

SAS Institute. (1985). *SAS user's guide: Statistics, version 5 edition.* Cary, NC: Author.

Shah, B., Barnwell. B. G., & Bieler, G. S. (1996). *SUDAAN user's manual, version 6.40* (2nd ed.). Research Triangle Park, NC: Research Triangle Institute.

Surtees, P. G., Sashidarian, S. P., & Dean, C. (1986). Affective disorder amongst women in the general population: A longitudinal study. *British Journal of Psychiatry, 148,* 176–186.

U. S. Department of Health and Human Services.(1999). *Mental health: A report of the Surgeon General.* Rockville, MD: Department of Health and Human Services: U.S. Public Health Service.

Weissman, M. M., & Myers, J. K. (1978). Mood disorders in a United States community: The use of Research Diagnostic Criteria in an epidemiological survey. *Archives of General Psychiatry, 35,* 1304–1311.

Wittchen, H-U., Semler, G., & Von Zerssen, D. (1985). A comparison of two diagnostic methods: Clinical ICD diagnosis v. DSM-III and Research Diagnosis Criteria using the Diagnostic Interview Schedule (version 2). *Archives of General Psychiatry, 42,* 677–684.

Chapter 18

Parental Reports of Emotional or Behavioral Difficulties and Mental Health Service Use among U.S. School-Age Children

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Introduction

The 1999 U.S. Surgeon General's Report on Mental Health identified mental health (MH) as an essential condition for children's development and well-being (U.S. DHHS, 1999). During the course of a year, approximately 20 percent of children have symptoms of a diagnosable clinical disorder and about 5 percent symptoms causing serious functional impairment (Leaf et al., 1996). Unfortunately, mental disorders in children are often undetected and therefore remain untreated (Leaf et al., 1996; Zahner, Pawelkiewicz, DeFrancesco, & Adnopoz, 1992). Unmet MH care needs can have serious consequences for children and their families: strained social relationships, poor academic performance, and serious problems in adulthood. Longitudinal studies of children with mental disorders have documented an increased risk of dropping out of school, alcohol and drug use, and criminal activity later in life (Buka, Monuteauz, & Earls, 2002). Further, children with mental disorders are at increased risk for suicidal behavior (Shaffer & Craft, 1999).

Information collected from parents is important for identifying child MH symptoms and disorders in both clinical and research settings. Many survey measures of child MH are based exclusively on parental reports. Past research has shown that parents frequently identify symptoms associated with behavioral and learning disorders (Glascoe, 1991, 2000). By contrast, parents may provide less information about symptoms related to the internalizing disorders of children such as anxiety and depression (Teagle, 2002). Also, parents may have less information about the symptoms of older children than younger children because the symptoms may be less overt as children grow older and may often occur in settings outside of the home (Achenbach, Dumenci, & Rescorla, 2002; Verhulst et al., 2003). However, parents of both younger and older children play a key role in identifying symptoms and initiating care for mental disorders and, as a result, can provide detailed information about MH service use (Costello, Pescosolido, Angold, & Burns., 1998). Moreover, because of their central role in children's lives, parents can also supply detailed information about health insurance coverage and other sociodemographic characteristics (Simpson, Scott, Henderson, & Manderscheid, 2004).

This chapter provides an overview of children's mental symptoms by examining parental reports of emotional or behavioral difficulties. The specific topics covered in the chapter include (1) a description of the prevalence of emotional or behavioral difficulties among all children 4–17 years of age and the prevalence among children in major sociodemographic subgroups, (2) an examination of the association between emotional or behavioral difficulties and three disorders: attention deficit hyperactivity disorder (ADHD), learning disability, and developmental delay, and (3) an analysis of MH service use by children with and without emotional or behavioral difficulties.

Data and Methods

This chapter presents data from the 2001–2003 National Health Interview Survey (NHIS), a continuous household survey of a nationally representative sample of the U.S. noninstitutionalized, civilian population (Botman, Moore, Moriarity, & Parsons, 2000). In-person household interviews are used to obtain a wide range of information, including health conditions, health insurance coverage, use of a variety of health care services, and sociodemographic characteristics. A knowledgeable adult, usually a parent, provides information for children. In each

sample family with children, one child 0–17 years of age is randomly selected, and additional detailed questions are asked about this child's health status and use of health care services. No identifying information is maintained on the particular child sampled.

This chapter presents estimates based on information about children in the child sample of the 2001–2003 NHIS. The child sample response rate, reflecting the response rate at the household, family, and sample child levels, was 81 percent in 2001–2003. The results presented in this chapter describe the health and health care use of 28,415 children 4–17 years of age for whom complete information for the sociodemographic, health, and health care variables was included in the analysis. The results exclude information for 827 children who had missing data. Because most (92 percent) of the respondents for children were parents, all respondents hereafter are referred to as parents.

The results in this chapter are based on the weighted sample results and represent national estimates for the U.S. noninstitutionalized, civilian population. SUDAAN statistical software was used in all analyses to adjust for the effects of the complex sampling design (Shah, Barnwell, & Bieler, 1997). Chi-square tests were used to assess associations between variables and pairwise t-tests were performed to evaluate differences between estimates. Results are reported as statistically significant when the probability of a test statistic was less than 0.05. Additional information on the survey methods, questionnaires, and sampling procedures of the NHIS are available from the National Center for Health Statistics (NCHS) Web site at http://www.cdc.gov/nchs/nhis.htm.

Questions About Emotional or Behavioral Difficulties

Beginning in 2001, the parent report version of the *Strengths and Difficulties Questionnaire* (SDQ) (Bourdon, Goodman, Rae, Simpson, & Koretz, 2005; Goodman, 1994) was added to the sample child questionnaire of the NHIS. The SDQ is a multi-question screening instrument that measures MH symptoms as well as impact and burden associated with these symptoms. This analysis focuses on the responses of parents to a single question about the child's emotional or behavioral difficulties: "Overall, do you think that (sample child) has difficulties in any of the following areas: emotions, concentration, behavior, or being able to get along with other people?" The question on overall difficulties is scored on a 4-point scale, 0 = "No," 1 = "Minor difficulties," 2 = "Definite difficulties," and 3 = "Severe difficulties." The present analysis combines the responses of definite and severe difficulties into a single category.

Questions About Diagnosed Disorders

Parents were also asked questions about specific disorders related to behavior and learning: "Has a doctor or health professional ever told you that (child) had: Attention Deficit Hyperactivity Disorder or Attention Deficit Disorder? Mental retardation? Any other developmental delay? Autism? Down's Syndrome?" and "Has a representative from a school or a health professional ever told you that (child) had a learning disability?" Children with "any" diagnosed disorder include those with ADHD, mental retardation, autism, Down's syndrome, other developmental delay, or learning disability. In this analysis, children classified as having a diagnosis of developmental delay include only children with developmental delays other than mental retardation, autism, or Down's syndrome.

Questions About Use of Health Care and Educational Services

Parents answered questions about three measures of MH service use: (1) the parent's contact with any MH professional, such as a psychiatrist, psychologist, psychiatric nurse, or clinical social worker, about the child during the past 12 months; (2) the parent's contact with a general doctor about an emotional or behavioral problem of the child during the past 12 months; and (3) current receipt of special education services for an emotional or behavioral problem. In the questions about MH services, parents were asked about "problems" rather than "difficulties". Both problems and difficulties refer to symptoms that cause some level of functional impairment. Additional measures of health care service use covered in the analysis include: regular use of any type of prescription medication for at least 3 months and a parent's contact with a medical specialist, defined as a medical doctor who specializes in a particular medical disease or problem (other than obstetrician/gynecologist, psychiatrist or ophthalmologist) about the child during the past 12 months. A parental report of contact with a health care provider does not necessarily indicate that a child was evaluated or treated. In this analysis, the term "con-

tact" refers to a parent either seeing or talking to a health care provider about the child.

Sociodemographic Variables

Parents also provided information about a child's sex, age, race/ethnicity, family income, family structure, and health insurance coverage. A child's age is categorized as 4–7 years, 8–10 years, 11–14 years, or 15–17 years. Children under 4 years of age are not included in this analysis since the identification of MH difficulties usually occurs after a child begins elementary school. The question about Hispanic ethnicity was asked before the question regarding a child's single or multiple race(s). Children classified as Hispanic may be of any race. The categories of "Non-Hispanic white" and "Non-Hispanic black" include only children of a single race. Because the number of children of "other races" (non-Hispanic children of single races other than white or black and non-Hispanic children reported to have more than one race) was small, this category is not shown in the tables.

A child's family structure is based on the presence or absence of parents (biological, adoptive, step, or foster) in the family. Estimates are shown for families with only a mother present and those with two parents present. Because the number of children in families with only a father present or no parents present was too small to produce reliable estimates, these categories are not shown in the tables. A child's poverty status is based on the ratio of family income to the federal poverty threshold given family size and composition. The poverty status categories include poor (family income less than 100 percent of the poverty threshold), near poor (family income 100–199 percent of the threshold), and nonpoor (family income 200 percent or more of the threshold). Due to the substantial percentage of children (26 percent) with missing information for family income, unknown values for family income were estimated using a multiple imputation procedure (Schenker et al., 2004).

Health insurance coverage at the time of interview is categorized into three groups: private, Medicaid, and no insurance. Children with private insurance are covered by private plans provided in part or full by an employer or union, or purchased directly. The private insurance category includes managed care plans, other types of government-sponsored insurance such as coverage for military dependents and the combination of both private and Medicaid insurance. Children with Medicaid coverage have coverage only under the State Children's Health Insurance Program (SCHIP) or other state-sponsored plans. Uninsured children have neither private insurance nor Medicaid. Finally, a child's residential location was classified by metropolitan status. The definition of the metropolitan status categories corresponds to the 1993 definition by the Office of Management and Budget of a metropolitan statistical area (MSA). The categories include residence in a central city of an MSA, a suburban area in an MSA that is not in central city, and an area outside of an MSA (Office of Management and Budget, 1990).

Results

Prevalence of Emotional or Behavioral Difficulties

Approximately 5 percent of children 4–17 years of age (2.8 million) had parental reports of severe/definite emotional or behavioral difficulties during the past 6 months and 17 percent (9.3 million) had reports of minor difficulties (figure 18.1, table 18.1). A higher percentage of boys than girls had difficulties at both levels of severity (severe/definite and minor). Among boys and girls, the percentage reported to have difficulties increased with age (figure 18.2).

Parents reported difficulties among children 4–7 years of age less often than among children 8–17 years of age (table 18.1).

The prevalence of emotional or behavioral difficulties varied with other characteristics of children and their families (table 18.1). Hispanic children were less likely to have parental reports of difficulties at either level of severity compared with non-Hispanic white or non-Hispanic black children. Non-Hispanic black children were as likely as non-Hispanic white

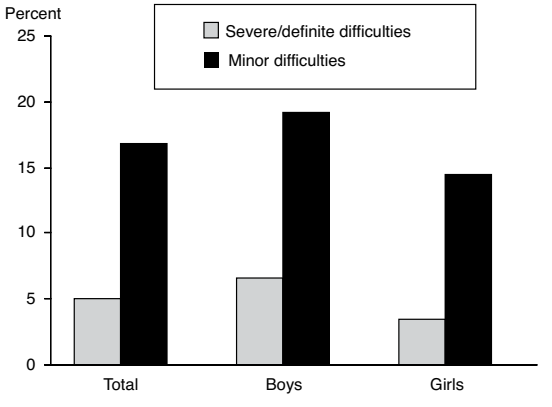


Figure 18.1. Emotional or Behavioral Difficulties Among Children 4–17 Years of Age by Sex: United States, 2001–2003.

Table 18.1. Parental reports of emotional or behavioral difficulties among children 4–17 years of age by selected sociodemographic characteristics: United States, 2001–2003

	Severe/definite difficulty		Minor difficulty		No difficulty		
	Percent	**(SE)**	**Percent**	**(SE)**	**Percent**	**(SE)**	**P[1]**
Total	5.1	(0.2)	16.8	(0.3)	78.1	(0.3)	
Sex							
Boys	6.6	(0.3)	19.1	(0.4)	74.3	(0.5)	<0.001
Girls	3.5	(0.2)	14.4	(0.4)	82.1	(0.4)	
Age (in years)							
4–7	3.3	(0.3)	14.5	(0.5)	82.2	(0.5)	<0.001
8–10	5.7	(0.4)	17.9	(0.6)	76.5	(0.7)	
11–14	5.8	(0.3)	18.1	(0.5)	76.2	(0.6)	
15–17	5.9	(0.4)	17.0	(0.6)	77.0	(0.6)	
Race/ethnicity							
White, non-Hispanic	5.3	(0.2)	16.7	(0.4)	78.0	(0.4)	<0.001
Black, non-Hispanic	6.2	(0.5)	20.9	(0.8)	72.9	(0.9)	
Hispanic	3.7	(0.3)	14.5	(0.5)	81.8	(0.6)	
Family structure							
Mother only	8.0	(0.4)	22.0	(0.6)	70.0	(0.7)	<0.001
Two parent	4.0	(0.2)	14.8	(0.3)	81.2	(0.4)	
Poverty[2]							
Poor	7.6	(0.5)	19.7	(0.7)	72.8	(0.9)	<0.001
Near poor	6.1	(0.4)	18.6	(0.6)	75.3	(0.7)	
Nonpoor	4.1	(0.2)	15.4	(0.3)	80.5	(0.4)	
Health insurance							
Uninsured	5.0	(0.5)	16.2	(0.8)	78.8	(0.9)	<0.001
Medicaid[3]	9.1	(0.5)	21.9	(0.7)	69.0	(0.7)	
Private[4]	3.9	(0.2)	15.4	(0.3)	80.8	(0.4)	
MSA							
MSA/CC	5.4	(0.3)	17.0	(0.5)	77.6	(0.6)	0.003
MSA/not CC	4.6	(0.2)	16.2	(0.4)	79.2	(0.4)	
Not MSA	5.9	(0.4)	18.2	(0.8)	75.9	(0.8)	

SE Standard error
MSA Metropolitan statistical area
CC Central city

[1]P value for a chi square test.
[2]Poor includes family incomes less than 100 percent of the poverty level, near poor includes family incomes 100–199 percent of the poverty level, nonpoor includes family incomes 200 percent or more of the poverty level.
[3]Medicaid includes children insured only by Medicaid.
[4]Private includes children covered by private insurance, those with non-Medicaid public insurance, and those with both private and public insurance.

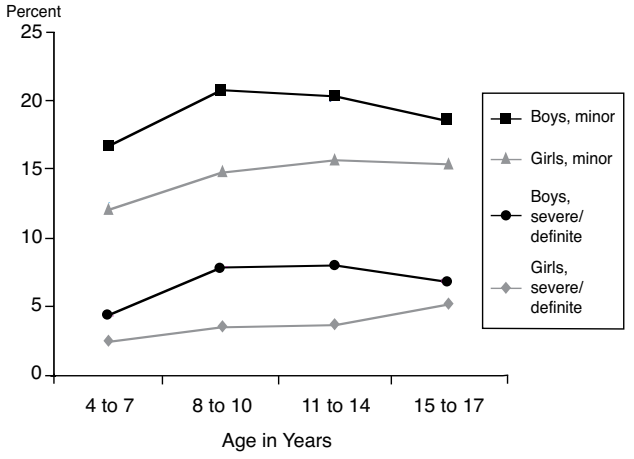


Figure 18.2. Emotional or Behavioral Difficulties Among Children 4–17 Years of Age by Sex and Age: United States, 2001–2003.

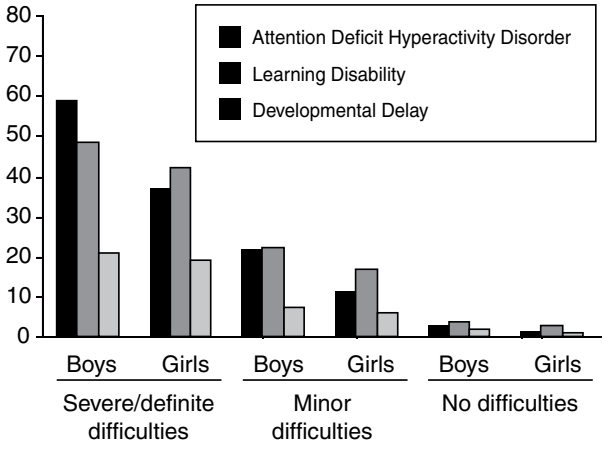
children to have severe/definite difficulties, but were more likely to have parental reports of minor difficulties. The percentage of children in mother-only families with severe/definite difficulties was double the percentage reported for children in two-parent families (8 percent vs. 4 percent). Children in mother-only families were also more often described as having minor difficulties compared with children in two-parent families (22 percent vs. 15 percent).

Children living in poor and near poor families had higher rates of severe/definite and minor difficulties than children in nonpoor families (table 18.1). Nearly twice the percentage of poor children had parental reports of severe/definite difficulties as nonpoor children (7 percent vs. 4 percent). Children with Medicaid coverage had higher rates of difficulties than uninsured children or children with private health insurance. The percentage with severe/definite difficulties was 9 percent of Medicaid insured children compared with 4 percent of privately insured children and 5 percent of uninsured children. The percentage of children with difficulties varied less by the child's place of residence. Children living in metropolitan areas outside of the central city (MSA/not CC) were less often reported by parents to have severe/definite difficulties than children living either in the central cities of metropolitan areas (MSA/CC) or outside of metropolitan areas (not MSA).

Diagnosed Disorders Related to Behavior or Learning

Overall, 12 percent of children 4–17 years of age (6.8 million) were reported to have been diagnosed with at least one of the following disorders: ADHD, learning disability, mental retardation, autism, Down's syndrome, or developmental delay. Nearly 7 percent (3.9 million) had ever been diagnosed with ADHD and 8 percent (4.4 million) with learning disability. A substantially lower percentage of children, 3 percent (1.7 million), had ever been diagnosed with developmental delay. As figure 18.3 shows, the percentage of children with ADHD, learning disability, or developmental delay was strongly associated with a child's level of emotional or behavioral difficulty. Among boys with severe/definite difficulties, 59 percent had ever been diagnosed with ADHD, 48 percent with learning disability, and 21 percent with developmental delay. Among boys with minor difficulties, a substantial percentage had ever been diagnosed with ADHD (22 percent) or learning disability (22 percent), and about 7 percent had ever been diagnosed with developmental delay. Finally, among boys with no difficulties, less than 4 percent had parental reports of any of the diagnoses. Similarly, among girls, diagnosed disorders were most often reported for those with severe/definite difficulties and least often for those with no difficulties.

At all levels of emotional or behavioral difficulties, boys more often had reports of ADHD than girls. Among children with severe/definite difficulties, the percentages of boys and girls with diagnoses of learning disability and developmental delay were similar. Among children with minor difficulties, girls were less often reported to have learning disability, but were as often reported to have developmental delay. Among children with no difficulties, boys more often had parental reports of learning disability or developmental disability.



NOTE: A child may have more than one diagnosis.

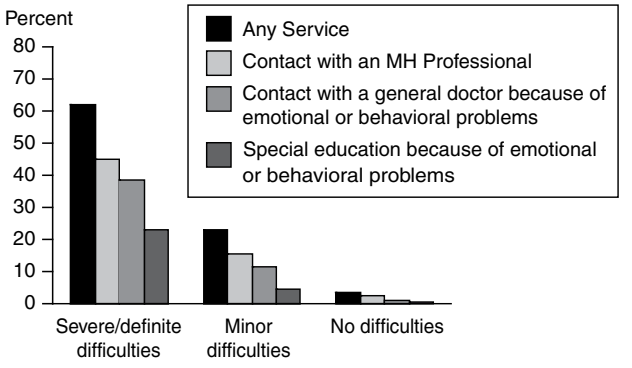
Figure 18.3. Selected Diagnosed Disorders Among Children 4–17 Years of Age by Level of Emotional or Behavioral Difficulties and Sex: United States, 2001–2003.

Use of Mental Health and Other Health Care Services

Overall, 10 percent of children 4–17 years of age (5.4 million) used a MH service. Use of MH services was strongly associated with a child's level of difficulties (figure 18.4). Among children with severe/definite difficulties, 62 percent had used a MH service: approximately 45 percent had contact with a MH professional, 40 percent had contact with a general doctor because of the child's emotional or behavioral problems, and about 23 percent received special education services because of emotional or behavioral problems. Among children with minor difficulties, 23 percent had used a MH service: 16 percent had contact with a MH professional, 11 percent had contact with a general doctor because of the child's emotional or behavioral problems, and less than 5 percent had received special education services because of emotional or behavioral problems. Among children with no difficulties, approximately 4 percent had used a MH service.

Among children with severe/definite difficulties, the relationship between sociodemographic characteristics and use of MH services varied by the type of service (table 18.2). A similar percentage of boys and girls had contact with either a MH professional or a general doctor because of an emotional or behavioral problem. However, boys were more likely than girls to use special education services because of an emotional or behavioral problem. The relationship between a child's age and MH service use also differed by the type of service. Children 4–7 years of age were less likely than children 8 were less likely 17 years of age to have contact with either a MH professional or receive special education services because of an emotional or behavioral problem. In contrast, children 15–17 years of age were less likely than children 4–14 years of age to have contact with a general doctor because of an emotional or behavioral problem.

Among children with severe/definite difficulties, the percentage of non-Hispanic white children having contact with a MH professional (51 percent) was considerably higher than the percentage of non-Hispanic black or Hispanic children (30 and 39 percent) (table 18.2). Similarly, the percentage of non-Hispanic white children having contact with a general doctor because of an emotional or behavioral problem (44 percent) was higher than the percentage of non-Hispanic black and Hispanic children (25 and 29 percent, respectively). The percentage of children receiving special education services because of an emotional or behavioral problem did not vary by



NOTES: MH refers to mental health. "Any service" refers to using one of the following services: MH professional, general doctor for a MH problem, or special education for a MH problem.

Figure 18.4. Use of Selected MH Services among Children 4–17 Years of Age by Level of Emotional or Behavioral Difficulties: United States, 2001–2003.

race/ethnicity. A child's poverty status tended to be associated with the use of health care services, but not the use of special education services. By contrast, a child's insurance coverage was related to the use of all three types of services. Children with private and public insurance coverage more often had contact with a MH professional or general doctor because of an emotional or behavioral problem than children without insurance. Children with Medicaid received special education services because of an emotional or behavioral problem nearly twice as often (30 percent) as privately insured (19 percent) or uninsured children (18 percent). Neither family structure nor residential location was significantly related to the use of MH services.

While the use of MH services was lower among children with minor difficulties than children with severe/definite difficulties, the overall pattern of use was similar (table 18.2). Parents reported more often that boys received special education services because of an emotional or behavioral problem than girls. A lower percentage of children 4–7 years of age had contact with a MH professional than children 8–17 years of age. A lower percentage of Hispanic children compared with non-Hispanic white children had contact with a mental health professional or general doctor because of an emotional or behavioral problem, and a lower percentage of Hispanic children compared with non-Hispanic black children received special education services because of an emotional or behavioral problem. A higher percentage of children in mother-only families reported using any of the MH services than children in two-parent families. Children with private insurance or Medicaid reported greater use of services because of an emotional or behavioral problem than uninsured children. Children with Medicaid were nearly

Table 18.2. Use of mental health services among children 4–17 years of age by level of emotional or behavioral difficulties and selected sociodemographic variables: United States, 2001–2003

	Severe/definite difficulties									Minor difficulties								
	MH Professional			General Doctor for MH			Special Ed for MH			MH Professional			General Doctor for MH			Special Ed for MH		
	Percent	(SE)	P[1]	Percent	(SE)	P[1]	Percent	(SE)	P[1]	Percent	(SE)	P[1]	Percent	(SE)	P[1]	Percent	(SE)	P[1]
Total	45.0	(1.6)		38.7	(1.7)		22.8	(1.4)		15.6	(0.6)		11.3	(0.6)		4.7	(0.4)	
Sex																		
Boys	44.6	(2.0)	0.79	40.2	(2.1)	0.22	25.2	(1.7)	0.01	15.6	(0.8)	0.99	11.5	(0.7)	0.72	5.7	(0.5)	<0.001
Girls	45.6	(2.9)		35.8	(2.8)		18.1	(2.4)		15.6	(1.0)		11.1	(0.9)		3.3	(0.5)	
Age (in years)																		
4–7	32.9	(3.8)	0.01	40.3	(3.8)	0.02	12.9	(2.8)	0.004	9.9	(1.0)	<0.001	11.3	(1.2)	1.00	3.7	(0.7)	0.08
8–10	47.9	(3.3)		43.2	(3.4)		26.4	(3.0)		16.9	(1.4)		11.2	(1.1)		3.8	(0.7)	
11–14	47.1	(2.8)		41.2	(2.9)		24.1	(2.4)		16.2	(1.2)		11.3	(1.0)		6.1	(0.8)	
15–17	48.0	(3.3)		29.7	(3.1)		24.8	(2.8)		19.8	(1.4)		11.3	(1.1)		4.7	(0.7)	
Race/ethnicity																		
White, non-Hispanic	50.7	(2.1)	<0.001	44.4	(2.2)	<0.001	22.3	(1.8)	0.28	17.6	(0.9)	<0.001	12.5	(0.7)	<0.001	4.7	(0.5)	0.04
Black, non-Hispanic	30.0	(3.7)		25.0	(3.4)		25.5	(3.4)		12.2	(1.4)		10.9	(1.3)		6.3	(1.1)	
Hispanic	38.6	(3.6)		28.8	(3.3)		18.4	(2.8)		10.2	(1.2)		6.8	(0.9)		3.3	(0.7)	
Family Structure																		
Mother only	42.0	(2.7)	0.19	35.4	(2.6)	0.07	24.7	(2.3)	0.16	18.0	(1.2)	0.001	12.8	(1.0)	0.04	6.5	(0.8)	0.001
Two parent	46.5	(2.2)		41.4	(2.2)		20.5	(1.9)		13.4	(0.8)		10.3	(1.7)		3.6	(0.4)	
Poverty[2]																		
Poor	38.6	(3.6)	0.02	33.3	(3.3)	0.06	26.5	(3.0)	0.22	15.0	(1.5)	0.20	11.3	(1.3)	0.88	5.8	(1.1)	0.15
Near poor	42.4	(3.2)		36.7	(3.2)		24.7	(3.1)		13.9	(1.3)		10.8	(1.2)		5.6	(0.9)	
Nonpoor	49.6	(2.3)		42.5	(2.2)		19.9	(2.1)		16.6	(0.8)		11.5	(0.7)		4.0	(0.4)	
Health insurance																		
Uninsured	31.5	(4.8)	0.02	20.0	(3.8)	<0.001	17.6	(4.1)	0.001	10.7	(1.7)	0.01	7.6	(1.4)	0.02	3.9	(1.1)	0.004
Medicaid[3]	44.8	(2.7)		39.3	(2.8)		30.0	(2.4)		17.7	(1.3)		13.1	(1.2)		7.1	(0.9)	
Private[4]	47.8	(2.3)		42.0	(2.2)		18.6	(1.8)		15.5	(0.8)		11.1	(0.7)		3.7	(0.4)	
MSA																		
MSA/CC	45.1	(2.9)	0.19	34.6	(2.7)	0.25	22.04	(2.4)	0.93	15.9	(1.3)	0.23	10.7	(1.1)	0.27	5.1	(0.7)	0.43
MSA/not CC	47.4	(2.4)		39.9	(2.3)		23.05	(2.0)		16.4	(0.9)		12.1	(0.8)		4.2	(0.5)	
Not MSA	39.8	(3.4)		41.2	(3.9)		23.25	(3.2)		13.5	(1.4)		10.1	(1.2)		5.3	(1.0)	

MH Mental health
SE Standard error
MSA Metropolitan statistical area
CC Central city
[1] P value for a chi square test.
[2] Poor includes family incomes less than 100 percent of the poverty level, near poor includes family incomes 100–199 percent of the poverty level, nonpoor includes family incomes 200 percent or more of the poverty level.
[3] Medicaid includes children insured only by Medicaid.
[4] Private includes children covered by private insurance, those with non-Medicaid public insurance, and those with both private and public insurance.

twice as likely to receive special education services because of an emotional or behavioral problem as privately insured or uninsured children. Use of MH services among children with minor difficulties was unrelated to poverty status or residential location.

Use of other types of health care services also varied with a child's level of emotional or behavioral difficulty. Among children with severe/definite difficulties, 48 percent used some type of prescription medication and 25 percent had contact with a medical specialist. Among children with minor difficulties, the percentage using each of these services was much lower: 23 percent used prescription medication and 17 percent had contact with a medical specialist. Finally, among children with no difficulties, use of these services was even less frequently reported: 10 percent used prescription medication and 11 percent had contact with a medical specialist.

Discussion

Monitoring the prevalence of child MH symptoms with data from large national health surveys requires the development and validation of brief and reliable measures of child MH. In 2001, a question from the SDQ about a child's overall emotional or behavioral difficulties was added to the NHIS as a measure of the prevalence of MH symptoms among children (Simpson, Bloom, Cohen, Blumberg, & Bourdon, 2005). Results from a previous study by Goodman (1999) indicated that parental responses to the question on overall difficulties differed markedly for children with and without diagnosed mental disorders. While it is unknown whether parental responses indicating severe/definite emotional or behavioral difficulties can be used as an indicator of a psychiatric disorder causing functional impairment, the overall percentage of children with severe/definite difficulties, approximately 5 percent, is similar to the percentage of children in the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) study reported by parents to have a psychiatric disorder with moderate to severe impairment (5.5 percent) (Shaffer et al., 1996). Another indication that parental reports about difficulties may indicate the presence of impairing MH symptoms is the finding from the present analysis, that nearly 70 percent of the children with reports of severe/definite difficulties had previously been diagnosed as having ADHD, learning disability, or developmental delay.

The associations between parental reports of emotional or behavioral difficulties and a variety of sociodemographic variables also suggest that these reports provide a useful indicator of child MH symptoms. At both levels of severity (severe/definite and minor), more difficulties were reported for boys and fewer difficulties for young children 4–7 years of age. These sex- and age-related differences are similar to findings from several other large-scale epidemiologic studies of child MH such as the Ontario Child Health Survey (Offord et al., 1987), the Great Smokey Mountain Study (Costello et al., 1996), the Virginia Twin Study of Adolescent Behavioral Development (Simonoff et al., 1997), and the British Child Mental Health Survey (Meltzer, Gatward, Goodman, & Ford, 2000).

The large size of the child sample from the 2001–2003 NHIS made it possible to examine the prevalence of MH difficulties and the use of services among children in specific subgroups defined by race/ethnicity, poverty status, and health insurance coverage. Past studies of the association between race and child MH problems have generally reported insignificant differences (Costello et al., 1996; U.S. DHHS, 2001). The results of investigations comparing the MH of Hispanic and non-Hispanic white children have reported, in some cases, more problems among Hispanic children (Achenbach et al., 1990; Glover, Pumarieaga, Holzer, Wise, & Rodriguez, 1999) and, in other cases, similar problems for Hispanic and non-Hispanic children (Vega, Khoury, Zimmerman, Gil, & Warheit, 1995). Results from the 2001–2003 NHIS indicate that parents of Hispanic children less often reported severe/definite difficulties than the parents of either non-Hispanic white or non-Hispanic black children. Whether these ethnic differences in parental reports reflect true variations in child behavior and adjustment is uncertain. The impact of stigma, language difficulties, and barriers to health care are possible factors related to the lower prevalence of reported difficulties among Hispanic children (Glascoe, 2003; U.S. DHHS, 2001).

The significantly higher percentage of poor and near poor children as compared with nonpoor children reported to have severe/definite difficulties mirrors the findings from previous investigations (Costello, 1989; Wadell et al., 2002). The multiple stresses and limited support experienced by children in poor and near poor families may also be a factor that partially accounts for the higher prevalence of difficulties reported for children in mother-only families than children in two-parent families. Access to care is another factor that may facilitate parental recognition of child MH problems (Costello et al., 1998). The higher prevalence of MH difficulties observed among Medicaid insured children compared with privately insured and uninsured children has been documented in previous studies (Witt, Kasper,

& Riley, 2003). A number of explanations have been suggested for the increased prevalence of MH difficulties among children with Medicaid: a greater tendency of the families of children with MH difficulties to enroll in Medicaid, the effects of access to care on parental perceptions of MH symptoms, and the adverse effects of poverty on child MH.

A child's race/ethnicity, poverty status, and health insurance coverage were factors strongly associated with the use of MH services among children with emotional or behavioral difficulties. These results are similar to the findings from other studies that have described much less use of health care services for MH problems among non-Hispanic black, Hispanic, and poor children (Alegria et al., 2002; Cuffe, Waller, Cuccaro, Pumariego, & Garrison, 1995; Cunningham & Freiman, 1996). The additional finding that race/ethnicity and poverty were not associated with the use of special education services for MH problems are also similar to the results of previous research (Witt et al., 2003). These findings suggest that barriers to MH services may be reduced in school settings. The findings about heath insurance coverage and the use of services by children with MH difficulties coincide with results from a number of studies that have documented greater use of MH services by children with private insurance or Medicaid coverage (Farmer Burns, Phillips, Angold, & Costello, 2003; Sturm & Sherbourne, 2001). The observation in the present analysis that children with Medicaid coverage were almost twice as likely to be receiving special education services for MH problems as children with either private insurance or those with no insurance coverage follows a pattern previously described for school-aged children with disabilities (Witt et al., 2003). Medicaid has become an important source of funding for MH services in special education programs as well as services provided by community-based health care professionals (Rodman et al., 1999). Finally, the high percentage of uninsured children with difficulties who do not appear to be receiving any services underscores the continuing importance of this gap in the provision of child MH services (Kataoka, Zhang, & Wells, 2002).

Limitations

Some limitations of the present study should be considered. This analysis relied solely on information reported by parents at a single point in time. Several studies have shown that obtaining information from multiple informants, such as teachers, health professionals, parents, and children, results in a more accurate assessment of child MH symptoms (Achenbach, McConaughy, & Howell, 1987; Canino, Bird, Rubio-Stipec, & Bravo, 1995). Information collected directly from the child may be particularly important for identifying some symptoms of both internalizing and externalizing disorders, especially for adolescents (Verhulst et al., 1997). Further, a parental report in household survey about a child's emotional or behavioral difficulties may be very different than an evaluation and diagnosis by a MH professional (Flisher et al., 1997). Stigma and socioeconomic factors may lead some parents to minimize or underreport a child's symptoms (Fendrich , Johnson, Wislar, & Nageotte, 1999; U.S. DHHS, 2001). Moreover, children in the institutionalized population, including those in psychiatric hospitals and juvenile detention facilities, were not included in the NHIS sample. While children in the institutionalized population are more likely to have MH symptoms, the omission from the sample of this small group of children probably had little effect on the estimation of the national prevalence of child MH difficulties (U.S. Census Bureau, 2000).

Another limitation is the reliance on a series of single questions to measure child MH difficulties and service use. The question on overall difficulties does not capture the complexity, impact, and burden associated with a child's MH symptoms. Similarly, the questions about contacts with MH providers did not ask parents for information about the frequency, types, or quality of treatment that children received for MH problems. Because the NHIS collects information at one point in time, associations observed in the data cannot be used to determine causation. Moreover, since the sociodemographic variables presented in this chapter are intercorrelated, the bivariate associations may not reflect the independent effect of specific variables on the prevalence of MH difficulties and service use.

Currently two validation studies of the SDQ are evaluating how well the items in this instrument predict child MH. One study, directed by Alaattin Erkanli and Jane Costello of Duke University, is comparing the performance of several child MH screening instruments including the SDQ. The other study conducted by Ronald Kessler of Harvard is a clinical calibration study of the SDQ that is part of the adolescent segment of the National Comorbidity Study. Results from both of these studies will provide guidelines for the interpretation of parental reports in the SDQ.

Conclusions

In conclusion, the analysis of data from the 2001–2003 NHIS found that nearly 22 percent of children 4–17 years of age had a parental report of emotional or behavioral difficulties. Approximately 5 percent of children were judged by parents to have severe/definite difficulties. The prevalence of severe/definite difficulties varied with a child's sex, age, race/ethnicity, family structure, poverty status, health insurance coverage, and residence. Among children with severe/definite difficulties, the prevalence of diagnosed behavioral, developmental, and learning disorders was markedly higher than the prevalence among children with no difficulties. The use of health care and educational services because emotional or behavioral problems was strongly associated with parental reports of emotional or behavioral difficulties. However, even among children with severe/definite difficulties, a substantial fraction did not receive MH services indicating the need for greater access to this type of health care in communities and schools.

REFERENCES

Achenbach, T. M., Bird, H. R., Canino, G., Phares, V., Gould, M. S., & Rubio-Stipec, M. (1990). Epidemiological comparisons of Puerto Rican and U.S. mainland children: Parent, teacher, and self-reports. *Journal of American Academy of Child and Adolescent Psychiatry, 29,* 84–93.

Achenbach, T. M., Dumenci, L., & Rescorla, L. A. (2002). Ten-year comparisons of problems and competencies for national samples of youth: Self, parent, and teacher reports. *Journal of Emotional and Behavioral Disorders, 10*(4)*,* 194–203.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin, 101*(2), 213–232.

Alegría, M., Canino, G., Ríos, R., Vera, M., Calderón, J., Rusch, D., et al. (2002). Inequalities in use of specialty mental health services among Latinos, African Americans, and non-Latino Whites. *Psychiatric Services, 53*(12), 1547–1555.

Bourden, K. H., Goodman, R., Rae, D. S., Simpson, G, & Koretz, D. S. (2005). The Strengths and Difficulties Questionnaire: U.S. normative data and psychometric properties.

Botman, S. L., Moore, T. F., Moriarity, C. L., & Parsons, V. L. (2000). Design and estimation for the National Health Interview Survey, 1995–2004. National Center for Health Statistics. *Vital and Health Statistics 2*(130).

Buka, S. L., Monuteauz, M., & Earls, F. (2002). The epidemiology of child and adolescent mental disorders. In M. T. Tsuang & M. Tohen (Eds.), *Textbook in psychiatric epidemiology*, 2nd ed., pp. 629–655. New York: Wiley-Liss.

Canino, G., Bird, H. R., Rubio-Stipec, M., & Bravo, M. (1995). Child psychiatric epidemiology: What we have learned and what we need to learn. *International Journal of Methods in Psychiatric Research, 5*, 79–92.

Costello, E. J. (1989). Developments in child psychiatric epidemiology. *Journal of American Academy of Child and Adolescent Psychiatry, 28,* 836–841.

Costello, E. J. & Janiszewski, S. (1990). Who gets treated? Factors associated with referral in children with psychiatric disorders. *Acta Pscyhchiatrica Scandinavica, 81*, 523–529.

Costello, E. J., Angold, A., Burns, B. J., Stangl, D. K., Tweed, D. L., Erkanli, A., et al. (1996). The Great Smoky Mountains Study of Youth: Goals, design, methods, and prevalence of DSM-III-R disorders. *Archives of General Psychiatry, 53*(12), 1129–1136.

Costello, E. J., Pescosolido, B. A., Angold, A., & Burns, B. J. (1998). A family network-based model of access to child mental health services. *Research in Community and Mental Health, 9*, 165–190.

Cuffe, S. P., Waller, J. L., Cuccaro, M. L., Pumariega, A. J., & Garrison, C. Z. (1995). Race and gender differences in the treatment of psychiatric disorders in young adolescents. *Journal of American Academy of Child and Adolescent Psychiatry, 34*(11), 1536–1543.

Cunningham, P. J. & Freiman, M. P. (1996). Determinants of ambulatory mental health services use for school-age children and adolescents. *Health Services Research, 31*(4), 409–427.

Farmer, E. M., Burns, B. J., Phillips, S. D., Angold, A., & Costello, E. J. (2003). Pathways into and through mental health services for children and adolescents. *Psychiatric Services 54*(1):60–66.

Fendrich, M., Johnson, T., Wislar, J. S., & Nageotte, C. (1999). Accuracy of parent mental health service reporting: Results from a reverse record-check study. *Journal of American Academy of Child & Adolescent Psychiatry, 38*(2), 147–155.

Flisher, A. J., Kramer, R. A., Grosser, R. C., Alegria, M., Bird, H. R., Bourdon, K. H., et al. (1997). Correlates of unmet need for mental health services by children and adolescents. *Psychological Medicine, 27,* 1145–1154.

Glascoe, F. P. (1991). The importance of parents' concerns about their child's behavior. *Clinical Pediatrics, 30*(1), 8–10.

Glascoe, F. P. (2000). Evidence-based approach to developmental and behavioural surveillance using parents' concerns. *Child: Care, Health, and Development, 26*(2), 137–149.

Glascoe, F. P. (2003). Parents' evaluation of developmental status: How well do parents' concerns identify children with behavioral and emotional problems? *Clinical Pediatrics,* 133–138.

Glover, S. H., Pumariega, A. J., Holzer, C. E., Wise, B. K., & Rodriguez, M. (1999). Anxiety symptomatology in Mexican American adolescents. *Journal of Child and Family Studies, 8,* 47–57.

Goodman, R. (1994). A modified version of the Rutter parent questionnaire including extra items on children's strengths: A research note. *Journal of Child Psychology & Psychiatry, 35,* 1483–1494.

Goodman, R. (1999). The Strengths and Difficulties Questionnaire as a guide to child psychiatric caseness and consequent burden. *Journal of Child Psychology and Psychiatry, 40*(5), 791–799.

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry 159*(9):1548–1555.

Leaf, P. J., Alegria, M., Cohen, P., Goodman, S. H., Horwitz, S. M., Hoven, et al. (1996). Mental health service use in the community and schools: Results from the four-community MECA study. *Journal of American Academy of Child & Adolescent Psychiatry, 35*(7), 889–897.

Meltzer, H., Gatward, R, Goodman, R., & Ford, T. (2000). *Mental health of children and adolescents in Great Britain.* London: The Stationery Office.

Office of Management and Budget. (1990). Alternative approaches to defining metropolitan and nonmetropolitan areas; notice. *Federal Register*, *63*(244), 70526–70561. Retrieved November 15, 2005 from http://www.whitehouse.gov/omb/inforeg/msa.pdf.

Offord, D. R., Boyle, M. H., Szatmari, P., Rae-Grant, N. I., Links, P. S., Cadman, D. T., et al. (1987). Ontario Child Health Study, II. Six-month prevalence of disorder and rates of service utilization. *Archives of General Psychiatry, 44,* 832–836.

Rodman, J., Weill, K., Discoll, M., Fenton, T., Alpert, H., Salem-Schatz, S., et al. (1999). A nationwide survey of financing health-related services for special education students. *Journal of School Health, 69*(4), 133–139.

Schenker, N., Raghunathanb, T. E., Chiua, P-L., Makuc, D. M., Zhang, G. & Cohen, A. J. (2004). Multiple imputation of family income and personal earnings in the National Health Interview Survey: Methods and examples. *National Center for Health Statistics and University of Michigan*. Retrieved February 4, 2005, from http://www.cdc.gov/nchs/data/nhis/tecdoc.pdf.

Shaffer, D., & Craft, L. (1999). Methods of adolescent suicide prevention. *Journal of Clinical Psychiatry 60* (Suppl. 2)*,* 70–74.

Shaffer, D., Fisher, P., Dulcan, M. K., Davies, M., Piacentini, J., Schwab-Stone, M. E., et al. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, acceptability, prevalence rates, and performance in the MECA study. *Journal of American Academy of Child & Adolescent Psychiatry, 35*(7), 865–877.

Shah, B. V., Barnwell, B. G., & Bieler, G.S. (1997). *SUDAAN User's Manual, Release 7.5*. Research Triangle Park, NC: Research Triangle Institute.

Simonoff, E., Pickles, A., Meyer, J. M., Silberg, J. L., Maes, H. H., Loeber, R., et al. (1997). The Virginia Twin Study of Adolescent Behavioral Development: Influences of age, sex, and impairment on rates of disorder. *Archives of General Psychiatry, 54*(9), 801–808.

Simpson, G. A., Bloom, B., Cohen, R. A., Blumberg, S., & Bourdon, K. H. (2005). Children with emotional and behavioral difficulties: Data from the 2001, 2002, and 2003 National Health Interview Surveys. *Advance Data from Vital and Health Statistics no. 360.*

Simpson, G. A., Scott, G., Henderson, M. J., & Manderscheid, R. W. (2004). Estimates of attention, cognitive, and emotional problems, and health service use by U.S. school-age children. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States, 2002* (pp. 105–119). U.S. DHHS Pub No. (SMA) 3938. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

Sturm, R., & Sherbourne, C. D. (2001). Are barriers to mental health and substance abuse care still rising? *Journal of Behavioral Health Services Research 28*(1), 81–88.

Teagle, S. E. (2002). Parental problem recognition and child mental health. *Mental Health Services Research, 4*(4), 257–266.

U.S. Census Bureau. (2000).*Group quarters population by sex, age, and type of group quarters: 2000.* American FactFinder. Retrieved November 15, 2005 from http://factfinder.census.gov.

U.S. Department of Health and Human Services (1999). *Mental health: A report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

U.S. Department of Health and Human Services (2001). *Mental health: Culture, race, and ethnicity—A supplement to Mental health: A report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General.

Vega, W. A., Khoury, E. L., Zimmerman, R. S., Gil, A. G., & Warheit, G. J. (1995). Cultural conflicts and problem behaviors of Latino adolescents in home and school environments. *Journal of Community Psychology, 23,* 167–179.

Verhulst, F. C., Achenbach, T. M., van der Ende, J., Role, N., Lambert, M. C., Leung, P .W. L., et al. (2003). Comparisons of problems reported by youths from seven countries. *American Journal of Psychiatry, 160*(8), 1479–1485.

Verhulst, F. C., van der Ende, J., Ferdinand, R. F., & Kasius, M. (1997). The prevalence of DSM-III-R diagnoses in a national sample of Dutch adolescents. *Archives of General Psychiatry, 54,* 329–336.

Waddell, C., Offord, D. R., Shepherd, B. A., Hua, J. M., & McEwan, K. (2002). Child psychiatric epidemiology and Canadian public policy-making: The state of the science and the art of the possible. *Canadian Journal of Psychiatry, 47*(9), 825–832.

Witt, W. P., Kasper, J. D., & Riley, A. W. (2003). Mental health services use among school-aged children with disabilities: The role of sociodemographics, functional limitations, family burdens, and care coordination. *Health Services Research, 38*(6), Part I, 1441–1466.

Zahner, G. E. P., Pawelkiewicz, W., DeFrancesco, J. J., & Adnopoz, J. (1992). Children's mental health service needs and utilization patterns in an urban community: An epidemiological assessment. *Journal of American Academy of Child & Adolescent Psychiatry, 31*(5), 951–960.

Section V.
National Service Statistics

Chapter 19

Highlights of Organized Mental Health Services in 2002 and Major National and State Trends

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During the 32 years leading up to 2002, significant changes occurred in the number, capacity, structure, and operation of organizations providing mental health services in the United States. This chapter describes some of the changes that have occurred nationally in the delivery system, analyzes some of the policy implications of these changes for future planning purposes, and presents some comparative data by State.

The source of most of the organizational data presented in this chapter is the periodic Survey of Mental Health Organizations and General Hospital Mental Health Services (SMHO; see appendix A) conducted by the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA). The SMHO is a complete enumeration of all specialty mental health organizations and separate psychiatric services of non-Federal general hospitals, together with a sample survey that collects descriptive information on the number and types of services, capacity (number of beds), volume of services (numbers of episodes, additions, and resident patients), staffing, expenditures, and sources of revenue.

The types of mental health organizations covered are State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals with separate psychiatric services, Department of Veterans Affairs (VA) medical centers, residential treatment centers (RTCs) for emotionally disturbed children, and "all other mental health organizations," which include multiservice mental health organizations, freestanding psychiatric outpatient clinics, and partial care psychiatric organizations. Definitions of these organization types are given in appendix A.

This chapter examines four organizational focuses of the specialty mental health care sector:

- *Availability*—the number of each type of organization and the number of organizations providing mental health services in 24-hour care (inpatient, including residential care) and in less than 24-hour care (outpatient and partial care), as well as the capacity of these services (number of 24-hour hospital beds).

- *Volume of Services*—the actual level of services provided by each organization type. Aggregate measures of service utilization are shown for 24-hour hospital services, including residential treatment care, and for less than 24-hour services (number of additions, number of resident patients, and average daily census).

- *Staffing*—the number of full-time equivalent (FTE) personnel by staff discipline employed by each organization type.

- *Finances*—the expenditures made by each organization type to provide and administer services, and the amount and sources of the revenues received by these organizations.

Availability of Services

Number of Organizations and Service Settings

The total number of mental health organizations in the United States[1] increased between 1970 and 1998 from 3,005 to 5,722 (see table 19.1). However, there was a slight dip between 1992 and 1994, as well as a decrease between 1998 and 2002, from 5,722 to 4,301 organizations. Almost all the increase up to 1998 occurred as a result of gains in the number of separate psychiatric services of non-Federal general hospitals, RTCs, and "all other mental health organizations," because the number of State and county mental hospitals (hereafter referred to as State mental hospitals) and the number of freestanding outpatient clinics (included in the rubric "all other mental health organizations") decreased, and the number of VA medical centers with psychiatric services remained relatively unchanged. Although the number of private psychiatric hospitals in 1998 was still more than twice the number in 1970, this represented a substantial decline from their 1992 peak. During the 4-year period between 1998 and 2002, the number of private psychiatric hospitals continued to decline by about 27 percent.

Although the number of mental health organizations increased overall leading up to 1998, the number of organizations providing 24-hour hospital and residential treatment services peaked in 1994 and has decreased by 21 percent since that time. For example, between 1970 and 1994, the number providing 24-hour hospital and residential treatment services nearly doubled from 1,734 to 3,827, but declined between 1994 and 2002 to 3,032. In contrast, the number providing less than 24-hour services rose consistently between 1970 and 1998, from 2,156 to 4,386. However, between 1998 and 2002, the number of mental health organizations providing less than 24-hour services decreased approximately 23 percent to 3,367.

Number of Psychiatric Beds

Although the number of mental health organizations providing 24-hour services (hospital inpatient and residential treatment) increased significantly over the 32-year period, the number of psychiatric beds provided by these organizations decreased by more than half, from 524,878 in 1970 to 211,199 in 2002 (see table 19.2). The corresponding bed rates per 100,000 civilian population dropped proportionately more in the same period, from 264 to 73. Beds in State mental hospitals accounted for most of this precipitous drop, with their number representing only 27 percent of all psychiatric beds in 2002, compared with almost 80 percent in 1970 (see figure 19.1). Trends in bed rates for specific organization types, shown in table 19.2 and figure 19.2, indicate that the rates for private psychiatric hospitals, non-Federal general hospitals with separate psychiatric

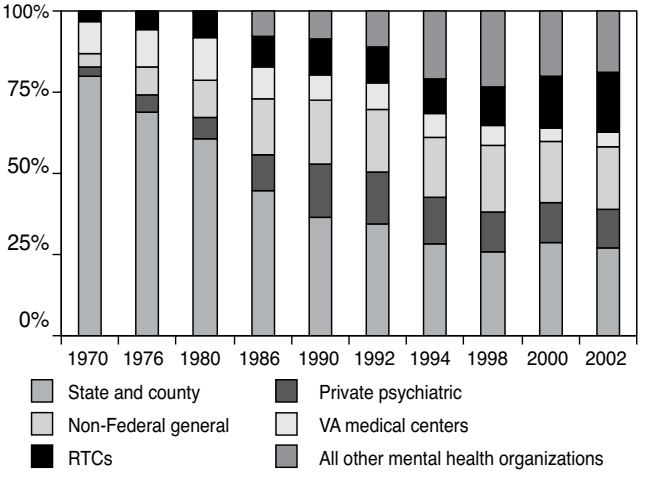


Figure 19.1. Percent Distribution of 24-Hour Hospital and Residential Treatment Beds, by Type of Mental Health Organization: United States, Selected Years, 1970–2002.

[1] Throughout this chapter, including the tables, "United States" includes the 50 States and the District of Columbia, although the SMHO also covers facilities in Puerto Rico and the Territories.

Table 19.1. Number of mental health organizations, by type of organization: United States, selected years, 1970–2002[1]

Type of organization	1970	1976	1980	1986	1990	1992	1994	1998	2000	2002
Number of mental health organizations										
All organizations	3,005	3,480	3,727	4,747	5,284	5,498	5,392	5,722	4,541	4,301
State and county mental hospitals	310	303	280	285	273	273	256	229	223	222
Private psychiatric hospitals	150	182	184	314	462	475	430	348	269	253
Non-Federal general hospitals with separate psychiatric services	797	870	923	1,351	1,674	1,616	1,612	1,707	1,373	1,285
VA medical centers[2]	115	126	136	139	141	162	161	145	142	140
Federally funded community mental health centers	196	517	691	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	261	331	368	437	501	497	459	461	475	508
All other mental health organizations[3]	1,176	1,151	1,145	2,221	2,233	2,475	2,474	2,832	2,059	1,893
Number with 24-hour hospital or residential treatment care										
All organizations	1,734	2,273	2,526	3,039	3,430	3,415	3,827	3,729	3,199	3,032
State and county mental hospitals	310	303	280	285	273	273	256	229	223	222
Private psychiatric hospitals	150	182	184	314	462	475	430	348	269	253
Non-Federal general hospitals with separate psychiatric services	664	791	843	1,287	1,571	1,517	1,531	1,593	1,325	1,232
VA medical centers[2]	110	112	121	124	130	133	135	123	133	131
Federally funded community mental health centers	196	517	691	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	261	331	368	437	501	497	459	461	475	508
All other mental health organizations[3]	43	37	39	592	493	520	1,016	975	774	686
Number with less than 24-hour care[4]										
All organizations	2,156	2,318	2,431	2,946	3,189	3,390	4,087	4,386	3,536	3,367
State and county mental hospitals	195	147	100	83	84	75	70	60	61	61
Private psychiatric hospitals	100	60	54	114	176	198	347	263	235	213
Non-Federal general hospitals with separate psychiatric services	376	303	299	497	633	618	875	965	815	784
VA medical centers[2]	100	113	127	137	141	161	148	128	115	116
Federally funded community mental health centers	196	517	691	200	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	48	57	68	99	163	167	227	210	285	312
All other mental health organizations[3]	1,141	1,121	1,092	2,016	1,992	2,171	2,420	2,760	2,025	1,881

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1]Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980–98 data with those of earlier years.

[2] Includes Department of Veterans Affairs (formerly Veterans Administration) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[3] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[4] The survey format was changed in 1994 and partial care is now included with outpatient care, and together are called "less than 24-hour care."

Table 19.2. Number, percent distribution, and rate[1] of 24-hour hospital and residential treatment beds, by type of mental health organization: United States, selected years, 1970–2002[2]

Type of organization	1970	1976	1980	1986	1990	1992	1994[5]	1998	2000	2002
	Number of 24-hour hospital and residential treatment beds									
All organizations	524,878	338,963	274,713	267,613	272,253	270,867	290,604	267,796	212,621	211,199
State and county mental hospitals	413,066	222,202	156,482	119,033	98,789	93,058	81,911	68,872	60,675	57,263
Private psychiatric hospitals	14,295	16,091	17,157	30,201	44,871	43,684	42,399	33,408	26,484	25,095
Non-Federal general hospitals with separate psychiatric services	22,394	28,706	29,384	45,808	53,479	52,059	52,984	54,434	39,690	40,202
VA medical centers[3]	50,688	35,913	33,796	26,874	21,712	22,466	21,146	16,973	9,363	9,672
Federally funded community mental health centers	8,108	17,029	16,264	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	15,129	18,029	20,197	24,547	29,756	30,089	32,110	31,965	33,375	39,049
All other mental health organizations[4]	1,198	993	1,433	21,150	23,646	29,511	60,054	62,144	43,034	39,918
	Percent distribution of 24-hour hospital and residential treatment beds									
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	78.7	65.6	57.0	44.5	36.3	34.4	28.2	25.7	28.5	27.1
Private psychiatric hospitals	2.7	4.7	6.2	11.3	16.5	16.1	14.6	12.5	12.5	11.9
Non-Federal general hospitals with separate psychiatric services	4.3	8.5	10.7	17.1	19.6	19.2	18.2	20.3	18.7	19.0
VA medical centers[3]	9.7	10.6	12.3	10.0	8.0	8.3	7.3	6.3	4.4	4.6
Federally funded community mental health centers	1.5	5.0	5.9	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	2.9	5.3	7.4	9.2	10.9	11.1	11.0	11.9	15.7	18.5
All other mental health organizations[4]	0.2	0.3	0.5	7.9	8.7	10.9	20.7	23.2	20.2	18.9
	24-hour hospital and residential treatment beds per 100,000 civilian population									
All organizations	263.6	160.3	124.3	111.7	111.6	107.5	112.1	99.5	75.4	73.3
State and county mental hospitals	207.4	105.1	70.2	49.7	40.5	36.9	31.6	25.6	21.5	19.9
Private psychiatric hospitals	7.2	7.6	7.7	12.6	18.4	17.3	16.4	12.4	9.4	8.7
Non-Federal general hospitals with separate psychiatric services	11.2	13.6	13.7	19.1	21.9	20.7	20.4	20.2	14.1	14.0
VA medical centers[3]	25.5	17.0	15.7	11.2	8.9	8.9	8.2	6.3	3.3	3.4
Federally funded community mental health centers	4.1	8.0	7.3	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	7.6	8.5	9.1	10.3	12.2	11.9	12.4	11.9	11.8	13.6
All other mental health organizations[4]	0.6	0.5	0.6	8.8	9.7	11.7	23.2	23.1	15.3	13.9

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the January 1 civilian population of the United States for each year through 1998. The rates for 2000 and 2002 are based on the July 1 civilian population.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980–98 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[5] The data for 1994 include residential supportive additions that were excluded in previous years. This is not material except for the category "all other organizations."

services, RTCs, and "all other mental health organizations" increased substantially between 1970 and 1990, with the greatest growth occurring between 1980 and 1990. bed rates for non-Federal general hospitals remained stable throughout the 1990s, but declined substantially between 1998 and 2002. In addition, bed rates for private psychiatric hospitals declined, although they remained above the rates for 1980 and earlier. The rate for RTCs was nearly flat from 1970 to 2002, while the rate for State mental hospitals and VA psychiatric organizations decreased substantially. The greatest increase from 1970 to 1998—from less than one bed per 100,000 population to 23 beds—occurred in the "all other mental health organizations" category, which includes the multiservice organizations (table 19.2). However, between 1998 and 2002, the bed rate for this category decreased to 14 beds. In each of the years shown, the number of "scatter" beds in non-Federal general hospitals has been excluded. Scatter beds are those that are co-mingled with medical surgical beds in non-Federal general hospitals, as distinguished from those that are in the separate psychiatric units of these hospitals.

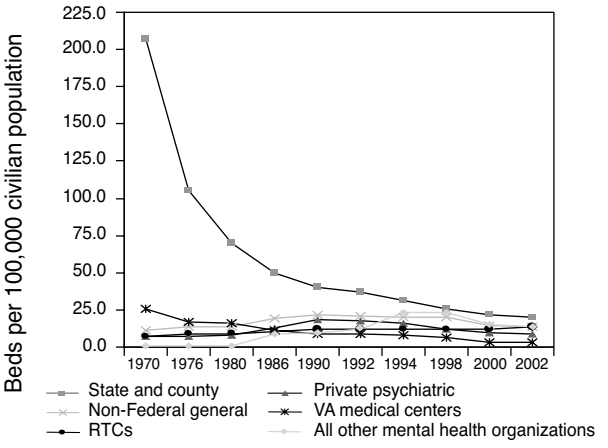


Figure 19.2. Rate of 24-Hour Hospital and Treatment Beds, by Type of Mental Health Organization: United States, Selected Years, 1970–2002.

Volume of Services

Additions to 24-Hour Hospital and Residential Services

The number of 24-hour hospital and residential treatment additions increased steadily between 1969 and 1998, from 1,282,698 to 2,299,959, with a slight decrease between 1998 and 2002 to 2,192,839. There was a corresponding increase in the addition rate, from 644 per 100,000 civilian population in 1969 to 875 in 1994. The addition rate decreased between 1994 and 2002 to 762 (see table 19.3). In 1969, three-quarters of the 24-hour hospital patients were about evenly divided between State mental hospitals and the psychiatric services of non-Federal general hospitals. A constant and precipitous decline in the number of additions and the addition rate to State mental hospitals from 1969 to 1998, accompanied by substantial increases in these measures for the 24-hour services at non-Federal general hospitals and private psychiatric hospitals, especially after 1979, shifted the volume of patient additions to these latter two organization types. By 2002, non-Federal general hospital separate psychiatric services accounted for 50 percent and private psychiatric hospitals for 22 percent of all 24-hour additions, while the proportion of State mental hospital 24-hour additions increased slightly, from 9 percent to 11 percent, from 1998 to 2002 (table 19.3). Among the other mental health organizations, RTCs showed a more or less steady gain in addition rates between 1969 and 1990, but they dipped in 1992, peaked in 1994, and then dipped slightly in both 1998 and 2000 before peaking at an all-time high of 21 additions per 100,000 civilian population in 2002 (see figure 19.3). From 1979 to 1998, VA 24-hour additions as a proportion of all additions have been decreasing, from 12 percent to 7 percent (table 19.3). However, between 1998 and 2002 this category had a slight increase to 8 percent.

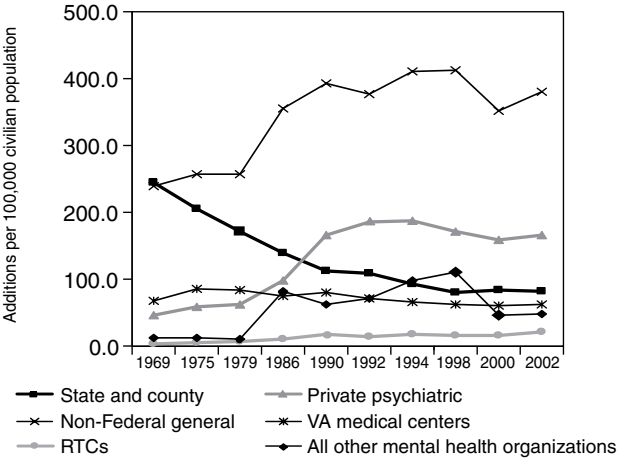


Figure 19.3. Rate of 24-Hour Hospital and Treatment Beds, by Type of Mental Health Organization: United States, Selected Years, 1969–2002.

Table 19.3. Number, percent distribution, and rate[1] of 24-hour hospital and residential treatment additions, by type of mental health organization: United States, selected years, 1969–2002[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994[5]	1998	2000	2002
	Number of hospital and residential treatment additions									
All organizations	1,282,698	1,556,978	1,541,659	1,819,189	2,035,245	2,092,062	2,266,600	2,299,959	2,029,184	2,192,839
State and county mental hospitals	486,661	433,529	383,323	332,884	276,231	275,382	238,431	216,460	235,793	238,546
Private psychiatric hospitals	92,056	125,529	140,831	234,663	406,522	469,827	485,001	462,069	450,889	477,395
Non-Federal general hospitals with separate psychiatric services	478,000	543,731	551,190	849,306	959,893	951,121	1,066,547	1,109,730	993,848	1,094,715
VA medical centers[3]	135,217	180,701	180,416	179,964	198,111	180,529	173,282	166,548	170,816	182,024
Federally funded community mental health centers	59,730	236,226	246,409	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	7,596	12,022	15,453	24,511	41,588	36,388	46,704	44,930	45,841	59,633
All other mental health organizations[4]	23,438	25,240	24,037	197,861	152,900	178,815	256,635	300,222	131,997	140,526
	Percent distribution of hospital and residential treatment additions									
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	37.9	27.8	24.9	18.3	13.6	13.2	10.5	9.4	11.6	10.9
Private psychiatric hospitals	7.2	8.1	9.1	12.9	20.0	22.5	21.4	20.1	22.2	21.8
Non-Federal general hospitals with separate psychiatric services	37.3	34.9	35.8	46.7	47.2	45.5	47.1	48.2	49.0	49.9
VA medical centers[3]	10.5	11.6	11.7	9.9	9.7	8.6	7.6	7.2	8.4	8.3
Federally funded community mental health centers	—	—	—	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.6	0.8	1.0	1.3	2.0	1.7	2.1	2.0	2.3	2.7
All other mental health organizations[4]	1.8	1.6	1.6	10.9	7.5	8.5	11.3	13.1	6.5	6.4
	Hospital and residential treatment additions per 100,000 civilian population									
All organizations	644.2	736.5	704.2	759.9	833.7	830.1	874.6	854.8	719.3	761.6
State and county mental hospitals	244.4	205.1	172.0	139.1	113.2	109.3	92.0	80.4	83.6	82.8
Private psychiatric hospitals	46.2	59.4	63.2	98.0	166.5	186.4	187.1	171.7	159.8	165.8
Non-Federal general hospitals with separate psychiatric services	240.1	257.2	256.7	354.8	393.2	377.4	411.5	412.4	352.3	380.2
VA medical centers[3]	67.9	85.5	84.0	75.1	81.2	71.6	66.9	61.9	60.5	63.2
Federally funded community mental health centers	30.0	111.7	110.6	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	3.8	5.7	6.9	10.2	17.0	14.4	18.0	16.7	16.2	20.7
All other mental health organizations[4]	11.8	11.9	10.8	82.7	62.6	70.9	99.0	111.6	46.8	48.8

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the January 1 civilian population of the United States for each year through 1998. The rates for 2000 and 2002 are based on the July 1 civilian population.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980–98 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[5] The data for 1994 include residential supportive additions that were excluded in previous years. This is not material except for the category "all other organizations."

Additions to Less Than 24-Hour Care Services

From 1969 to 2002, the number of less than 24-hour service additions to mental health organizations nearly tripled, from 1,202,098 to 3,574,832, and the corresponding addition rate per 100,000 civilian population more than doubled, from 604 to 1,242 (see table 19.4). Much of this increase occurred during the 1970s, when the number and rate of less than 24-hour service additions increased substantially in the "all other mental health organizations" grouping, encompassing freestanding psychiatric outpatient clinics, federally funded community mental health centers (CMHCs), and other multiservice mental health organizations (see figure 19.4). Since 1979, the overall increase in additions to less than 24-hour services has moderated, and, in fact, a slight decrease is noted between 1990 and 1992, generated mainly by a substantial decrease in outpatient additions to non-Federal general hospital psychiatric services. The number of additions to these facilities resumed its increase in 1994, but decreased again between 2000 and 2002.

"All other mental health organizations" now includes the freestanding outpatient and partial care clinics as well as the multiservice organizations. In 2002, this category had nearly 2.3 million outpatient additions, down from about 2.9 million in 1998. The less than 24-hour additions in the non-Federal general hospital psychiatric services were second, with more than 500,000 additions in 2002, down from 1.1 million in 2000. Private psychiatric hospitals, RTCs, and the VA medical centers combined comprised more than 700,000 additions. Additions in State mental hospitals in 2002 numbered more than 52,000. By category, the changes in number of less than 24-hour care additions since 2000 were mixed. State mental hospitals, Private psychiatric hospitals, and RTCs showed increases, while non-Federal general hospital psychiatric services, VA medical centers, and "all other mental health organizations" showed decreases.

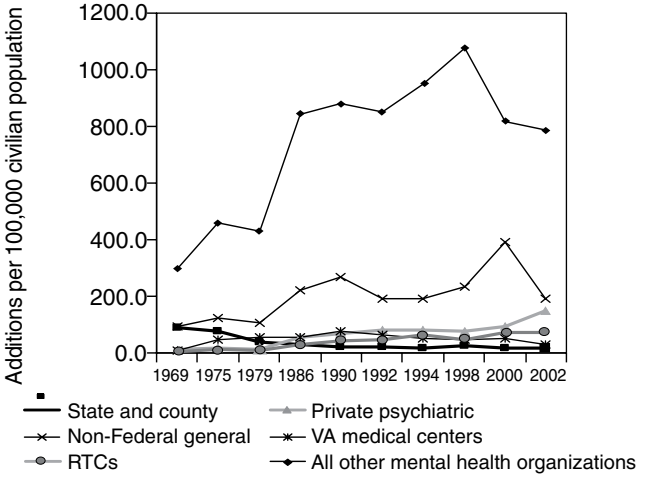


Figure 19.4. Rate of Less Than 24-Hour Care Additions, by Type of Mental Health Organization: United States, Selected Years, 1969–2002.

Patients in 24-Hour Hospital and Residential Services

The number of 24-hour hospital and residential patients generally decreased from 1969 to 2002, with increases since the previous survey in 1986, 1994, and 2002 (see table 19.5). The 1994 increase was due entirely to the inclusion of residential supportive patients, who had been excluded in previous years. Thus, the decline from 1994 to 2002 continued a trend that had begun after 1986. In 1969, 24-hour hospital and residential patients numbered 471,451, but by 1992 the number had declined to 214,714. The number in 2002 was 180,543. The rate per 100,000 civilian population decreased from 237 in 1969 to 63 in 2002. Much of the decrease occurred before 1979, when substantial reductions occurred in the number of resident patients in State mental hospitals and in VA medical center psychiatric inpatient services. The total resident patient count has continued to decline as decreases in the State mental hospital, VA medical center, and private psychiatric hospital resident patient populations have not been offset by the relatively stable numbers through 2002 in non-Federal general hospital psychiatric services and the increases in the number of RTCs and other organizations. VA medical center resident patient counts peaked in 1969, while private psychiatric hospital resident patient counts peaked in 1990; both categories continued to decrease throughout the 1990s and accounted for 5 percent and 10 percent of patient counts, respectively, in 2002. In 1969, State mental hospitals accounted for the largest percentage of residents of psychiatric organizations, more than three-quarters. Their percentage of residents declined steadily, but they continued to treat more residential patients than any other type of treatment facility through 2002, when they were treating nearly 30 percent of residential patients.

Table 19.4. Number, percent distribution, and rate[1] of less than 24-hour care additions, by type of mental health organization: United States, selected years, 1969–2002[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994	1998	2000	2002
	Number of less than 24-hour care additions									
All organizations	1,202,098	2,453,105	2,807,058	2,955,337	3,298,473	3,164,437	3,516,403	4,048,115	4,057,240	3,574,832
State and county mental hospitals	174,737	160,283	91,727	67,986	48,211	49,609	41,759	64,079	48,664	52,685
Private psychiatric hospitals	28,412	36,044	33,471	132,175	163,164	206,169	213,566	206,092	265,405	425,712
Non-Federal general hospitals with separate psychiatric services	188,652	268,881	237,008	532,960	658,567	479,596	497,523	627,903	1,103,160	546,050
VA medical centers[3]	20,290	101,723	127,221	132,589	183,621	158,982	132,417	127,054	138,629	79,853
Federally funded community mental health centers	189,670	878,730	1,320,637	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	8,591	23,215	22,172	67,344	99,503	121,131	167,344	128,271	199,201	207,722
All other mental health organizations[4]	591,746	984,229	974,822	2,022,283	2,145,407	2,148,950	2,463,794	2,894,716	2,302,181	2,262,810
	Percent distribution of less than 24-hour care additions									
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	14.5	6.5	3.3	2.3	1.5	1.6	1.2	1.6	1.2	1.5
Private psychiatric hospitals	2.4	1.5	1.2	4.5	4.9	6.5	6.1	5.1	6.5	11.9
Non-Federal general hospitals with separate psychiatric services	15.7	11.0	8.4	18.0	20.0	15.2	14.1	15.5	27.2	15.3
VA medical centers[3]	1.7	4.1	4.5	4.5	5.6	5.0	3.8	3.1	3.4	2.2
Federally funded community mental health centers	15.8	35.8	47.0	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.7	0.9	0.8	2.3	3.0	3.8	4.8	3.2	4.9	5.8
All other mental health organizations[4]	49.2	40.1	34.7	68.4	65.0	67.9	70.1	71.5	56.7	63.3
	Less than 24-hour care additions per 100,000 civilian population									
All organizations	603.8	1,142.7	1,236.6	1,233.4	1,352.4	1,255.2	1,356.8	1,504.4	1,438.1	1,241.5
State and county mental hospitals	87.8	74.7	40.4	28.4	19.8	19.7	16.1	23.8	17.2	18.3
Private psychiatric hospitals	14.3	16.8	14.7	55.2	66.9	81.8	82.4	76.6	94.1	147.8
Non-Federal general hospitals with separate psychiatric services	94.8	125.3	104.4	222.4	270.0	190.2	192.0	233.4	391.0	189.6
VA medical centers[3]	10.2	47.4	56.0	55.3	75.3	63.1	51.1	47.2	49.1	27.7
Federally funded community mental health centers	95.3	409.3	581.8	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	4.3	10.8	9.8	28.1	40.8	48.0	64.6	47.7	70.6	72.1
All other mental health organizations[4]	297.2	458.5	429.4	844.0	879.6	852.4	950.7	1,075.8	816.0	785.9

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the January 1 civilian population of the United States for each year through 1998. The rates for 2000 and 2002 are based on the July 1 civilian population. Data for 1969–92 are the summation of partial care and outpatient care additions. The 1994 survey format was changed and partial care is now included with outpatient, and together are called "less than 24-hour care."

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980–98 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

Table 19.5. Number, percent distribution, and rate[1] of 24-hour hospital and residential treatment residents, by type of mental health organization: United States, selected years, 1969–2002[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994[5]	1998	2000	2002
	Number of hospital and residential treatment residents at end of year									
All organizations	471,451	284,158	230,216	237,845	226,953	214,714	236,110	221,216	177,460	180,543
State and county mental hospitals	369,969	193,436	140,355	111,135	90,572	83,180	72,096	63,765	56,716	52,612
Private psychiatric hospitals	10,963	11,576	12,921	24,591	32,268	24,053	26,519	20,804	16,113	17,858
Non-Federal general hospitals with separate psychiatric services	17,808	18,851	18,753	34,474	38,327	35,611	35,841	37,053	27,385	28,460
VA medical centers[3]	51,696	31,850	28,693	24,322	17,233	18,531	18,019	14,329	8,228	8,386
Federally funded community mental health centers	5,270	10,818	10,112	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	13,489	16,307	18,276	23,171	27,785	27,751	29,493	29,049	30,272	35,709
All other mental health organizations[4]	2,256	1,320	1,076	20,152	20,768	25,588	54,142	56,216	38,746	37,518
	Percent distributions of hospital and residential treatment residents									
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	78.5	68.1	61.0	46.7	39.9	38.7	30.5	28.8	32.0	29.1
Private psychiatric hospitals	2.3	4.1	5.6	10.3	14.2	11.2	11.2	9.4	9.1	9.9
Non-Federal general hospitals with separate psychiatric services	3.8	6.6	8.1	14.5	16.9	16.6	15.2	16.8	15.4	15.8
VA medical centers[3]	11.0	11.2	12.5	10.2	7.6	8.6	7.6	6.5	4.6	4.6
Federally funded community mental health centers	—	—	—	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	2.9	5.7	7.9	9.7	12.2	12.9	12.5	13.1	17.1	19.8
All other mental health organizations[4]	0.5	0.5	0.5	8.5	9.2	11.9	22.9	25.4	21.8	20.8
	Hospital and residential treatment residents per 100,000 civilian population									
All organizations	236.8	134.4	103.9	99.6	93.0	85.2	91.1	82.2	62.9	62.7
State and county mental hospitals	185.8	91.5	63.0	46.5	37.1	33.0	27.8	23.7	20.1	18.3
Private psychiatric hospitals	5.5	5.5	5.8	10.3	13.2	9.5	10.2	7.7	5.7	6.2
Non-Federal general hospitals with separate psychiatric services	8.9	8.9	8.6	14.4	15.7	14.1	13.8	13.8	9.7	9.9
VA medical centers[3]	26.0	15.1	13.3	10.2	7.1	7.4	7.0	5.3	2.9	2.9
Federally funded community mental health centers	2.7	5.1	4.5	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	6.8	7.7	8.2	9.7	11.4	11.0	11.4	10.8	10.7	12.4
All other mental health organizations[4]	1.1	0.6	0.5	8.5	8.5	10.2	20.9	20.9	13.7	13.0

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the January 1 civilian population of the United States for each year through 1998. The rates for 2000 and 2002 are based on the July 1 civilian population.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980–98 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[5] The number of residents increased in 1994 because all residential treatment and residential supportive patient residents were combined with 24-hour care hospital residents; previously, residential supportive patients were excluded.

Patient Care Episodes

Patient care episodes, unlike the other volume measures, provide an estimate of the number of persons under care throughout the year. They are defined as the number of persons receiving services at the beginning of the year in the 24-hour hospital and residential treatment care services and less than 24-hour care services of mental health organizations plus the number of additions to these services throughout the year. They are a duplicated count in that persons can be admitted to more than one type of service or can be admitted to the same service more than once during the year.

The National Institute of Mental Health (NIMH) and CMHS have tracked patient care episodes since 1955. Over the ensuing 45 years, the locus of mental health care in the United States shifted from inpatient to ambulatory services, as measured by the number of patient care episodes. Of the 1.7 million episodes in 1955, 77 percent were in 24-hour hospital and residential treatment services, and 23 percent were in less than 24-hour services; by 1971, there were 4.2 million episodes, of which 42 percent were in 24-hour hospital and residential treatment services, and 58 percent were in less than 24-hour hospital services; by 2002, of 9.5 million episodes, 24 percent were in 24-hour hospital and residential treatment services, and 76 percent were in less than 24-hour hospital services, almost exactly the reverse of the 1955 distribution (see table 19.6 and figure 19.5).

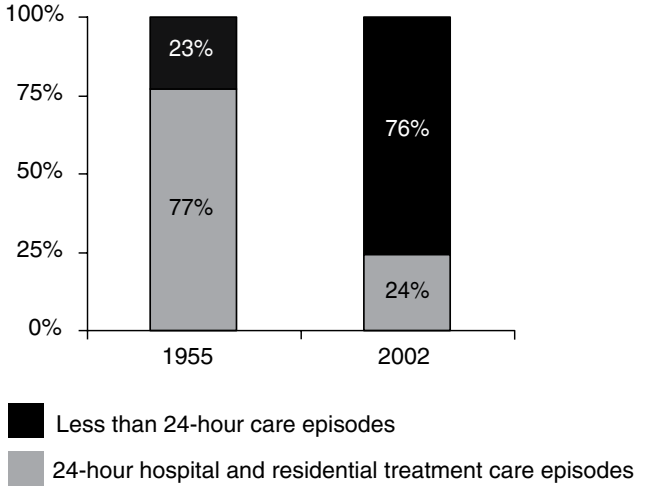


Figure 19.5. Patient Care Episodes in Mental Health Organizations in 1955 (1.7 Million Patient Care Episodes) and 2002 (9.5 Million Patient Care Episodes).

Table 19.6. Number and percent distribution of hospital and residential treatment care and less than 24-hour care episodes in mental health organizations: United States (excluding territories), selected years, 1955–2002

Year	Total episodes	24-hour hospital and residential treatment care episodes[1]	Less than 24-hour care episodes
		Number	
2002	9,524,742	2,315,808	7,208,934
2000	9,878,879	2,206,644	7,672,235
2000	10,741,243	2,335,711	8,405,532
1998	10,549,951	2,521,175	8,028,776
1994	9,584,216	2,502,166	7,082,050
1992	8,824,701	2,322,374	6,502,307
1990	8,620,628	2,266,022	6,354,606
1986	7,885,618	2,055,571	5,830,047
1983	7,194,038	1,860,613	5,333,425
1975	6,857,597	1,817,108	5,040,489
1971	4,190,913	1,755,816	2,435,097
1969	3,682,454	1,710,372	1,972,082
1965	2,636,525	1,565,525	1,071,000
1955	1,675,352	1,296,352	379,000
		Percent distribution	
2002	100.0	24.3	75.7
2000	100.0	22.3	77.7
2000	100.0	21.7	78.3
1998	100.0	23.9	76.1
1994	100.0	26.1	73.9
1992	100.0	26.3	73.7
1990	100.0	26.3	73.7
1986	100.0	26.1	73.9
1983	100.0	25.9	74.1
1975	100.0	26.5	73.5
1971	100.0	41.9	58.1
1969	100.0	46.4	53.6
1965	100.0	59.4	40.6
1955	100.0	77.4	22.6

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The data for 1994 include residential supportive additions that were excluded in previous years. This is not new material except for the category "all other organizations."

Along with the shift of patient care episodes from 24-hour hospital and residential treatment care to less than 24-hour services, a shift also occurred across organization types within these two services (Redick, Witkin, Atay, & Manderscheid, 1994). For example, State mental hospitals accounted for 63 percent of hospital and residential treatment episodes in 1955, compared with only 13 percent in 2002. Also in 2002, the majority of hospital and residential treatment care episodes were in private psychiatric hospitals (22 percent) and non-Federal general hospitals (48 percent; see figure 19.6). Compared with 2002, State mental hospitals and VA medical centers in 1955 saw a larger proportion of less than 24-hour care episodes. For example, State mental hospitals accounted for 9 percent of less than 24-hour care episodes in 1955 and 2 percent in 2002. VA medical centers accounted for 11 percent of these episodes in 1955 and 3 percent in 2002. The proportion of "all other mental health organizations" providing less than 24-hour care was higher in 1955 (80 percent) than in 2002 (69 percent; see figure 19.7).

Staffing of Mental Health Organizations

This section has been updated since the publication of *Mental Health, United States, 2002* with sample survey data from 2000.

Concomitant with increases in the number of mental health organizations and patients served by

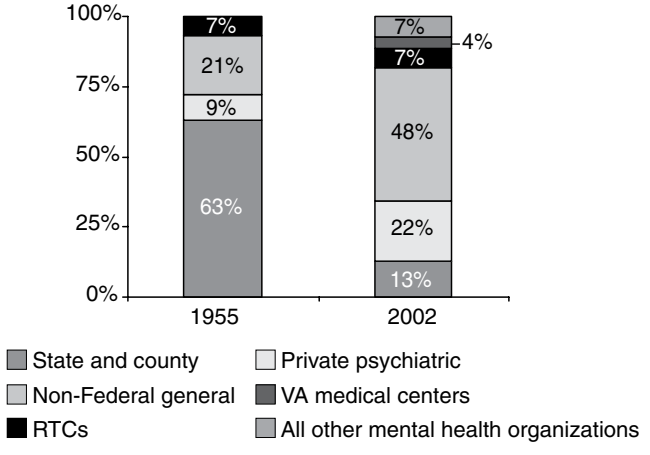


Figure 19.6. 24-Hour Hospital and Residential Treatment Care Episodes in Mental Health Organizations in 1955 (1.3 Million Episodes) and 2002 (2.3 Million Episodes).

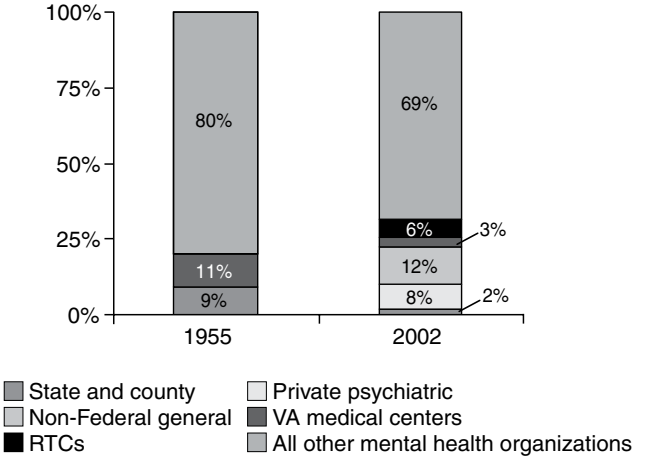


Figure 19.7. Less Than 24-Hour Patient Care Episodes in Mental Health Organizations in 1955 (379 Thousand Episodes) and 2002 (7.2 Million Episodes).

these organizations, the number of FTE staff employed by such organizations generally increased between 1972 and 2000, from 375,984 to 569,187 (see table 19.7).

In 1972, professional patient care staff comprised about 27 percent of all FTE staff, compared with 43 percent of all FTE staff in 2000 (see figure 19.8). Among the professional patient care staff disciplines, the largest gains over the 28-year period were noted for psychiatrists, psychologists, social workers, registered nurses, and other mental health professionals (table 19.7). By contrast, the number of other workers (with less than a B.A. degree) employed in mental health organizations showed a variable pattern of increases and decreases between 1972 and 2000, with a larger number reported in 2000 (182,566) than in 1972 (140,379). The number of FTE administrative, clerical, and maintenance staff increased slightly from 134,719 to 142,627 in that period (table 19.7).

As a percentage of all FTE staff, other mental health workers dropped from 37 percent in 1972 to 32 percent in 2000. The administrative and support staff declined from 36 percent in 1972 to 25 percent in 2000 (table 19.7). The mental health organization types that showed the largest proportional increases in number between 1972 and 2000 were private psychiatric hospitals, non-Federal general hospitals with separate psychiatric services, RTCs, and "all other mental health organizations," which accounted for all of the increases in total FTE staff among mental health organizations during this period (tables 19.7a to 19.7f).

Table 19.7. Number and percent distribution of full-time equivalent staff[1] in all mental health organizations by staff discipline: United States, selected years, 1972–2000[2]

Staff discipline	1972	1976	1978	1986[2,3]	1990	1992	1994	1998	2000
					Number of FTE staff				
All staff	375,984	373,969	430,051	494,515	563,619	585,972	577,669	680,310	569,187
Patient care staff	241,265	251,756	292,699	346,630	415,719	432,866	370,635	531,532	426,558
Professional patient care staff	100,886	117,190	153,598	232,481	273,374	305,988	225,250	304,449	243,993
Psychiatrists	12,938	12,896	14,492	17,874	18,818	22,803	20,242	28,374	20,233
Other physicians	3,991	3,055	3,034	3,868	3,865	3,949	2,692	3,561	2,962
Psychologists[4]	9,443	10,587	16,501	20,210	22,825	25,000	14,050	28,729	19,003
Social workers	17,687	18,927	28,125	40,951	53,375	57,136	41,326	72,367	70,208
Registered nurses	31,110	33,981	42,399	66,180	77,635	78,588	82,620	78,562	70,295
Other mental health professionals	17,514	27,977	39,363	56,245	84,071	102,162	57,982	78,854	53,271
Physical health professionals and assistants	8,203	9,767	9,684	27,153	12,785	16,350	6,338	14,002	8,023
Other mental health workers[5]	140,379	134,566	139,101	114,149	142,345	126,878	145,385	227,083	182,566
Administrative, clerical, and maintenance staff	134,719	122,213	137,352	147,885	147,900	153,106	207,034	148,778	142,627
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	64.2	67.3	68.1	70.1	73.8	73.9	64.2	78.1	74.9
Professional patient care staff	26.8	31.3	35.7	47.0	48.5	52.2	39.0	44.8	42.9
Psychiatrists	3.4	3.4	3.4	3.6	3.3	3.9	3.5	4.2	3.6
Other physicians	1.1	0.8	0.7	0.8	0.7	0.7	0.5	0.5	0.5
Psychologists[4]	2.5	2.8	3.8	4.1	4.0	4.3	2.4	4.2	3.3
Social workers	4.7	5.1	6.5	8.3	9.5	9.8	7.2	10.6	12.3
Registered nurses	8.3	9.1	9.9	13.4	13.8	13.4	14.3	11.5	12.4
Other mental health professionals	4.7	7.5	9.2	11.4	14.9	17.4	10.0	11.6	9.4
Physical health professionals and assistants	2.2	2.6	2.3	5.5	2.3	2.8	1.1	2.1	1.4
Other mental health workers[5]	37.3	36.0	32.3	23.1	25.3	21.7	25.2	33.4	32.1
Administrative, clerical, and maintenance staff	35.8	32.7	31.9	29.9	26.2	26.1	35.8	21.9	25.1

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

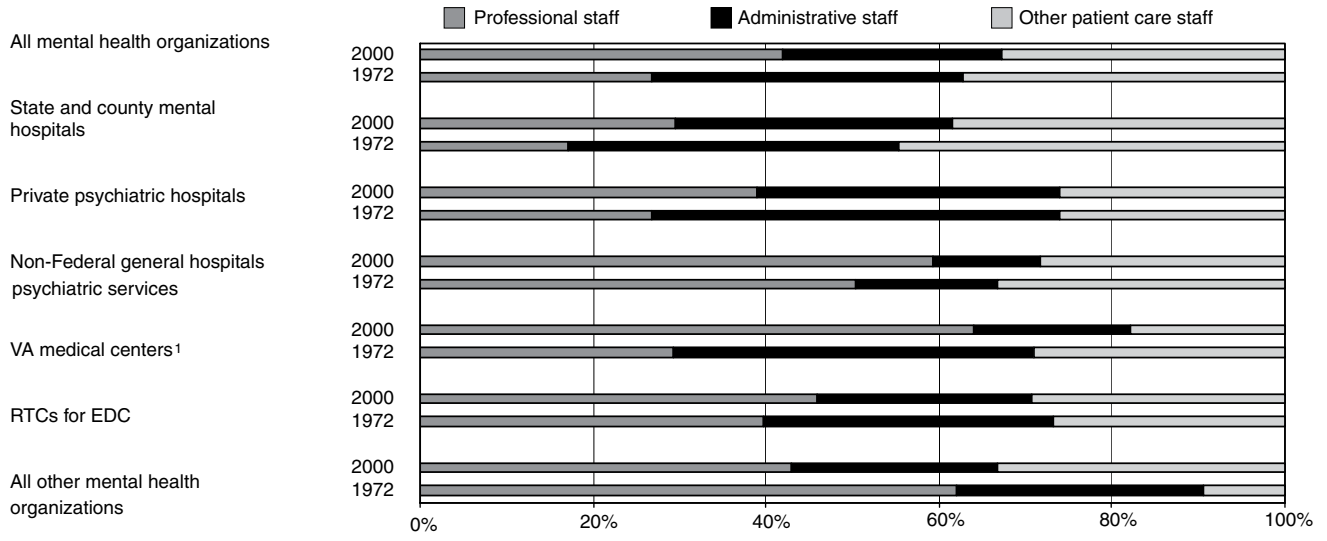
[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1986 some organizations had been reclassified as a result of changes in reporting procedures and definitions.

[3] Includes data for CMHCs in 1978. In 1986, 1990, 1992, and 1994, these staff were subsumed under other organizations types. Data for CMHCs are not shown separately.

[4] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[5] Workers in this category have less than a B.A. degree.



[1] Staffing for 2000 is based on 1998 estimates.

Figure 19.8. Percent Distribution of Full-Time Professional, Administrative, and Other Patient Care Staff in Medical Health Organizations in the United States, 1972 and 2000.

Financing of Services

This section has been updated since the publication of *Mental Health, United States, 2002* with inventory data on revenues and expenditures since 1998.

Expenditures

Total expenditures by mental health organizations in the United States, as measured in current dollars, increased more than elevenfold between 1969 and 1998, from $3.3 billion to $38.5 billion. However, between 1998 and 2002, total expenditures declined to slightly more than $34 billion. Additionally, when adjustments were made for inflation, that is, when expenditures were expressed in constant dollars (1969 = 100), total expenditures rose from $3.3 billion in 1969, peaked at slightly more than $5.5 billion in 1990, remained at over $5 billion until 2000, and declined to slightly less than $4 billion in 2002. This increase was not a monotonic increase over the period (see figure 19.9, table 19.8a, and table 19.8b). Only $619 million, or 2 percent of the $31 billion increase in current dollar expenditures between 1969 and 2002, represented an increase in purchasing power; the remaining 98 percent was due to inflation.

All the specific organization types registered increases in current dollar expenditures between 1969 and 2002, but private psychiatric hospitals declined in 1992, 1998, and 2000; State mental hospitals declined after 1992 followed by increases for 2000 and 2002; VA medical centers showed declines in 1994, peaked in 1998, declined again in 2000, and rose slightly in 2002; and "all other mental health organizations" have continued to decline since peaking in 1998 (table 19.8a). (However, the per capita rates also

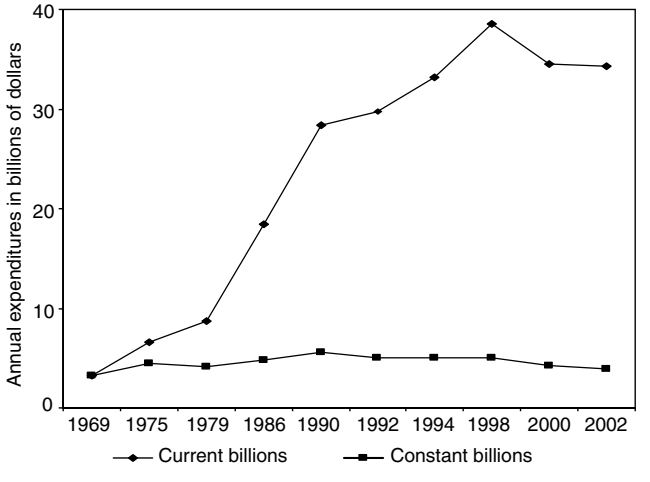


Figure 19.9. Annual Expenditures in Current and Constant Dollars, All Mental Health Organizations, United States: Selected Years, 1969–2002.

Table 19.7a. Number and percent distribution of full-time equivalent staff[1] in State and county mental hospitals, by staff discipline: United States, selected years, 1972–2000

Staff discipline	1972	1976	1978	1986	1990	1992	1994	1998	2000
					Number of FTE staff				
All staff	223,886	219,006	205,289	182,466	175,566	171,745	148,415	116,387	141,161
Patient care staff	138,307	141,127	131,187	119,073	114,198	110,874	99,145	81,766	96,017
Professional patient care staff	38,516	46,596	45,131	54,853	50,035	56,953	38,480	36,167	41,724
Psychiatrists	4,389	4,333	3,712	3,762	3,849	4,457	3,442	2,902	4,255
Other physicians	2,440	2,047	1,809	1,917	1,962	2,126	1,467	1,209	1,240
Psychologists[2]	2,484	3,039	3,149	3,412	3,324	3,620	2,699	2,660	3,384
Social workers	5,324	5,948	5,924	6,238	7,013	7,378	5,276	4,185	5,962
Registered nurses	13,353	15,098	14,859	19,425	20,848	21,119	16,918	17,214	19,324
Other mental health professionals	5,890	10,551	10,492	8,033	8,955	11,527	5,450	4,332	3,335
Physical health professionals and assistants	4,636	5,580	5,186	12,066	4,084	6,726	3,228	3,666	4,224
Other mental health workers[3]	99,791	94,531	86,056	64,220	64,163	53,921	60,664	45,599	54,293
Administrative, clerical, and maintenance staff	85,579	77,879	74,102	63,393	61,368	60,871	49,270	34,621	45,144
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	61.8	64.4	63.9	65.3	65.0	64.6	66.8	70.2	68.0
Professional patient care staff	17.2	21.3	22.0	30.1	28.5	33.2	25.9	31.1	29.6
Psychiatrists	2.0	2.0	1.8	2.1	2.2	2.6	2.3	2.5	3.0
Other physicians	1.1	0.9	0.9	1.1	1.1	1.2	1.0	1.0	0.9
Psychologists[2]	1.1	1.4	1.5	1.9	1.9	2.1	1.8	2.3	2.4
Social workers	2.4	2.7	2.9	3.4	4.0	4.3	3.6	3.6	4.2
Registered nurses	6.0	6.9	7.2	10.6	11.9	12.3	11.4	14.8	13.7
Other mental health professionals	2.6	4.8	5.1	4.4	5.1	6.7	3.7	3.7	2.4
Physical health professionals and assistants	2.1	2.5	2.5	6.6	2.3	3.9	2.2	3.1	3.0
Other mental health workers[3]	44.6	43.2	41.9	35.2	36.5	31.4	40.9	39.2	38.5
Administrative, clerical, and maintenance staff	38.2	35.6	36.1	34.7	35.0	35.4	33.2	29.7	32.0

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

Table 19.7b. Number and percent distribution of full-time equivalent staff[1] in private psychiatric hospitals, by staff discipline: United States, selected years, 1972–2000

Staff discipline	1972	1976	1978	1986	1990	1992	1994	1998	2000
					Number of FTE staff				
All staff	21,504	27,655	29,972	58,912	75,392	77,251	71,906	56,842	48,297
Patient care staff	11,329	17,196	18,728	35,480	57,200	56,877	20,388	40,608	31,325
Professional patient care staff	5,735	9,879	11,419	27,246	45,669	44,206	14,132	26,004	18,778
Psychiatrists	1,067	1,369	1,285	1,554	1,582	2,081	1,367	1,844	1,236
Other physicians	101	162	185	141	316	147	160	356	444
Psychologists[2]	305	559	590	1,557	1,977	1,656	708	1,074	588
Social workers	418	784	920	2,893	4,044	4,587	1,963	3,830	4,489
Registered nurses	2,634	3,395	3,967	10,147	14,819	15,086	5,161	10,443	8,890
Other mental health professionals	857	2,794	3,644	7,478	17,358	15,303	3,563	7,465	2,296
Physical health professionals and assistants	353	816	828	3,476	5,573	5,346	1,210	993	835
Other mental health workers[3]	5,594	7,317	7,309	8,234	11,531	12,671	6,256	14,604	12,548
Administrative, clerical, and maintenance staff	10,175	10,459	11,244	23,432	18,192	20,374	51,518	16,235	16,972
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	52.7	62.2	62.5	60.2	75.9	73.6	28.4	71.4	64.9
Professional patient care staff	26.7	35.7	38.1	46.2	60.6	57.2	19.7	45.7	38.9
Psychiatrists	5.0	5.0	4.3	2.6	2.1	2.7	1.9	3.2	2.6
Other physicians	0.5	0.6	0.6	0.2	0.4	0.2	0.2	0.6	0.9
Psychologists[2]	1.4	2.0	2.0	2.6	2.6	2.1	1.0	1.9	1.2
Social workers	1.9	2.8	3.1	4.9	5.4	5.9	2.7	6.7	9.3
Registered nurses	12.2	12.3	13.2	17.2	19.7	19.5	7.2	18.4	18.4
Other mental health professionals	4.0	10.1	12.2	12.7	23.0	19.8	5.0	13.1	4.8
Physical health professionals and assistants	1.6	3.0	2.8	5.9	7.4	6.9	1.7	1.7	1.7
Other mental health workers[3]	26.0	26.5	24.4	14.0	15.3	16.4	8.7	25.7	26.0
Administrative, clerical, and maintenance staff	47.3	37.8	37.5	39.8	24.1	26.4	71.6	28.6	35.1

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

Table 19.7c. Number and percent distribution of full-time equivalent staff[1] in the separate psychiatric services of non-Federal general hospitals, by staff discipline: United States, selected years, 1972–2000

Staff discipline	1972	1976	1978	1986	1990	1992	1994	1998	2000
					Number of FTE staff				
All staff	30,982	39,621	40,908	70,187	80,625	81,819	80,532	96,639	81,123
Patient care staff	25,385	33,969	34,966	61,148	72,214	72,880	75,231	84,974	71,069
Professional patient care staff	15,565	21,231	22,401	50,233	57,019	58,544	64,264	60,375	48,062
Psychiatrists	3,394	3,933	3,583	6,009	6,500	6,160	4,920	8,158	4,348
Other physicians	452	180	237	671	585	353	369	545	270
Psychologists[2]	1,100	1,356	1,512	2,983	3,951	4,182	2,245	2,946	3,852
Social workers	1,904	2,515	2,552	5,634	7,241	7,985	5,198	13,560	11,189
Registered nurses	6,922	9,445	10,611	23,454	28,473	28,355	45,968	27,253	24,026
Other mental health professionals	1,519	3,394	3,583	7,658	9,643	10,812	5,089	5,584	3,551
Physical health professionals and assistants	274	408	323	3,824	626	697	475	2,330	826
Other mental health workers[3]	10,270	12,738	12,565	10,915	15,195	14,336	10,968	24,599	23,007
Administrative, clerical, and maintenance staff	5,147	5,652	5,942	9,039	8,411	8,939	5,301	11,665	10,054
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	81.9	85.7	85.5	87.1	89.6	89.1	93.4	87.9	87.6
Professional patient care staff	50.2	53.6	54.8	71.6	70.7	71.6	79.8	62.4	59.3
Psychiatrists	11.0	9.9	8.8	8.6	8.1	7.5	6.1	8.4	5.4
Other physicians	1.5	0.5	0.6	1.0	0.7	0.4	0.5	0.6	0.3
Psychologists[2]	3.6	3.4	3.7	4.3	4.9	5.1	2.8	3.0	4.8
Social workers	6.1	6.3	6.2	8.0	9.0	9.8	6.5	14.0	13.8
Registered nurses	22.3	23.8	25.9	33.4	35.3	34.7	57.1	28.2	29.6
Other mental health professionals	4.9	8.6	8.8	10.9	12.0	13.2	6.3	5.8	4.4
Physical health professionals and assistants	0.9	1.0	0.8	5.4	0.8	0.9	0.6	2.4	1.0
Other mental health workers[3]	33.1	32.1	30.7	15.6	18.8	17.5	13.6	25.5	28.4
Administrative, clerical, and maintenance staff	16.6	14.3	14.5	12.9	10.4	10.9	6.6	12.1	12.4

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

Table 19.7d. Number and percent distribution of full-time equivalent staff[1] in VA medical centers, by staff discipline: United States, selected years, 1972–2000

Staff discipline	1972	1976	1978	1986	1990	1992	1994	1998	2000[4]
					Number of FTE staff				
All staff	42,152	39,963	40,785	33,376	29,741	24,345	22,788	22,731	22,261
Patient care staff	24,523	25,226	26,282	23,559	22,080	20,834	21,569	18,587	18,202
Professional patient care staff	12,315	13,129	13,954	17,782	14,619	16,274	17,871	14,531	14,230
Psychiatrists	902	1,320	1,471	2,245	2,103	3,403	6,676	4,650	4,554
Other physicians	626	504	531	555	464	486	212	92	90
Psychologists[2]	895	1,134	1,255	1,439	1,476	2,479	623	2,149	2,105
Social workers	1,098	1,412	1,620	1,680	1,855	2,244	1,759	1,974	1,933
Registered nurses	4,713	4,503	5,326	6,761	5,888	5,485	8,125	5,088	4,983
Other mental health professionals	1,497	1,812	1,748	1,423	1,322	1,266	186	279	273
Physical health professionals and assistants	2,584	2,444	2,003	3,679	1,511	911	290	299	293
Other mental health workers[3]	12,208	12,097	12,328	5,777	7,461	4,560	3,697	4,057	3,973
Administrative, clerical, and maintenance staff	17,629	14,737	14,503	9,817	7,661	3,511	1,219	4,143	4,057
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	58.2	63.1	64.4	70.6	74.2	85.6	94.7	81.8	81.8
Professional patient care staff	29.2	32.9	34.2	53.3	49.2	66.8	78.4	63.9	63.9
Psychiatrists	2.1	3.3	3.6	6.7	7.1	14.0	29.3	20.5	20.5
Other physicians	1.5	1.3	1.3	1.7	1.6	2.0	0.9	0.4	0.4
Psychologists[2]	2.1	2.8	3.1	4.3	5.0	10.2	2.7	9.5	9.5
Social workers	2.6	3.5	4.0	5.0	6.2	9.2	7.7	8.7	8.7
Registered nurses	11.2	11.3	13.1	20.3	19.8	22.5	35.7	22.4	22.4
Other mental health professionals	3.6	4.5	4.3	4.3	4.4	5.2	0.8	1.2	1.2
Physical health professionals and assistants	6.1	6.1	4.9	11.0	5.1	3.7	1.3	1.3	1.3
Other mental health workers[3]	29.0	30.3	30.2	17.3	25.1	18.7	16.2	17.8	17.8
Administrative, clerical, and maintenance staff	41.8	36.9	35.6	29.4	25.8	14.4	5.3	18.2	18.2

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

[4] Staffing for 2000 is based on 1998 estimates.

Table 19.7e. Number and percent distribution of full-time equivalent staff[1] in residential treatment centers for emotionally disturbed children, by staff discipline: United States, selected years, 1972–2000

Staff discipline	1972	1976	1978	1986	1990	1992	1994	1998	2000
					Number of FTE staff				
All staff	17,025	19,352	22,443	34,569	53,220	55,678	59,011	69,703	75,860
Patient care staff	11,299	13,824	16,464	25,146	40,969	42,801	51,725	58,087	57,040
Professional patient care staff	6,738	8,990	10,824	17,599	26,032	30,207	29,765	27,833	34,918
Psychiatrists	147	149	140	335	498	748	283	273	1,124
Other physicians	34	27	22	86	101	126	52	18	572
Psychologists[2]	354	434	497	911	1,492	1,641	961	1,947	1,213
Social workers	1,653	1,778	2,196	4,585	5,636	6,506	3,843	6,055	13,545
Registered nurses	244	301	324	746	1,238	1,367	858	2,587	3,184
Other mental health professionals	4,177	6,072	7,359	9,435	16,765	18,970	23,608	14,475	15,179
Physical health professionals and assistants	129	229	286	1,501	302	849	160	2,480	100
Other mental health workers[3]	4,561	4,834	5,640	7,547	14,937	12,594	21,960	30,253	22,122
Administrative, clerical, and maintenance staff	5,726	5,528	5,979	9,423	12,251	12,877	7,286	11,616	18,820
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	66.4	71.4	73.4	72.7	77.0	76.9	87.7	83.3	75.2
Professional patient care staff	39.6	46.5	48.2	50.9	48.9	54.3	50.4	39.9	46.0
Psychiatrists	0.9	0.8	0.6	1.0	0.9	1.3	0.5	0.4	1.5
Other physicians	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.8
Psychologists[2]	2.1	2.2	2.2	2.6	2.8	2.9	1.6	2.8	1.6
Social workers	9.7	9.2	9.8	13.3	10.6	11.7	6.5	8.7	17.9
Registered nurses	1.4	1.6	1.4	2.2	2.3	2.5	1.5	3.7	4.2
Other mental health professionals	24.5	31.4	32.8	27.3	31.5	34.1	40.0	20.8	20.0
Physical health professionals and assistants	0.8	1.2	1.3	4.3	0.6	1.5	0.3	3.6	0.1
Other mental health workers[3]	26.8	25.0	25.1	21.8	28.1	22.6	37.2	43.4	29.2
Administrative, clerical, and maintenance staff	33.6	28.6	26.6	27.3	23.0	23.1	12.3	16.7	24.8

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

Table 19.7f. Number and percent distribution of full-time equivalent staff[1] in all other mental health organizations, by staff discipline: United States, selected years, 1972–2000

Staff discipline	1972	1976	1978	1986	1990	1992	1994	1998	2000
					Number of FTE staff				
All staff	20,774	28,372	33,430	33,430	115,005	149,075	195,018	318,008	200,485
Patient care staff	14,831	20,414	23,861	23,861	82,224	109,058	102,578	247,510	152,905
Professional patient care staff	12,879	17,365	20,263	20,263	64,768	80,000	60,738	139,538	86,281
Psychiatrists	1,815	1,792	1,781	1,781	3,969	4,286	3,554	10,548	4,715
Other physicians	127	135	83	83	498	437	432	1,342	346
Psychologists[2]	2,811	4,065	4,565	4,565	9,908	10,605	6,814	17,954	7,861
Social workers	4,979	6,490	7,593	7,593	19,921	27,586	23,287	42,763	33,090
Registered nurses	958	1,239	1,355	1,355	5,647	6,369	5,590	15,977	9,887
Other mental health professionals	1,978	3,354	4,521	4,521	22,218	30,028	20,086	46,719	28,637
Physical health professionals and assistants	211	290	365	365	2,607	689	975	4,234	1,745
Other mental health workers[3]	1,952	3,049	3,598	3,598	17,456	29,058	41,840	107,972	66,623
Administrative, clerical, and maintenance staff	5,942	7,958	9,569	9,569	32,781	40,017	92,440	70,498	47,580
					Percent distribution of FTE staff				
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	71.4	72.0	71.4	71.4	71.5	73.2	52.6	77.8	76.3
Professional patient care staff	62.0	61.2	60.6	60.6	56.3	53.7	31.1	43.9	43.0
Psychiatrists	8.7	6.3	5.3	5.3	3.5	2.9	1.8	3.3	2.4
Other physicians	0.6	0.5	0.2	0.2	0.4	0.3	0.2	0.4	0.2
Psychologists[2]	13.5	14.3	13.7	13.7	8.6	7.1	3.5	5.6	3.9
Social workers	24.0	22.9	22.7	22.7	17.3	18.5	11.9	13.4	16.5
Registered nurses	4.6	4.4	4.1	4.1	4.9	4.3	2.9	5.0	4.9
Other mental health professionals	9.5	11.8	13.5	13.5	19.3	20.1	10.3	14.7	14.3
Physical health professionals and assistants	1.0	1.0	1.1	1.1	2.3	0.5	0.5	1.3	0.9
Other mental health workers[3]	9.4	10.7	10.8	10.8	15.2	19.5	21.5	34.0	33.2
Administrative, clerical, and maintenance staff	28.6	28.0	28.6	28.6	28.5	26.8	47.4	22.2	23.7

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

Table 19.8a. Amount, percent distribution, and rate per capita[1] of expenditures in current dollars, by type of mental health organization: United States, selected years, 1969–2002[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994	1998	2000	2002
					Expenditure in thousands of dollars					
All organizations	3,292,563	6,564,312	8,763,795	18,457,741	28,410,261	29,765,202	33,136,440	38,512,290	34,527,900	34,301,742
State and county mental hospitals	1,814,101	3,185,049	3,756,754	6,325,844	7,774,482	7,970,163	7,824,661	7,117,009	7,484,706	7,616,498
Private psychiatric hospitals	220,026	466,720	743,037	2,629,009	6,101,063	5,301,940	6,468,184	4,105,741	3,885,158	3,929,356
Non-Federal general hospitals with separate psychiatric services	298,000	621,284	722,868	2,877,739	4,661,574	5,192,984	5,344,188	5,589,434	5,852,560	5,178,958
VA medical centers[3]	450,000	699,027	848,469	1,337,943	1,480,082	1,529,745	1,386,213	1,689,572	975,725	1,017,936
Federally funded community mental health centers	143,491	775,580	1,480,890	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	122,711	278,950	436,246	977,616	1,969,283	2,167,324	2,360,363	3,556,955	3,780,572	4,496,090
All other mental health organizations[4]	244,234	537,702	775,531	4,309,590	6,423,777	7,603,066	9,752,831	16,453,579	12,549,180	12,062,905
					Percent distribution of expenditures					
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	55.1	48.5	42.9	34.3	27.4	26.8	23.6	18.5	21.7	22.2
Private psychiatric hospitals	6.7	7.1	8.5	14.2	21.5	17.8	19.5	10.7	11.3	11.5
Non-Federal general hospitals with separate psychiatric services	9.1	9.5	8.2	15.6	16.4	17.4	16.1	14.5	17.0	15.1
VA medical centers[3]	13.7	10.6	9.7	7.2	5.2	5.1	4.2	4.4	2.8	3.0
Federally funded community mental health centers	4.4	11.8	16.9	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	3.7	4.2	5.0	5.3	6.9	7.3	7.1	9.2	11.0	13.1
All other mental health organizations[4]	7.4	8.2	8.8	23.3	22.6	25.5	29.4	42.7	36.4	35.2
					Expenditures per capita civilian population					
All organizations	16.53	31.05	39.61	77.10	116.39	116.69	127.86	143.13	122.39	118.95
State and county mental hospitals	9.11	15.06	16.86	26.43	31.85	31.25	30.19	26.45	26.53	26.41
Private psychiatric hospitals	1.10	2.21	3.34	10.98	24.99	20.78	24.96	15.26	13.77	13.63
Non-Federal general hospitals with separate psychiatric services	1.50	2.94	3.37	12.02	19.10	20.36	20.62	20.77	20.74	17.96
VA medical centers[3]	2.26	3.31	3.95	5.59	6.06	6.00	5.35	6.28	3.46	3.53
Federally funded community mental health centers	0.72	3.67	6.65	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.62	1.32	1.96	4.08	8.07	8.50	9.11	13.22	13.40	15.59
All other mental health organizations[4]	1.22	2.54	3.48	18.00	26.32	29.80	37.63	61.15	44.48	41.83

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1]The population used in the calculation of these rates is the January 1 civilian population of the United States for each year through 1998. The rates for 2000 and 2002 are based on the July 1 civilian population. Data for 1969–92 are the summation of partial care and outpatient care additions. The 1994 survey format was changed and partial care is now included with outpatient, and together are called "less than 24-hour care."

[2]Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980–98 data with those of earlier years.

[3]Includes Department of Veterans Affairs (formerly Veterans Administration) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4]Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

Table 19.8b. Amount, percent distribution, and rate per capita[1] of expenditures in constant dollars (1969 = 100)[2], by type of mental health organization: United States, selected years, 1969–2002[3]

Type of organization	1969	1975	1979	1986	1990	1992	1994	1998	2000	2002
					Expenditure in thousands of dollars					
All organizations	3,292,563	4,414,465	4,145,598	4,828,079	5,566,274	4,995,003	5,010,045	5,080,777	4,223,596	3,911,259
State and county mental hospitals	1,814,101	2,141,929	1,777,083	1,654,681	1,523,214	1,337,500	1,183,045	938,919	915,560	868,472
Private psychiatric hospitals	220,026	313,867	351,484	687,682	1,195,349	889,737	977,953	541,654	475,249	448,045
Non-Federal general hospitals with separate psychiatric services	298,000	417,810	341,943	752,744	913,318	871,452	808,011	737,392	715,909	590,531
VA medical centers[4]	450,000	470,092	401,357	349,972	289,985	256,712	209,588	222,899	119,355	116,070
Federally funded community mental health centers	143,491	521,574	700,516	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	122,711	187,592	206,360	255,720	385,831	363,706	356,874	469,255	462,455	512,667
All other mental health organizations[5]	244,234	361,601	366,855	1,127,280	1,258,577	1,275,896	1,474,574	2,170,657	1,535,068	1,375,474
					Percent distribution of expenditures					
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	55.1	48.5	42.9	34.3	27.4	26.8	23.6	18.5	21.7	22.2
Private psychiatric hospitals	6.7	7.1	8.5	14.2	21.5	17.8	19.5	10.7	11.3	11.5
Non-Federal general hospitals with separate psychiatric services	9.1	9.5	8.2	15.6	16.4	17.4	16.1	14.5	17.0	15.1
VA medical centers[4]	13.7	10.6	9.7	7.2	5.2	5.1	4.2	4.4	2.8	3.0
Federally funded community mental health centers	4.4	11.8	16.9	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	3.7	4.2	5.0	5.3	6.9	7.3	7.1	9.2	11.0	13.1
All other mental health organizations[5]	7.4	8.2	8.8	23.3	22.6	25.5	29.4	42.7	36.4	35.2
					Expenditures per capita civilian population					
All organizations	16.53	20.88	19.37	20.15	22.81	19.83	19.33	18.88	14.97	13.56
State and county mental hospitals	9.11	10.13	7.98	6.90	6.24	5.31	4.56	3.49	3.25	3.01
Private psychiatric hospitals	1.10	1.48	1.58	2.87	4.90	3.53	3.77	2.01	1.68	1.55
Non-Federal general hospitals with separate psychiatric services	1.50	1.98	1.89	3.14	3.74	3.46	3.12	2.74	2.54	2.05
VA medical centers[4]	2.26	2.22	2.21	1.46	1.19	1.02	0.81	0.83	0.42	0.40
Federally funded community mental health centers	0.72	2.47	3.14	—	—	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.62	0.89	0.92	1.07	1.58	1.44	1.38	1.74	1.64	1.78
All other mental health organizations[5]	1.22	1.71	1.65	4.71	5.16	5.07	5.69	8.07	5.44	4.77

Sources: Published and unpublished inventory data from the Survey and Analysis branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The population used in the calculation of these rates is the January 1 civilian population of the United States for each year through 1998. The rates for 2000 and 2002 are based on the July 1 civilian population.

[2] Based on the medical care component of the consumer price index (1969 = 100). Indices for other years are 1975 (148.7), 1979 (211.4), 1986 (382.3), 1988 (434.5), 1992 (595.9), and 1994 (661.4). By 1998, consumer price indices were no longer calculated by the Bureau of Labor Statistics. The 1998 index number was calculated by dividing the 1998 medical care annual average Consumer Price Index (CPI) for all U.S. cities in the current series (1983–84 = 100) by the annual average for 1969 in the same series (242.1/31.9 = 7.58 x 100). For 2000 the calculation was 260.8/31.9 = 8.175 x 100. For 2002 the calculation was 8.175 + (8.175 -7.58) = 8.77 x 100.

[3] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or later period were substituted. These factors influence the comparability of 1980–98 data with data of earlier years.

[4] Includes VA neuropsychiatry hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[5] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

show a decline between 1998 and 2002 for all types of organizations except RTCs; see table 19.8a and figure 19.10). Although several organization types showed gains in 1998, when measured in constant dollars, only RTCs showed gains between 1998 and 2002 (see figure 19.11). As a result, the proportionate share of total expenditures changed significantly between 1969 and 2002 for some of the organization types. For example, State mental hospitals and VA medical centers comprised only 22 and 3 percent of total expenditures, respectively, in 2002, compared with 55 and 14 percent, respectively, in 1969; private psychiatric hospitals, separate psychiatric services of non-Federal general hospitals, and "all other mental health organizations" comprised 12, 15, and 35 percent, respectively, in 2002, compared with 7, 9, and 7 percent, respectively, in 1969 (see table 19.8b and figure 19.12).

Trends in per capita expenditures (the amount of expenditures per person in the civilian population of the United States) followed patterns similar to those noted above for the absolute expenditures among the various types of mental health organizations between 1969 and 2002. Only non-Federal general hospitals, RTCs, and "all other mental health organizations" showed consistent per capita expenditure increases throughout the period from 1969 to 1998. However, both non-Federal general hospitals and "all other mental health organizations" declined between 1998 and 2002. State mental hospitals and private psychiatric hospitals had declining per capita expenditures after 1994, and VA medical centers had a decline after 1998 (see table 19.8a). When expressed in constant dollars, total per capita expenditures had an inconsistent net decline of $2.97 between 1969 and 2002, from $16.53 to $13.56. Patterns for the individual types of organizations were mixed: State mental hospitals and VA medical centers largely decreased, while "all other mental health organizations" had the largest increase, peaking in 1998, but declining through 2002 (table 19.8b).

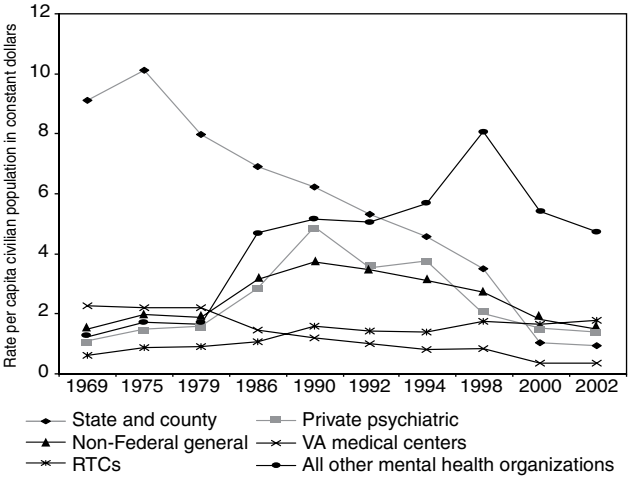


Figure 19.11. Rate of Constant Dollar Expenditures per Capita, by Type of Mental Health Organizations, United States: Selected Years, 1969–2002.

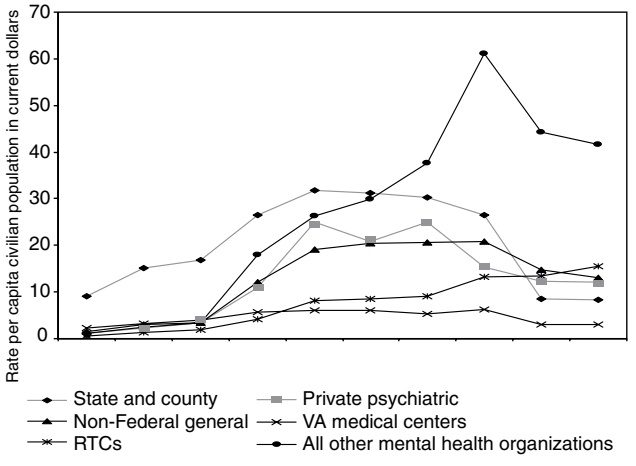


Figure 19.10. Rate of Current Dollar Expenditures per Capita, by Type of Mental Health Organizations, United States: Selected Years, 1969–2002.

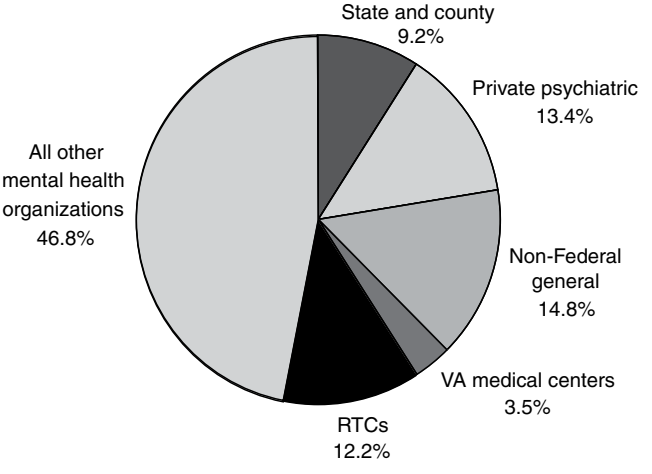


Figure 19.12. Percent Distribution of Expenditures by Type of Organization in 2002.

Revenues by Source

In 2002, revenues of mental health organizations in the United States totaled $37.3 billion, a decrease of $4.3 billion over 2000. Of the 2002 total revenues, 31 percent came from State mental health agencies and other State government funds, 15 percent from client fees, 39 percent from Federal Government sources (including Medicare and Medicaid), 10 percent from local governments, 2 percent from contracts, and 3 percent from all other sources (see table 19.9). The distribution of revenues by source for 2002 was similar to 2000 in that the highest percentage of funds (more than two-thirds) came from Federal and State government funding.

Looking at the revenues received by the different types of mental health organizations, figure 19.13 shows that the largest proportion of revenues, 33 percent, went to "all other mental health organizations." State and county organizations were next with 25 percent, followed by non-Federal general hospitals with 17 percent. The highest revenue increase, 16 percent over 2000, was for RTCs, whereas the largest revenue decrease, 20 percent from 2000, occurred in non-Federal general hospitals.

Major revenue sources also varied among the different mental health organization types in 2002. As would be expected, State mental hospitals obtained most of their funding (72 percent) from State mental health agencies and other State government sources, an increase from 69 percent in 2000 (table 19.9). While almost half (44 percent) of the funding for private psychiatric hospitals came from Medicare and Medicaid, a similar amount (43 percent) came from client fees. Medicaid was the largest source of revenue for RTCs (29 percent). Medicaid also provided the largest amount of funding for "all other mental health organizations," at 37 percent.

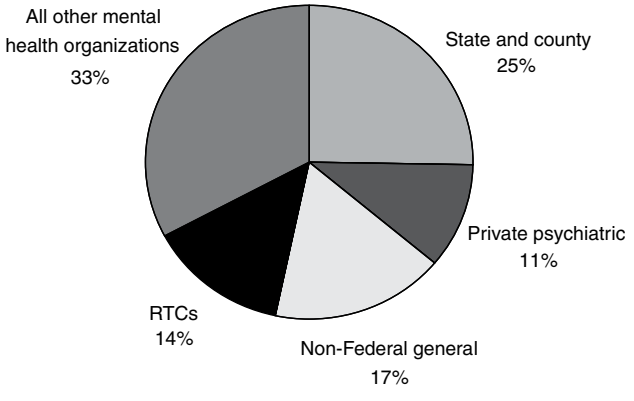


Figure 19.13. Percent Distribution of Revenues by Type of Organization in 2002 (Excludes VA Medical Centers).

Policy Implications

This chapter provides data that allow for the analysis and planning of mental health service delivery.[2] Time series data make it possible to map the trends and the evolution of services for mental health treatment. In addition, recent data, particularly those collected in 2000 and in 2002, provide insight into the large-scale transformations in health care service beginning in the 1990s that emphasized a major shift from inpatient to outpatient care. Analysts of health policy are faced with new challenges following the reform of health care and social service programs, and this is especially true for mental health policy.

Number of Beds

The substantial increase in the number of private psychiatric hospitals and non-Federal general hospital psychiatric inpatient and residential services during the 1980s has generated mergers, consolidations, downsizing, and closings of some of these hospitals. During the 1990s, the number of general hospitals with inpatient psychiatric services fluctuated slightly and then decreased substantially in 2000 concurrent with the supply of inpatient beds. Since 1992, the number of private psychiatric hospitals has declined resulting in a declining number of beds.

The 2002 data for State and county mental hospitals also showed a continued trend for a decline in these services. These facilities show a continued decline in their year-end resident patients and number

[2] In 1993, CMHS changed the name of its Mental Health Statistical Note series to Data Highlights. In addition, instead of presenting detailed and relatively long descriptive reports, the new reports were reduced in size and generally not only present descriptive data as in the past but also give interpretations of the trends and policy implications. Some excerpts from these publications are incorporated into the discussion above. The policy implications cover topics from each of the broad system focuses of this chapter: availability, volume of service, staffing, and financing. These implications can help policy makers and legislators make decisions regarding the types and volume of mental health services to be included as benefits in health care reform legislation at all levels of government and can provide baseline data for years prior to the implementation of managed care.

Table 19.9a. Amount and percent distribution of revenue in thousands of dollars, by type of mental health organization: United States, 1990, 1992, 1994, 1998, 2000, and 2002[1]

Source of revenue	Type of organization											
	All organizations						State and county mental hospitals					
	1990	1992	1994	1998	2000	2002	1990	1992	1994	1998	2000	2002
	Revenues in thousands of dollars											
Total revenue	27,776,102	30,844,812	36,182,690	38,422,487	41,605,285	37,343,154	7,717,856	8,096,881	7,814,103	7,053,896	9,478,887	9,448,517
State mental health agency funds	8,630,498	9,411,914	8,878,168	8,282,641	10,938,575	10,093,820	5,419,765	5,865,998	5,081,037	3,628,001	6,273,044	6,600,863
Other State government	1,437,644	1,027,353	1,973,285	3,491,341	2,543,877	1,508,402	517,856	109,644	433,039	506,412	256,310	156,475
Client fees	6,120,934	6,133,417	6,390,082	1,378,248	4,704311	5,497,544	302,949	294,737	192,112	139,497	216,438	174,170
Medicaid	3,645,107	5,628,876	7,140,560	9,396,981	11,239,738	9,897,184	815,292	1,356,140	1,423,626	1,134,391	2,078,451	1,327,641
Medicare	2,244,945	3,131,280	5,072,842	4,073,793	4,964,161	3,630,063	367,950	297,957	296,460	470,968	280,058	276,667
Other Federal	2,170,072	2,334,653	1,925,562	695,898	2,169,855	839,623	52,004	37,725	96,852	955	72,402	44,394
Local government	2,203,227	2,258,796	2,937,201	3,841,970	3,120,151	3,884,495	159,412	106,184	224,228	507,070	204,927	743,345
Contract funds	279,870	243,511	484,106	439,321	559,644	740,244	16,997	1,166	686	17,271	42,774	16,042
All other sources	1,043,805	675,012	1,380,884	6,822,294	1,364,973	1,171,639	65,631	27,330	66,063	649,331	54,393	108,921
	Percent distribution of revenues											
Total revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State mental health agency funds	31.1	30.5	24.5	21.6	26.3	27.0	70.2	72.5	65.0	51.4	66.2	69.9
Other State government	5.2	3.3	5.5	9.1	6.1	4.0	6.7	1.4	5.5	7.2	2.7	1.7
Client fees	22.0	19.9	17.7	3.6	11.3	14.7	3.9	3.6	2.5	2.0	2.3	1.8
Medicaid	13.1	18.2	19.7	24.5	27.0	26.5	10.5	16.7	18.2	16.1	21.9	14.1
Medicare	8.1	10.2	14.0	10.6	11.9	9.7	4.8	3.7	3.8	6.7	3.0	2.9
Other Federal	7.8	7.6	5.3	1.8	5.2	2.3	0.7	0.5	1.3	0.0	0.8	0.5
Local government	7.9	7.3	8.1	10.0	7.5	10.4	2.1	1.3	2.9	7.2	2.2	7.9
Contract funds	1.0	0.8	1.4	1.1	1.4	2.0	0.2	0.0	0.0	0.2	0.5	0.2
All other sources	3.8	2.2	3.8	17.8	3.3	3.1	0.9	0.3	0.8	9.2	0.6	1.2

[1] 2002 excludes all VA medical centers.

Table 19.9b. Amount and percent distribution of revenue in thousands of dollars, by type of mental health organization: United States, 1990, 1992, 1994, 1998, 2000, and 2002[1]

Source of revenue	Type of organization											
	Private psychiatric hospitals						Non-Federal general hospitals					
	1990	1992	1994	1998	2000	2002	1990	1992	1994	1998	2000	2002
	Revenues in thousands of dollars											
Total revenue	5,320,520	6,055,014	7626498	4,018,331	4,036,763	4,007,102	4,927,298	5,367,425	7,159,263	5,380,980	8,077,965	6,446,363
State mental health agency funds	209,112	82,431	127,677	0	144,887	66,714	177,982	225,679	175,454	47,471	61,700	48,672
Other State government	56,653	51,174	124,791	61,290	102,052	75,026	69,251	42,664	61,819	231,254	323,160	26,180
Client fees	326,421	3,237,863	3,363,513	234,985	1,511,279	1,710,221	1,798,097	1,754,848	1,958,094	165,144	2,148,070	2,027,832
Medicaid	500,722	949,466	1,002,516	1,364,132	1,080,402	1,036,625	1,195,036	1,604,334	1,980,399	976,098	1,405,334	1,544,419
Medicare	575,587	1,192,043	2,010,145	791,554	709,004	730,152	1,195,009	1,503,021	2,512,528	2,512,017	3,806,954	2,378,581
Other Federal	320,091	361,132	275,855	1,792	61,806	94,489	34,065	26,132	94,623	64,576	125,856	47,137
Local government	93,589	94,650	118,362	200,129	187,144	114,056	224,389	108,393	146,667	182,361	104,310	139,112
Contract funds	15,716	34,618	294,520	26,263	24,839	60,721	141,034	60,399	62,574	19,982	86,951	225,527
All other sources	287,629	51,637	309,119	1,338,186	215,349	119,099	92,436	41,955	167,105	1,182,077	15,631	8,904
	Percent distribution of revenues											
Total revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State mental health agency funds	3.9	1.4	1.7	0.0	3.6	1.7	3.6	4.2	2.4	0.9	0.8	0.8
Other State government	1.1	0.8	1.6	1.5	2.5	1.9	1.4	0.8	0.9	4.3	4.0	0.4
Client fees	61.3	53.4	44.1	5.8	37.4	42.7	36.5	32.7	27.4	3.1	26.6	31.5
Medicaid	9.4	15.7	13.1	33.9	26.8	25.9	24.2	29.9	27.7	18.1	17.4	24.0
Medicare	10.8	19.7	26.4	19.7	17.6	18.2	24.2	28.0	35.1	46.7	47.1	36.9
Other Federal	6.0	6.0	3.6	0.0	1.5	2.4	0.7	0.5	1.3	1.2	1.6	0.7
Local government	1.8	1.6	1.6	5.0	4.6	2.8	4.6	2.0	2.0	3.4	1.3	2.2
Contract funds	0.3	0.6	3.9	0.7	0.6	1.5	2.9	1.1	0.9	0.4	1.1	3.5
All other sources	5.4	0.8	4.1	33.3	5.3	3.0	1.9	0.8	2.3	22.0	0.2	0.1

[1] 2002 excludes all VA medical centers.

Table 19.9c. Amount and percent distribution of revenue in thousands of dollars, by type of mental health organization: United States, 1990, 1992, 1994, 1998, 2000, and 2002[1]

Source of revenue	Type of organization												
	VA medical centers						RTCs						
	1990	1992	1994	1998	2000	2002	1990	1992	1994	1998	2000	2002	2002
	Revenues in thousands of dollars												
Total revenue	1,458,573	1,537,624	1,431,333	1,628,863	1,088,456	—	1,960,029	2,152,681	2,390,039	3,518,063	4,442,812	5,167,592	12,273,579
State mental health agency funds	—	—	126497	0	0	—	291,459	357,706	365,589	346,585	454,316	1,071,619	2,305,953
Other State government	—	—	—	0	0	—	397,764	432,613	546,214	1,010,405	920,199	333,930	916,791
Client fees	285	—	11811	0	0	—	192,615	189,469	106,449	85,964	235,414	465,591	1,119,731
Medicaid	—	—	—	0	0	—	152,299	238,469	384,802	1,112,064	1,161,125	1,511,782	4,476,718
Medicare	—	—	—	0	0	—	9,796	11,423	7,444	61,093	12,535	54,202	190,461
Other Federal	1,458,273	1,537,455	1,293,025	0	1,088,456	—	49,907	34,031	57,815	128,946	345,824	205,967	447,636
Local government	—	—	—	0	0	—	632,372	636,180	668,343	349,178	913,716	1,014,568	1,873,414
Contract funds	—	—	—	0	0	—	9,598	25,482	21,379	124,949	95,471	145,348	292,606
All other sources	15	169	0	1,628,853	0	—	224,219	227,308	232,004	298,878	304,211	327,641	607,074
	Percent distribution of revenues												
Total revenue	100.0	100.0	100.0	100.0	100.0	—	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State mental health agency funds	—	—	8.8	0.0	0.0	—	14.9	16.6	15.3	9.9	10.2	20.7	18.8
Other State government	—	—	—	0.0	0.0	—	20.3	20.0	22.8	28.7	20.7	6.5	7.5
Client fees	0.0	0.0	0.8	0.0	0.0	—	9.8	8.8	4.5	2.4	5.3	9.0	9.1
Medicaid	—	—	—	0.0	0.0	—	7.8	11.1	16.1	31.6	26.1	29.3	36.5
Medicare	—	—	—	0.0	0.0	—	0.5	0.5	0.3	1.7	0.3	1.0	1.6
Other Federal	100.0	100.0	90.4	0.0	100.0	—	2.5	1.6	2.4	3.7	7.8	4.0	3.6
Local government	—	—	—	0.0	0.0	—	32.3	29.6	28.0	9.9	20.6	19.6	15.3
Contract funds	—	—	—	0.0	0.0	—	0.5	1.2	0.9	3.6	2.1	2.8	2.4
All other sources	0.0	0.0	0.0	100.0	0.0	—	11.4	10.6	9.7	8.5	6.8	6.3	4.9

[1] 2002 excludes all VA medical centers.

Continued

Table 19.9c. Amount and percent distribution of revenue in thousands of dollars, by type of mental health organization: United States, 1990, 1992, 1994, 1998, 2000, and 2002[1] (Continued)

Source of revenue	All other mental health organizations					
	1990	1992	1994	1998	2000	2002
Total revenue	7,635,185	6,91,725	9,762,456	16,822,354	14,480,402	12,273,579
State mental health agency funds	2,880,100	2,32,180	3,001,915	4,260,584	4,004,629	2,305,953
Other State government	391,258	396,120	807,421	1,681,980	942,157	916,791
Client fees	656,500	565,467	758,103	852,658	593,110	1,119,731
Medicaid	1,480,467	981,758	2,349,217	4,810,296	5,514,424	4,476,718
Medicare	126,834	96,603	246,267	238,161	155,610	190,461
Other Federal	338,178	255,732	107,392	499,629	475,423	447,636
Local government	1,313,389	1,093,465	1,780,601	2,603,232	1,710,053	1,873,414
Contract funds	121,846	96,525	104,948	250,856	309,608	292,606
All other sources	326,613	373,875	606,592	1,724,969	775,388	607,074
	Percent distribution of revenues					
Total revenue	100.0	100.0	100.0	100.0	100.0	100.0
State mental health agency funds	37.7	39.6	30.7	25.3	27.7	18.8
Other State government	5.1	6.2	8.3	10.0	6.5	7.5
Client fees	8.6	8.8	7.8	5.1	4.1	9.1
Medicaid	19.4	15.4	24.1	28.6	38.1	36.5
Medicare	1.7	1.5	2.5	1.4	1.1	1.6
Other Federal	4.4	4.0	1.1	3.0	3.3	3.6
Local government	17.2	17.0	18.2	15.5	11.8	15.3
Contract funds	1.6	1.5	1.1	1.5	2.1	2.4
All other sources	4.3	5.8	6.2	10.3	5.4	4.9

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this cateory included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

[3] Workers in this category have less than a B.A. degree.

of inpatient and residential beds as many State governments struggle to reduce their budgets by eliminating costly hospital and residential programs, stressing community care, and preventing admission to psychiatric beds when possible. This situation is becoming even more critical as responsibilities continue to shift to States. The shift to nonresidential care is shown by the increases in additions to less than 24-hour care since 1969 that only recently declined from 4 million in 2000 to 3.5 million in 2002.

Another factor in the decline in the number of psychiatric inpatient and residential beds may be the increased use of managed care and other cost saving mechanisms, including the substitution of less than 24-hour services for inpatient and residential care to further reduce the length of hospital stays, thereby reducing the cost of employee care to businesses and insurance companies. Indications are that the number of psychiatric beds may continue to decline in the foreseeable future (President's New Freedom Commission on Mental Health, 2004).

Patient Care Episodes

Policy implications evident from the trend data on patient care episodes involve four main issues: (1) the future role of State mental hospitals, (2) the balance between community-based and State mental hospital services, (3) the balance between hospital and residential and ambulatory services, and (4) the contracting by State mental health agencies for the provision of services through the private sector.

As the number of hospital and residential episodes in State mental hospitals continues to decline, policy makers are confronted with momentous decisions. Of particular importance is the question of whether these facilities should be expanded or closed. Some argue that these hospitals have contracted in size to such an extent that persons with severe mental illness are being denied admission, so that further downsizing is unwise. Others argue that all persons, regardless of the severity of their mental illness, can be cared for in the community and that State mental hospitals should be phased out entirely. Confounding the options of the policy makers are economic pressures brought by communities and labor unions to keep the State mental hospitals open and to increase their size.

State mental health agencies favor the expansion of community-based services at the expense of State mental hospital services. Federal legislation promotes community-based services to the exclusion of State mental hospital services in the distribution of community mental health service block grant funds to the States. Furthermore, between 1955 and 2002, aftercare services shifted from the State mental hospitals to community-based facilities. Despite these facts, State mental hospitals still received 70 percent of their revenue from State mental health agencies in 2002, up from 66 percent in 2000 (see table 19.9). In light of this situation, one of the major issues facing the mental health community today is how to strike a balance between the services of community-based mental health agencies and those of State mental hospitals.

The proper balance of hospital and residential with ambulatory services needs to be examined for treatment efficacy as well as for cost benefit. Although the percentage of less than 24-hour care is now much greater than it was between 1955 and 1971, the proportion has remained almost the same since 1975. Decisions will have to be made about the role of ambulatory versus hospital and residential services and, in particular, about whether ambulatory services should be increased at the expense of hospital and residential services.

The President's New Freedom Commission on Mental Health called for fully integrating people with mental illness into the community by enabling them to live, work, study, and participate in all activities.

Staffing

Accompanying trends in the number of mental health organizations and their caseloads since 1970 has been trends in the number of FTE staff these organizations employ. Increases occurred among the professional patient care staff, notably in the number of psychiatrists, psychologists, social workers, registered nurses, and other mental health professionals. The number of professional staff has more than doubled compared with a 6 percent increase in administrative, clerical, and maintenance (support) staff and a 30 percent increase in other mental health workers (paraprofessional) staff. This can be attributed in large part to the expansion of community-based mental health care services during this period, which has led to a greater emphasis on short-term hospital and residential as well as less than 24-hour care and partial care services, with the primary goal of keeping clients functioning in their own communities.

A feature of the contemporary evolution of health care service has been the replacement of higher cost professionals, particularly physicians, with other staff in less expensive labor categories, such as registered nurses. While the overall number of FTE

staff in all mental health organizations increased in the 28 years between 1972 and 2000, the number of psychiatrists serving these mental health institutions increased at a slower rate than other professional staff. Between 1972 and 2000, the number of psychiatrists increased by 56 percent and the number of other physicians decreased by 26 percent. In contrast, the number of psychologists doubled, and the number of social workers nearly tripled.

As the trends in the number and rates per population associated with hospital and residential care (e.g., decreases in resident patients and psychiatric beds) appear to be leveling off and policies regarding the effectiveness of long-term hospital and residential care versus short-term hospital and residential and ambulatory care come under review, the future human resource needs of mental health organizations must be assessed, particularly whether the supply of paraprofessional and professional mental health care workers needs to be augmented or selectively reduced. Consideration must also be given to the substitutability of staff disciplines in certain situations.

Managed Care

In 1998, 66 percent of all mental health organizations were part of one or more managed care networks, compared with 40 percent in 1994. Non-Federal general hospitals with separate psychiatric services and private psychiatric hospitals had the largest percentage of managed care participants—92 and 81 percent, respectively. The next largest percentages were all others (56 percent), RTCs (46 percent), and VA medical centers (48 percent). The organizations least likely to be part of managed care networks were State mental hospitals (14 percent).

Expenditures

With the advent of health care reform, much interest has developed in the role of inflation in the increase of expenditures by mental health organizations. Both the number of private psychiatric hospitals and their expenditures increased dramatically between 1969 and 2002, but declines were seen in both current and constant expenditures between 1994 and 2002. Non-Federal general hospitals with psychiatric services showed constant increases in expenditures and per capita between 1969 and 2000 as measured in current dollars, but they showed a constant decrease between 1990 and 2002 if measured in constant dollars. Yet their 24-hour care population continued to increase up to 1998. VA medical centers, RTCs, and "all other mental health organizations" showed increased expenditures in both current and constant dollars and in per capita through 1998. However, since 1998, only RTCs have shown increased expenditures in both current and constant dollars and in per capita; VA medical centers and "all other mental health organizations" have exhibited marked declines during the same period.

Mental Health Services Data by State

In conjunction with the preparation of national data for this chapter, CMHS tabulated the 2002 inventory data by State. In recent years, these State data have become increasingly important for managers of State mental health agencies, enabling them to compare their program statistics with those of other States and with national totals. In addition, State legislators, budget officers, and planners of mental health services frequently ask program administrators to furnish comparable statistical information from other States. Although State populations, programs, services, and funding patterns differ somewhat, State mental health program directors have usually identified enough similarities between their State and one or several others to make statistical comparisons. Among the most important factors in selecting other States for comparison is the need for States to have similarly organized services as well as somewhat similar populations. Geographical proximity may also be a relevant factor.

Tables 19.10, 19.10a, and 19.10b show the number of facilities in each State in each of the six facility types. Table 19.10 lists the number of facilities offering any services; table 19.10a lists the number providing 24-hour hospital inpatient and residential care; and table 19.10b lists the number in each State providing outpatient care. All three tables compare the number of facilities in 2002 with the numbers in 1992, 1994, 1998, and 2000.

Figures 19.14, 19.15, and 19.16 show three key variables by State: (1) inpatient and residential treatment beds, (2) inpatient and residential treatment additions, and (3) outpatient additions. All three maps display rates per 100,000 civilian population on July 1, 2002. Psychiatric inpatient and residential treatment beds (figure 19.14) were least common in the western States and most common

Table 19.10. Number of mental health organizations by type of organization and State: United States, 1992, 1994, 1998, 2000, and 2002

State/territory	State and county					Private psychiatric					Non-Federal general					VA medical centers				
	’92	’94	’98	’00	’02	’92	’94	’98	’00	’02	’92	’94	’98	’00	’02	’92	’94	’98	’00	’02
Total, U.S.	278	260	234	229	227	478	433	351	271	255	1,620	1,616	1,709	1,373	1,285	163	162	146	143	139
Excluding territories	273	256	229	223	222	475	430	348	269	253	1,616	1,612	1,707	1,373	1,285	162	161	145	142	138
Alabama	6	5	6	5	5	4	4	3	2	2	33	31	35	24	21	3	3	3	2	2
Alaska	1	1	1	1	1	2	2	1	1	1	3	4	7	5	4	1	1	1	1	0
Arizona	1	1	1	1	1	13	9	9	5	3	12	14	16	15	12	3	3	3	3	3
Arkansas	1	1	1	1	1	6	6	8	5	6	17	20	28	21	17	2	2	2	2	2
California	6	5	8	8	7	58	48	45	31	26	119	124	136	105	86	12	12	11	7	5
Colorado	3	3	2	2	2	6	6	7	5	5	19	19	18	11	11	3	3	3	3	2
Connecticut	8	5	3	3	3	6	6	5	6	5	27	25	26	21	20	3	3	2	1	1
Delaware	2	2	1	1	1	2	2	2	2	2	6	5	5	3	3	1	1	1	1	1
District of Columbia	1	1	1	1	1	1	1	1	1	1	8	8	7	8	7	1	1	1	1	1
Florida	8	8	5	5	4	35	27	24	23	17	60	65	65	48	42	4	4	6	6	6
Georgia	8	8	4	7	7	15	15	14	9	10	33	31	33	22	24	3	3	3	3	3
Hawaii	1	1	1	1	1	0	1	1	0	0	8	8	8	7	6	1	1	1	1	1
Idaho	2	2	2	2	2	6	4	2	1	1	4	4	6	4	5	1	1	1	1	1
Illinois	12	12	11	10	9	12	11	7	8	7	88	89	88	75	68	6	6	6	6	6
Indiana	8	6	6	6	6	18	21	15	8	8	42	42	46	36	33	3	3	2	3	3
Iowa	5	5	4	4	4	0	0	0	0	0	33	35	35	25	26	3	3	2	3	3
Kansas	4	4	3	3	3	9	7	4	1	1	24	23	23	20	17	3	3	2	2	2
Kentucky	4	4	4	5	5	9	9	8	8	8	28	28	31	27	22	2	2	2	2	2
Louisiana	6	6	6	6	6	21	17	11	7	7	33	35	45	41	35	3	3	3	3	3
Maine	2	2	2	2	2	1	2	1	2	2	9	9	10	8	8	1	1	1	1	1
Maryland	9	9	8	8	8	7	6	5	4	3	29	28	26	24	29	3	3	1	1	1
Massachusetts	8	6	6	6	5	11	11	9	10	9	63	55	59	39	36	4	4	4	4	4
Michigan	12	8	7	6	5	8	9	8	7	6	67	66	69	44	43	4	4	5	5	5
Minnesota	7	6	5	5	5	2	1	1	0	0	39	32	35	26	28	2	2	2	2	2
Mississippi	2	2	2	2	2	4	4	4	4	3	11	12	26	19	19	2	2	2	2	2
Missouri	8	9	9	8	8	8	9	8	6	6	50	52	53	38	37	4	4	5	4	4
Montana	1	1	1	1	1	4	2	2	1	1	5	4	5	4	4	1	1	1	1	1
Nebraska	3	3	3	3	3	2	2	1	2	1	9	10	7	5	7	3	3	3	3	1
Nevada	2	3	3	3	3	3	3	4	3	3	3	4	4	3	4	2	2	2	2	2
New Hampshire	1	1	1	1	1	3	3	3	1	1	12	10	11	9	9	1	1	1	1	1
New Jersey	11	12	10	11	12	5	5	7	4	4	51	50	50	45	39	2	2	1	2	2
New Mexico	2	2	2	3	2	7	6	4	3	2	7	8	9	8	8	1	1	1	1	1
New York	32	30	23	26	27	15	12	12	9	9	106	110	113	106	98	12	11	6	7	8
North Carolina	4	4	4	4	4	11	9	6	6	8	43	42	44	43	42	4	4	4	4	4
North Dakota	1	1	1	1	1	0	0	0	0	1	7	7	7	8	6	1	1	1	1	1
Ohio	15	13	9	7	6	10	9	8	7	5	82	79	84	69	66	5	5	4	4	4
Oklahoma	4	3	5	3	3	10	11	9	7	8	21	26	32	30	26	2	2	2	2	2
Oregon	3	3	2	2	3	1	1	1	0	0	13	12	15	14	14	3	3	2	3	3
Pennsylvania	13	13	11	9	9	24	25	18	15	17	103	104	112	91	93	9	9	8	8	7
Rhode Island	1	0	0	0	0	2	2	2	2	2	7	5	4	3	5	1	1	1	1	1
South Carolina	5	5	4	5	3	5	5	4	2	4	14	15	16	15	11	2	2	2	2	2
South Dakota	1	1	1	1	1	1	1	0	0	0	3	3	5	5	5	3	3	2	2	3
Tennessee	5	5	5	5	5	12	11	7	9	9	47	48	41	29	29	4	4	4	4	4
Texas	8	9	7	9	9	61	48	35	22	22	77	77	75	58	52	10	10	8	8	8
Utah	1	1	2	1	1	6	6	2	3	2	15	11	9	8	5	1	1	1	1	1
Vermont	1	1	1	1	1	1	1	1	1	1	5	5	3	4	2	1	1	1	1	1
Virginia	10	10	10	9	10	13	14	10	7	5	39	39	43	35	36	3	3	3	3	3
Washington	3	3	3	3	4	3	3	2	1	2	22	22	22	15	17	4	4	3	3	3
West Virginia	2	2	2	2	2	3	3	2	3	3	11	13	14	9	10	4	4	4	3	4
Wisconsin	8	7	9	3	6	8	9	4	4	3	45	40	42	39	36	3	3	3	3	3
Wyoming	1	1	1	1	1	1	1	1	1	1	4	4	4	2	2	2	2	2	2	2

Continued

Table 19.10. Number of mental health organizations by type of organization and State: United States, 1992, 1994, 1998, 2000, and 2002 (Continued)

	RTCs					All other mental health organizations				
State/territory	’92	’94	’98	’00	’02	’92	’94	’98	’00	’02
Total, United States	497	459	462	476	510	2,476	2,492	2,843	2,066	1,900
Excluding territories	497	459	461	475	508	2,460	2,474	2,832	2,059	1,894
Alabama	4	4	4	6	7	26	25	33	26	26
Alaska	2	2	7	5	6	35	35	44	29	27
Arizona	9	7	8	6	6	16	26	38	24	23
Arkansas	4	1	1	4	5	17	18	20	11	12
California	47	43	49	50	53	211	205	299	210	188
Colorado	13	12	12	12	12	20	24	24	19	20
Connecticut	6	7	6	15	14	74	101	88	58	53
Delaware	7	6	4	5	4	9	14	11	8	9
District of Columbia	1	2	1	3	2	33	24	19	13	14
Florida	12	14	18	18	19	58	65	105	58	64
Georgia	3	4	4	3	5	33	28	36	28	25
Hawaii	2	1	0	0	1	14	27	17	11	11
Idaho	2	2	1	2	2	18	16	12	15	14
Illinois	23	20	25	20	23	131	129	141	118	111
Indiana	9	9	10	11	12	13	18	68	33	30
Iowa	8	8	8	9	8	40	41	42	31	29
Kansas	5	6	5	3	3	28	28	27	26	26
Kentucky	11	9	7	7	6	15	15	19	13	14
Louisiana	5	3	2	2	2	48	48	47	41	38
Maine	3	2	3	4	5	32	34	29	19	17
Maryland	11	9	10	11	11	56	52	48	41	35
Massachusetts	47	38	31	32	31	115	97	108	85	68
Michigan	20	17	16	13	15	91	89	78	71	66
Minnesota	16	17	19	15	13	106	108	118	67	60
Mississippi	2	3	3	4	5	17	16	16	15	14
Missouri	14	13	13	13	13	39	40	34	26	23
Montana	2	1	2	3	3	5	6	4	4	4
Nebraska	3	2	6	6	6	23	25	22	15	13
Nevada	1	1	1	2	2	3	2	5	4	3
New Hampshire	0	9	8	7	7	10	17	16	10	10
New Jersey	12	11	10	8	8	57	63	68	51	48
New Mexico	16	18	13	11	10	28	28	34	21	20
New York	32	28	27	30	33	186	174	182	139	130
North Carolina	8	6	7	10	11	34	35	37	33	34
North Dakota	2	1	1	1	1	8	8	8	8	8
Ohio	26	25	14	21	23	185	180	166	122	109
Oklahoma	1	0	0	2	1	64	55	47	48	39
Oregon	11	13	17	14	13	58	65	84	65	59
Pennsylvania	22	18	22	21	23	148	146	126	101	93
Rhode Island	2	1	1	3	3	14	16	16	12	11
South Carolina	3	2	3	3	4	17	18	17	17	17
South Dakota	4	4	4	5	4	13	14	14	11	11
Tennessee	6	5	5	3	6	33	31	26	22	15
Texas	13	10	12	11	12	48	47	53	46	43
Utah	2	2	2	4	10	13	11	11	9	6
Vermont	5	5	4	3	4	10	10	10	10	10
Virginia	5	5	4	7	12	46	49	45	44	41
Washington	11	10	9	8	8	58	55	84	63	59
West Virginia	3	2	2	2	2	15	15	15	13	13
Wisconsin	16	16	15	14	14	73	66	205	79	67
Wyoming	5	5	5	3	5	16	15	16	16	14

Table 19.10a. Number of mental health organizations providing 24-hour hospital or residential treatment care, by type of organization and State: United States, 1992, 1994, 1998, 2000, and 2002

State/territory	State and county					Private psychiatric					Non-Federal general				
	1992	1994	1998	2000	2002	1992	1994	1998	2000	2002	1992	1994	1998	2000	2002
Total, United States	278	260	234	229	227	478	433	351	271	255	1,520	1,534	1,594	1,325	1,231
Excluding territories	273	256	229	223	222	475	430	348	269	255	1,517	1,531	1,593	1,325	1,231
Alabama	6	5	6	5	5	4	4	3	2	2	33	31	34	24	20
Alaska	1	1	1	1	1	2	2	1	1	1	3	4	5	4	4
Arizona	1	1	1	1	1	13	9	9	5	3	10	13	15	14	12
Arkansas	1	1	1	1	1	6	6	8	5	6	17	19	26	20	16
California	6	5	8	8	7	58	48	45	31	26	104	110	121	100	78
Colorado	3	3	2	2	2	6	6	7	5	5	17	18	17	11	9
Connecticut	8	5	3	3	3	6	6	5	6	5	24	23	24	20	20
Delaware	2	2	1	1	1	2	2	2	2	2	5	5	5	3	3
District of Columbia	1	1	1	1	1	1	1	1	1	1	8	8	7	8	7
Florida	8	8	5	5	4	35	27	24	23	17	60	64	61	48	42
Georgia	8	8	4	7	7	15	15	14	9	10	33	29	30	21	23
Hawaii	1	1	1	1	1	1	1	1	0	0	5	5	5	6	6
Idaho	2	2	2	2	2	6	4	2	1	1	4	4	5	4	5
Illinois	12	12	11	10	9	12	11	7	8	7	83	86	85	74	67
Indiana	8	6	6	6	6	18	21	15	8	8	41	42	45	36	33
Iowa	5	5	4	4	4	0	0	0	0	0	29	31	32	24	24
Kansas	4	4	3	3	3	9	7	4	1	1	23	23	23	20	17
Kentucky	4	4	4	5	5	9	9	8	8	8	28	28	31	27	22
Louisiana	6	6	6	6	6	21	17	11	7	7	32	35	42	40	34
Maine	2	2	2	2	2	1	2	1	2	2	9	9	10	8	8
Maryland	9	9	8	8	8	7	6	5	4	3	28	27	25	23	28
Massachusetts	8	6	6	6	5	11	11	9	10	9	55	50	54	38	36
Michigan	12	8	7	6	5	8	9	8	7	6	63	61	62	42	41
Minnesota	7	6	5	5	5	2	1	1	0	0	27	26	26	23	25
Mississippi	2	2	2	2	2	4	4	4	4	3	11	12	25	19	18
Missouri	8	9	9	8	8	8	9	8	6	6	46	47	49	36	34
Montana	1	1	1	1	1	4	2	2	1	1	4	4	5	4	4
Nebraska	3	3	3	3	3	2	2	1	2	1	8	10	5	5	7
Nevada	2	3	3	3	3	2	3	4	3	3	3	4	3	3	3
New Hampshire	1	1	1	1	1	3	3	3	1	1	12	10	9	9	9
New Jersey	11	12	10	11	12	5	5	7	4	4	47	46	43	42	37
New Mexico	2	2	2	3	2	7	6	4	3	2	6	8	9	8	8
New York	32	30	23	26	27	15	12	12	9	9	100	103	105	101	93
North Carolina	4	4	4	4	4	11	9	6	6	8	43	42	42	42	42
North Dakota	1	1	1	1	1	0	0	0	0	1	7	7	7	8	6
Ohio	15	13	9	7	6	10	9	8	7	5	79	76	82	68	65
Oklahoma	4	3	5	3	3	10	11	9	7	8	21	26	31	28	25
Oregon	3	3	2	2	3	1	1	1	0	0	13	12	14	14	13
Pennsylvania	13	13	11	9	9	24	25	18	15	17	101	102	109	91	90
Rhode Island	1	0	0	0	0	2	2	2	2	2	5	5	4	3	5
South Carolina	5	5	4	5	3	5	5	4	2	4	14	15	16	14	10
South Dakota	1	1	1	1	1	1	1	0	0	0	3	3	5	5	5
Tennessee	5	5	5	5	5	12	11	7	9	9	45	47	39	29	29
Texas	8	9	7	9	9	61	48	35	22	22	77	77	69	52	49
Utah	1	1	2	1	1	6	6	2	3	2	14	11	9	8	5
Vermont	1	1	1	1	1	1	1	1	1	1	5	5	3	4	2
Virginia	10	10	10	9	10	13	14	10	7	5	39	37	40	34	33
Washington	3	3	3	3	4	3	3	2	1	2	20	20	21	14	16
West Virginia	2	2	2	2	2	3	3	2	3	3	11	13	13	9	9
Wisconsin	8	7	9	3	6	8	9	4	4	3	38	34	37	35	32
Wyoming	1	1	1	1	1	1	1	1	1	1	4	4	4	2	2

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Table 19.10a. Number of mental health organizations providing 24-hour hospital or residential treatment care, by type of organization and State: United States, 1992, 1994, 1998, 2000, and 2002 (Continued)

State/territory	VA medical centers					RTCs					All other mental health organizations				
	1992	1994	1998	2000	2002	1992	1994	1998	2000	2002	1992	1994	1998	2000	2002
Total, United States	134	136	124	134	132	497	459	462	476	510	526	1,023	977	776	688
Excluding territories	133	135	123	133	131	497	459	461	475	508	520	1,016	975	774	686
Alabama	2	2	2	2	2	4	4	4	6	7	13	20	20	19	20
Alaska	0	0	0	1	0	2	2	7	5	6	6	15	15	10	6
Arizona	2	2	3	3	3	9	7	8	6	6	13	10	13	8	10
Arkansas	2	2	2	2	2	4	1	1	4	5	7	11	12	6	5
California	8	8	8	5	5	47	43	49	50	53	50	64	72	42	43
Colorado	3	3	2	2	2	13	12	12	12	12	11	16	12	12	12
Connecticut	3	3	2	1	1	6	7	6	15	14	2	27	23	15	15
Delaware	1	0	0	1	0	7	6	4	5	4	0	5	4	5	5
District of Columbia	1	1	1	1	1	1	2	1	3	2	2	8	4	3	2
Florida	4	4	6	6	6	12	14	18	18	19	32	41	57	32	34
Georgia	3	3	3	3	3	3	4	4	3	5	30	28	19	21	20
Hawaii	0	1	1	1	1	2	1	0	0	1	3	6	4	1	1
Idaho	1	1	1	1	1	2	2	1	2	2	0	0	0	0	0
Illinois	5	5	6	6	6	23	20	25	20	23	18	63	58	57	48
Indiana	2	2	2	3	3	9	9	10	11	12	5	17	28	21	20
Iowa	2	2	2	3	3	8	8	8	9	8	9	11	8	8	6
Kansas	3	3	2	2	2	5	6	5	3	3	5	8	3	5	2
Kentucky	2	2	2	2	2	11	9	7	7	6	9	10	10	9	10
Louisiana	3	3	3	3	3	5	3	2	2	2	2	3	3	1	0
Maine	1	1	1	1	1	3	2	3	4	5	7	12	12	12	9
Maryland	2	3	1	1	1	11	9	10	11	11	5	24	19	23	20
Massachusetts	4	4	4	4	4	47	38	31	32	31	26	56	57	46	37
Michigan	3	3	3	4	4	20	17	16	13	15	22	37	24	23	19
Minnesota	2	2	2	2	2	16	17	19	15	13	8	22	22	19	14
Mississippi	2	2	2	2	2	2	3	3	4	5	10	15	14	14	13
Missouri	4	4	5	4	3	14	13	13	13	13	11	18	14	10	9
Montana	1	1	1	1	1	2	1	2	3	3	0	5	3	4	4
Nebraska	2	2	2	1	1	3	2	6	6	6	2	8	8	7	7
Nevada	1	1	1	2	2	1	1	1	2	2	2	1	2	0	0
New Hampshire	1	0	0	1	1	0	9	8	7	7	4	15	15	10	10
New Jersey	2	2	1	2	2	12	11	10	8	8	5	27	26	21	19
New Mexico	1	1	1	1	1	16	18	13	11	10	5	6	8	7	6
New York	11	10	6	7	8	32	28	27	30	33	8	40	47	32	28
North Carolina	4	4	4	4	4	8	6	7	10	11	19	29	26	21	18
North Dakota	0	1	1	1	1	2	1	1	1	1	6	8	7	7	8
Ohio	4	4	4	4	4	26	25	14	21	23	43	67	61	42	37
Oklahoma	1	1	1	2	2	1	0	0	2	1	8	14	12	6	4
Oregon	3	3	2	2	2	11	13	17	14	13	4	22	24	17	14
Pennsylvania	5	6	5	7	6	22	18	22	21	23	18	63	53	45	42
Rhode Island	1	1	1	1	1	2	1	1	3	3	1	12	12	9	8
South Carolina	2	2	2	2	2	3	2	3	3	4	3	0	3	5	6
South Dakota	3	3	2	2	2	4	4	4	5	4	2	6	6	4	5
Tennessee	4	4	4	4	4	6	5	5	3	6	8	17	15	11	7
Texas	7	7	5	8	8	13	10	12	11	12	30	39	33	22	15
Utah	1	1	1	1	1	2	2	2	4	10	7	7	7	6	4
Vermont	1	1	1	1	1	5	5	4	3	4	1	9	9	10	10
Virginia	3	3	3	3	3	5	5	4	7	12	10	21	21	22	19
Washington	3	4	3	3	3	11	10	9	8	8	13	22	22	18	15
West Virginia	2	3	2	3	4	3	2	2	2	2	7	14	11	10	10
Wisconsin	3	3	3	3	3	16	16	15	14	14	7	16	15	13	7
Wyoming	1	1	1	1	1	5	5	5	3	5	1	4	2	3	3

Table 19.10b. Number of mental health organizations providing less than 24-hour care, by type of organization and State: United States, 1992, 1994, 1998, 2000, and 2002

State/territory	State and county					Private psychiatric					Non-Federal general				
	1992	1994	1998	2000	2002	1992	1994	1998	2000	2002	1992	1994	1998	2000	2002
Total, United States	77	71	62	65	64	198	348	265	237	215	619	876	966	815	785
Excluding territories	75	70	60	61	61	198	347	263	235	213	618	875	965	815	785
Alabama	0	0	0	0	0	2	4	2	2	2	5	9	11	11	9
Alaska	0	0	0	0	0	2	2	1	0	0	0	2	5	3	2
Arizona	0	0	0	0	0	8	8	8	3	3	5	7	6	9	9
Arkansas	0	0	0	0	0	2	6	6	5	5	2	4	7	6	5
California	0	1	4	3	3	16	38	28	24	19	40	71	72	53	51
Colorado	2	2	1	1	1	1	5	5	5	5	11	16	15	8	9
Connecticut	1	1	1	0	0	3	6	5	6	5	24	23	22	18	18
Delaware	1	1	0	0	0	0	2	2	1	2	3	2	3	1	2
District of Columbia	1	1	1	1	1	0	1	1	1	1	4	4	4	6	4
Florida	0	1	0	1	0	9	18	18	22	17	14	39	36	30	23
Georgia	0	0	0	1	1	9	11	9	9	7	13	19	17	18	18
Hawaii	0	0	0	0	0	0	1	1	0	0	4	4	4	5	4
Idaho	0	0	0	0	0	5	4	2	1	1	1	2	3	3	4
Illinois	1	0	0	0	0	4	10	7	7	6	40	55	59	52	51
Indiana	1	0	0	0	0	16	17	12	8	8	20	20	24	23	19
Iowa	3	0	0	1	1	0	0	0	0	10	12	22	28	18	22
Kansas	0	0	0	0	0	3	7	4	1	1	5	7	7	5	7
Kentucky	1	0	0	1	1	3	5	6	7	7	2	4	7	5	12
Louisiana	1	0	0	1	3	7	14	7	5	5	10	12	23	23	15
Maine	1	1	1	2	2	1	2	1	2	1	3	5	8	7	5
Maryland	2	1	0	1	1	5	6	5	4	3	8	15	18	18	21
Massachusetts	1	2	1	0	0	4	6	8	10	8	43	44	43	33	25
Michigan	4	2	1	0	0	3	8	7	6	5	27	48	55	35	31
Minnesota	0	1	1	1	1	1	0	0	0	0	30	22	24	15	19
Mississippi	0	0	0	2	1	2	3	3	4	3	3	6	9	7	6
Missouri	5	5	4	2	1	2	5	5	5	4	22	28	28	22	20
Montana	0	0	0	0	0	0	2	2	1	1	2	3	4	3	3
Nebraska	0	2	2	2	2	1	1	1	2	1	4	5	3	4	4
Nevada	2	2	2	2	2	0	2	2	3	2	1	2	2	2	3
New Hampshire	0	0	0	0	0	0	3	2	1	0	1	3	6	7	6
New Jersey	1	1	0	1	1	4	5	6	4	4	28	32	31	33	29
New Mexico	0	1	1	3	2	3	5	3	3	2	3	3	5	5	5
New York	29	28	19	23	23	4	5	5	5	6	68	71	72	68	70
North Carolina	0	0	0	0	0	8	7	6	5	6	6	13	17	23	19
North Dakota	0	0	0	1	1	0	0	0	0	1	4	4	5	6	6
Ohio	1	2	3	4	4	9	9	6	5	4	26	48	57	37	38
Oklahoma	2	1	3	1	1	5	11	7	7	6	5	11	13	10	10
Oregon	0	0	0	0	1	0	0	0	0	0	5	8	11	7	5
Pennsylvania	0	0	0	0	0	12	18	13	13	13	38	46	53	49	51
Rhode Island	0	0	0	0	0	2	1	2	2	2	4	3	3	3	3
South Carolina	0	0	1	1	1	1	2	2	1	2	3	8	10	10	7
South Dakota	1	1	1	0	0	1	1	0	0	0	1	1	1	3	3
Tennessee	0	1	0	1	0	5	8	6	8	9	7	15	13	11	12
Texas	7	7	5	0	0	17	45	31	20	21	15	37	41	32	26
Utah	0	0	0	0	0	3	6	0	3	2	9	8	6	4	2
Vermont	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Virginia	2	1	1	0	1	7	14	9	5	4	5	18	26	28	28
Washington	0	1	1	1	1	1	2	2	1	2	8	11	10	6	9
West Virginia	0	0	0	0	0	1	2	0	2	2	0	4	6	3	4
Wisconsin	5	3	6	2	3	5	8	4	4	3	22	29	30	26	28
Wyoming	0	0	0	1	1	1	1	1	1	1	2	2	2	1	2

Continued

Table 19.10b. Number of mental health organizations providing less than 24-hour care, by type of organization and State: United States, 1992, 1994, 1998, 2000, and 2002 (Continued)

	VA medical centers					RTCs					All other mental health organizations				
State/territory	**1992**	**1994**	**1998**	**2000**	**2002**	**1992**	**1994**	**1998**	**2000**	**2002**	**1992**	**1994**	**1998**	**2000**	**2002**
Total, United States	162	149	129	116	115	167	227	211	286	314	2,186	2,435	2,771	2,032	1,888
Excluding territories	161	148	128	115	114	167	227	209	285	312	2,171	2,420	2,760	2,025	1,882
Alabama	3	3	3	2	2	0	3	3	4	4	25	24	33	26	26
Alaska	1	1	1	0	0	1	2	5	4	4	32	35	42	27	26
Arizona	3	3	2	3	3	3	5	6	5	5	21	26	36	23	22
Arkansas	2	2	2	1	2	3	1	1	3	3	17	18	20	11	12
California	12	12	11	7	5	11	21	24	28	34	178	198	290	204	187
Colorado	3	3	3	3	2	3	5	4	8	8	19	23	24	19	20
Connecticut	3	3	2	1	1	0	3	3	10	9	43	94	85	56	53
Delaware	1	1	1	0	1	3	2	3	2	3	8	14	11	8	9
District of Columbia	1	1	0	0	1	1	0	1	3	1	21	23	17	13	14
Florida	4	3	5	5	6	6	8	9	12	12	54	64	101	55	61
Georgia	3	3	2	3	2	0	1	1	2	2	33	28	36	28	25
Hawaii	1	0	1	0	1	1	0	0	0	0	12	25	16	11	11
Idaho	1	1	1	0	0	0	1	0	1	1	18	16	12	15	14
Illinois	6	4	5	2	2	10	13	16	16	16	113	129	137	117	111
Indiana	3	3	2	2	2	1	3	3	8	8	13	18	63	32	29
Iowa	3	3	2	2	2	2	3	6	7	7	37	39	42	31	29
Kansas	3	2	2	2	2	3	3	2	1	1	28	28	27	26	26
Kentucky	2	2	1	0	0	2	3	1	3	2	14	15	19	13	14
Louisiana	3	3	3	3	2	0	0	0	0	0	46	48	47	40	38
Maine	1	1	1	1	1	2	2	3	4	4	23	34	29	18	17
Maryland	3	3	1	1	1	2	6	5	6	7	41	51	47	41	35
Massachusetts	4	4	4	3	4	16	18	12	12	13	87	93	103	83	68
Michigan	4	4	5	3	2	7	9	8	3	5	90	88	78	71	66
Minnesota	2	2	2	2	2	5	8	5	5	5	90	101	109	64	60
Mississippi	2	2	2	2	1	0	1	1	3	4	18	16	15	15	14
Missouri	4	3	4	4	4	8	9	7	10	10	38	40	34	26	23
Montana	1	1	1	0	1	0	0	0	2	3	5	6	4	4	4
Nebraska	3	2	2	3	1	1	1	2	2	4	18	23	22	13	12
Nevada	2	2	2	2	2	1	1	1	2	1	3	2	5	4	3
New Hampshire	1	1	1	1	1	0	2	0	0	1	10	15	14	10	10
New Jersey	2	2	0	2	2	3	3	3	3	4	50	59	65	49	47
New Mexico	1	1	1	1	1	4	6	5	7	6	23	28	33	21	2
New York	11	10	6	6	7	12	15	13	21	22	162	173	178	136	130
North Carolina	4	3	1	3	3	6	4	5	8	6	34	35	36	32	33
North Dakota	1	1	1	1	1	0	0	0	0	0	8	8	8	8	8
Ohio	5	4	4	4	4	15	18	8	20	21	169	177	165	121	109
Oklahoma	2	2	2	2	2	0	0	0	1	0	64	54	46	48	39
Oregon	3	3	2	3	3	6	8	5	10	10	51	64	78	64	58
Pennsylvania	9	9	7	7	6	6	11	10	15	17	114	144	125	101	93
Rhode Island	1	0	0	1	1	0	1	0	2	3	14	16	16	12	11
South Carolina	2	2	2	2	2	2	1	2	2	3	17	18	17	17	17
South Dakota	3	2	2	2	2	1	3	2	3	2	13	14	14	11	11
Tennessee	4	4	4	4	4	4	4	4	2	2	30	31	26	22	15
Texas	10	10	8	6	7	3	1	2	3	5	47	47	53	46	42
Utah	1	1	1	1	1	0	1	1	3	7	13	11	10	9	6
Vermont	1	1	1	1	1	0	1	1	1	1	10	10	10	10	10
Virginia	3	2	2	3	3	1	1	1	2	3	45	49	45	44	41
Washington	4	4	2	1	1	5	6	5	5	7	56	55	84	63	59
West Virginia	4	4	4	3	3	0	1	1	1	1	15	15	15	13	13
Wisconsin	3	3	2	3	2	5	5	7	8	10	65	63	202	78	67
Wyoming	2	2	2	1	2	2	3	3	2	5	16	15	16	16	14

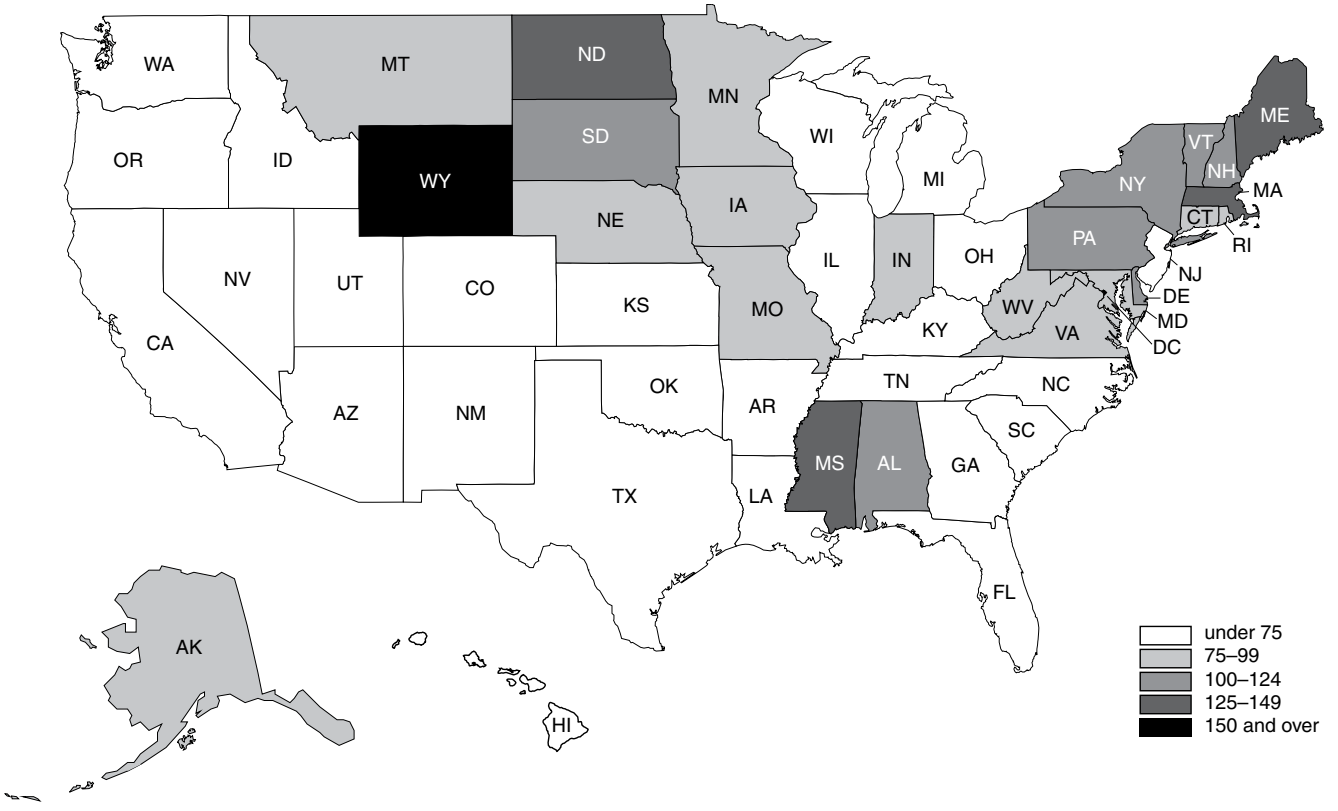

Figure 19.14. Total Psychiatric Inpatient and Residential Treatment Beds per 100,000 Civilian Population by State: United States, 2002.

in the Northeast. Wyoming had an unusually high rate of inpatient and residential beds for a western State, whereas much of the Southeast has low bed rates.

Inpatient and residential treatment additions (figure 19.15) displayed a similar regional pattern, being less frequent in the western States. A band of high admission rates was seen throughout a number of midwestern States, including Wisconsin, Iowa, Missouri, and Oklahoma, and many of the adjacent States also had relatively high addition rates. In the East, only Florida had a low addition rate.

High outpatient addition rates were found in Wyoming and Wisconsin (figure 19.16) in addition to a cluster of New England States—Massachusetts, Connecticut, New Hampshire, and Maine. The areas with the lowest rates were again the West and also the Southeast.

Data from the 2002 SMHO, similar to those presented in the figures, are available in unpublished form from CMHS. Comparative State data for 1983, 1986, and 1988 can be found in *Mental Health, United States, 1992;* for 1986, 1988, and 1990 in *Mental Health, United States, 1994;* for 1986, 1990, and 1992 in *Mental Health, United States, 1996;* for 1990, 1992, and 1994 in *Mental Health, United States, 1998;* for 1992, 1994, and 1998 in *Mental Health, United States, 2000;* and for 1992, 1994, 1998, and 2000 in *Mental Health, United States, 2002.*

REFERENCES

President's New Freedom Commission on Mental Health (2004). *Subcommittee on acute care: Background paper.* DHHS Pub. No. SMA-04-3876. Rockville, MD: U.S. Department of Health and Human Services.

Redick, R. W., Witkin, M. J., Atay, J. E., & Manderscheid, R. W. (1994). *The evolution and expansion of mental health care in the United States between 1955 and 1990.* Rockville, MD: Center for Mental Health Services.

Witkin, M. J., Atay, J. E., & Manderscheid, R. W. (1994). *The effect of inflation on expenditures by mental health organizations between 1969 and 1990.* Rockville, MD: Center for Mental Health Services.

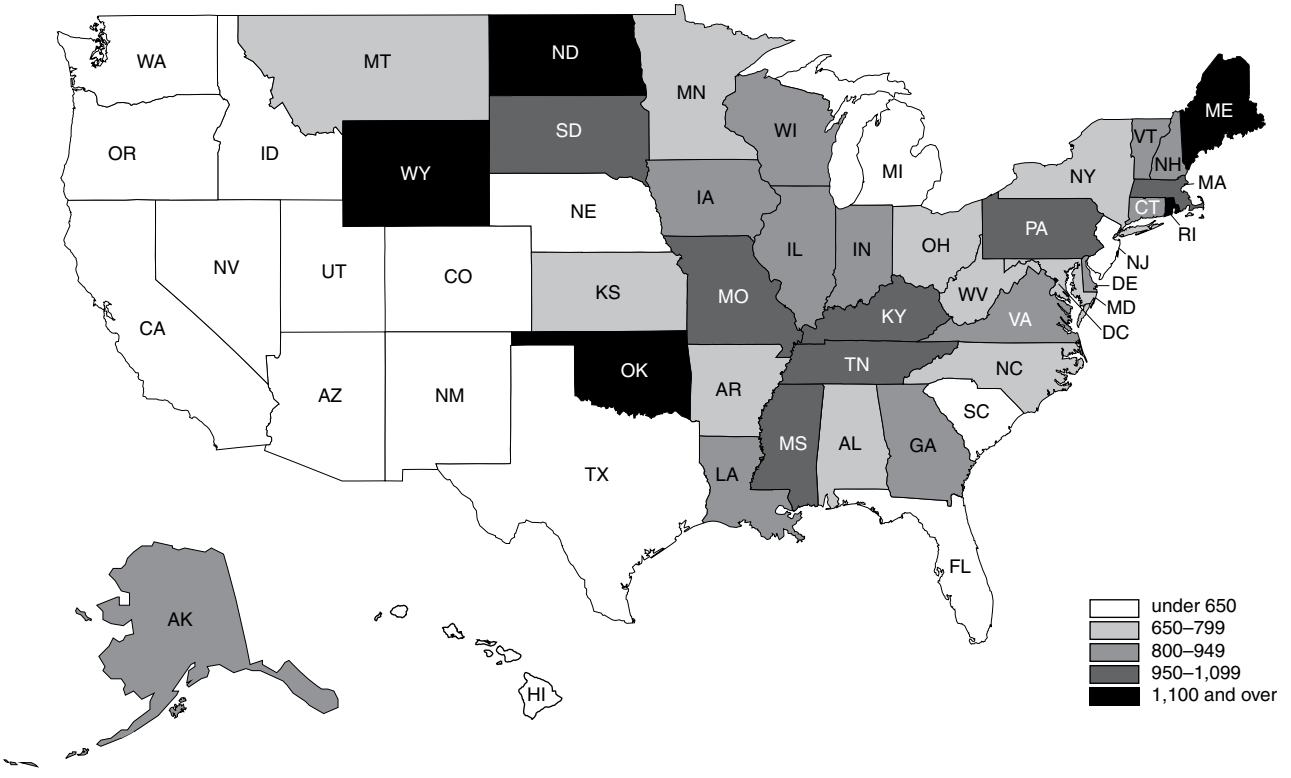

Figure 19.15. Total Inpatient and Residential Treatment Additions per 100,000 Civilian Population by State: United States, 2002.

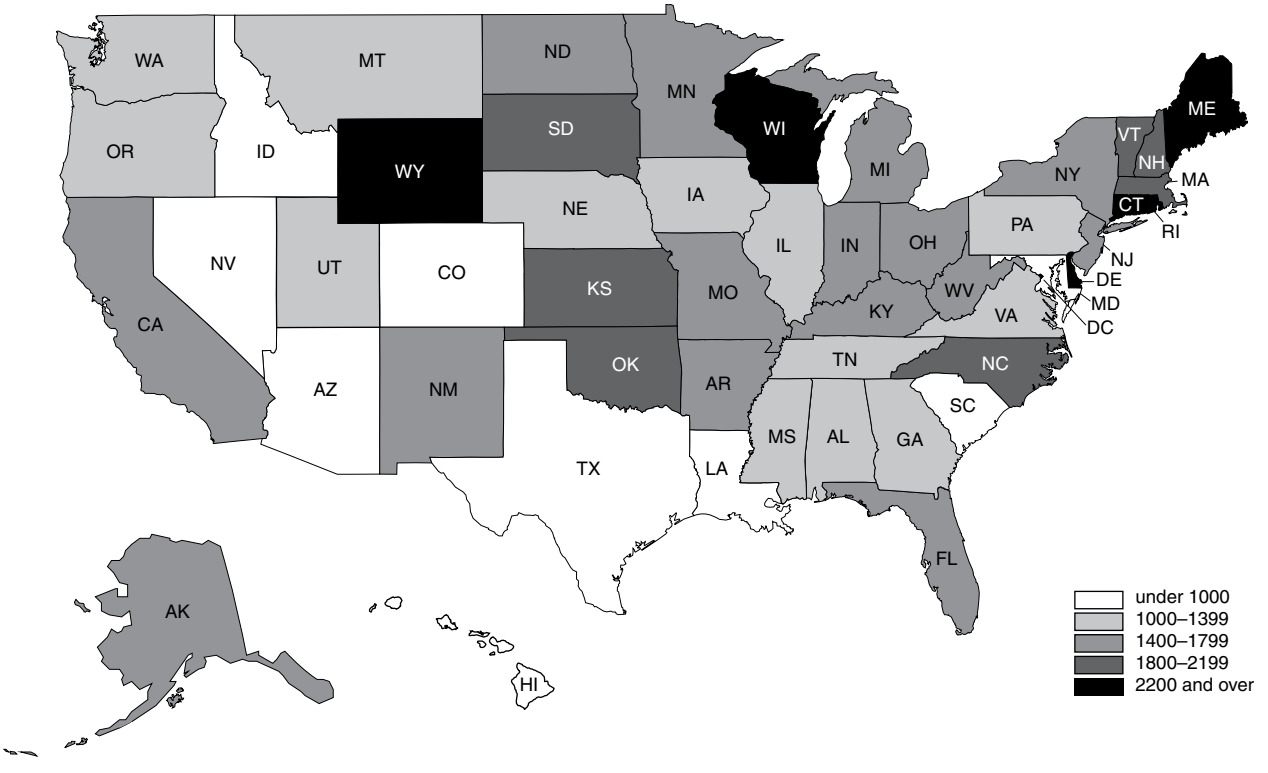

Figure 19.16. Total Outpatient Additions per 100,000 Civilian Population by State: United States, 2002.

Chapter 20

Sources of Referral for Persons Admitted to Specialty Mental Health Organizations, United States, 1997

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Introduction

The aim of this chapter is to describe the referral source for adults and children admitted to inpatient and outpatient mental health programs using a nationally representative 1997 *Client/Patient Sample Survey*. The President's New Freedom Commission on Mental Health report of 2003 found widespread fragmentation in mental health services that causes clients to slip through interorganizational "cracks" (NFCMH, 2003). According to the report, a goal of transforming the mental health system is to ensure that "early mental health screening, assessment, and referral to services are common practice." The Institute of Medicine's (IOM) 2001 *Crossing the Quality Chasm* report identified several aims for the redesign of the American health care systems (IOM, 2001). Core to the IOM report rules are that appropriate and safe, person-centered, efficient, effective, equitable, and timely based referrals be made (Adams, Daniels, & Reis, 2005). A major step in achieving the goal of early and appropriate referral is to describe the pattern of referrals using a nationally representative database.

This chapter offers a framework for understanding organizational interactions in the provision of care that is continuous and appropriate for persons with mental illness. It describes the sources of referral for persons admitted to the specialty mental health care delivery system and documents how the mental health system interacts with other delivery systems—health (e.g., emergency rooms, private physicians), social services (e.g., social service agencies, schools), correctional agencies (e.g., courts, police), as well as interactions among mental health care providers (e.g., psychiatric hospitals, outpatient clinics).

Data Source

In 1997, the *Client/Patient Sample Survey (1997 CPSS)* was conducted by the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA) (SAMSHA, 1997). The *1997 CPSS* represented a nationwide cross-sectional sample survey of persons admitted to and receiving care in specialty mental health organizations. The survey was designed to collect statistical information on the demographic, clinical, and service use characteristics of the population receiving mental health care, and to provide national estimates of this population. The *1997 CPSS* included a sample of persons who were admitted to a sample of programs of specialty mental health organizations. The following types of organizations were included: State and county mental hospitals, private psychiatric hospitals, separate psychiatric services of the Department of Veterans Affairs (VA) medical centers and of non-Federal general hospitals, multiservice mental heath organizations, residential treatment centers for emotionally disturbed children, other residential programs, and freestanding outpatient

clinics and partial care organizations. The types of programs included inpatient, residential, and outpatient. Outpatient refers to less than 24-hour care programs that provide outpatient and partial care services that are not overnight. Details about the design and scope of the *1997 CPSS* can be found in appendix B of this volume.

This chapter presents findings from the *1997 CPSS* that highlight the referral source most responsible for a person's admission to selected program types providing specialty mental health care. The chapter provides an analysis of the following:

Admissions of adults (age 18 and older) and children (under age 18), with respect to level of care: inpatient programs (excluding residential care) and outpatient programs of specialty mental health organizations, by source of referral: personal, community setting, outpatient setting, or inpatient/residential setting.

Personal referral includes self and family/friends. Community setting includes social services agency, court or corrections agency (except police), police, educational system, and other community setting. Outpatient setting includes private practice mental health professional, outpatient mental health care program, general medical program or physician, alcohol/drug abuse treatment facility, and other outpatient program or care. Inpatient/residential setting includes State or county mental hospital, general hospital inpatient psychiatric services, other psychiatric hospital or inpatient psychiatric service, hospital medical service, alcohol/drug abuse treatment facility, residential setting (e.g., group home, halfway house), and other inpatient or residential setting.

Method

Estimates of standard errors were calculated through the use of SUDAAN Survey Data Analysis Software (Shah, Barnwell, Hunt, & LaVange, 1995). This procedure computes estimated standard errors through the use of the Taylor series approximation. As applied to data from the present survey, variance estimates for totals and subtotals were calculated for each sampling stratum and then summed across sampling strata to derive standard errors for characteristics of interest.

A logistic regression analysis was used to examine the factors associated with admission to inpatient mental health programs within the specialty mental health system. The independent variables in the model included age (adults age 18 and older versus children under age 18); gender (males versus females); race (Black or African American, Hispanic or Latino and others, versus White); diagnosis (schizophrenia, adjustment disorders, or affective disorders versus other diagnoses); and referral source (personal, community setting, or outpatient setting versus inpatient/residential setting).

Results

Table 20.1 shows the demographic characteristics of inpatient and outpatient admissions for mental health services, as well as the demographics for the U.S. civilian population in 1997. There were an estimated 2.0 million inpatient admissions and 3.3 million outpatient admissions in 1997.

Overall, males comprised the majority of inpatient admissions (54 percent) while they comprised 49 percent of the U.S. civilian population. For outpatient admissions, males and females were admitted in about the same proportion as in the U.S. civilian population (Males accounted for 49 percent of outpatient admissions and the U.S. civilian population; females accounted for 51 percent of outpatient admissions and the U.S. civilian population).

Children under age 18 comprised 14 percent of inpatient admissions, 29 percent of outpatient admissions, and 26 percent of the U.S. civilian population in 1997. The race/ethnicity distribution shows that inpatient admissions were 70 percent White, 19 percent Black or African American, 9 percent Hispanic or Latino, 1 percent Asian or Pacific Islander, and 1 percent American Indian or Alaska Native. A similar distribution was found for outpatient admissions, who were 70 percent White, 17 percent Black or African American, 10 percent Hispanic or Latino, 2 percent Asian or Pacific Islander, and 1 percent American Indian or Alaska Native. In the U.S. civilian population, 73 percent were White, 12 percent Black or African American, 11 percent Hispanic or Latino, 4 percent Asian or Pacific Islander, and 1 percent American Indian or Alaska Native.

Referral Source—Major Groups

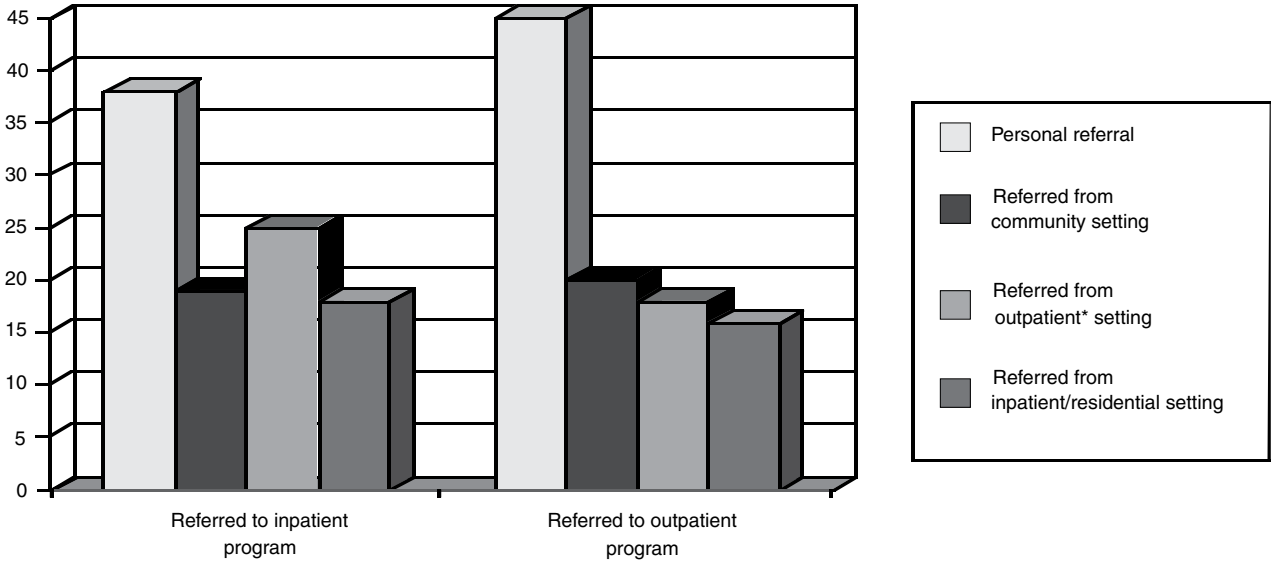
Figure 20.1 shows the distribution of adult admissions by referral source within major groupings (personal, community, outpatient, and inpatient/residential) by level of care (inpatient treatment and outpatient treatment). For adults, the personal referral source was the most frequently reported group for both inpatient and outpatient admissions (38 percent and 45 percent, respectively) (figure 20.2). Child in-

Table 20.1. Number and percent distribution by gender, age, and race/ethnicity of persons admitted to specialty mental health organizations by level of care: United States, 1997

Gender, Age, and Race/Ethnicity	Inpatient		Outpatient*		U.S. Civilian Population	
	Number	Percent	Number	Percent	Number	Percent
Total	2,035,094		3,333,215		266,046,590	
Male	1,097,127	53.9%	1,645,131	49.4%	129,456,545	48.7%
Female	937,967	46.1%	1,688,084	50.6%	136,590,045	51.3%
Adult - Age 18 and older	1,748,642	85.9%	2,366,894	71.0%	196,539,812	73.9%
Child - Age under 18	286,452	14.1%	966,321	29.0%	69,506,778	26.1%
White (non-Hispanic)	1,429,431	70.2%	2,337,167	70.1%	193,736,914	72.8%
Black or African American (non-Hispanic)	378,751	18.6%	563,517	16.9%	32,022,193	12.0%
Asian or Pacific Islander (non-Hispanic)	22,813	1.1%	52,853	1.6%	9,433,197	3.5%
American Indian or Alaska Native (non-Hispanic)	23,542	1.2%	43,565	1.3%	1,965,918	0.7%
Hispanic or Latino	180,557	8.9%	336,113	10.1%	28,888,368	10.9%

*The term "outpatient" refers to less than 24-hour care programs (i.e., mental health services that are not provided overnight). Included are outpatient and partial care services provided in organized mental health care settings.

Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.



*The term "Outpatient" refers to less than 24-hour care programs.
Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

Figure 20.1. Adult—Percent Distribution by Source of Referral for Adults Admitted to Specialty Mental Health Organizations by Level of Care: United States, 1997.

patient admissions were distributed almost uniformly among all four referral groups (27 percent, 25 percent, 27 percent, and 21 percent, respectively). Child outpatient admissions were distributed primarily among the personal referral group (40 percent) and the community setting referral group (38 percent).

Referral Source—Specific Types Within Major Groups

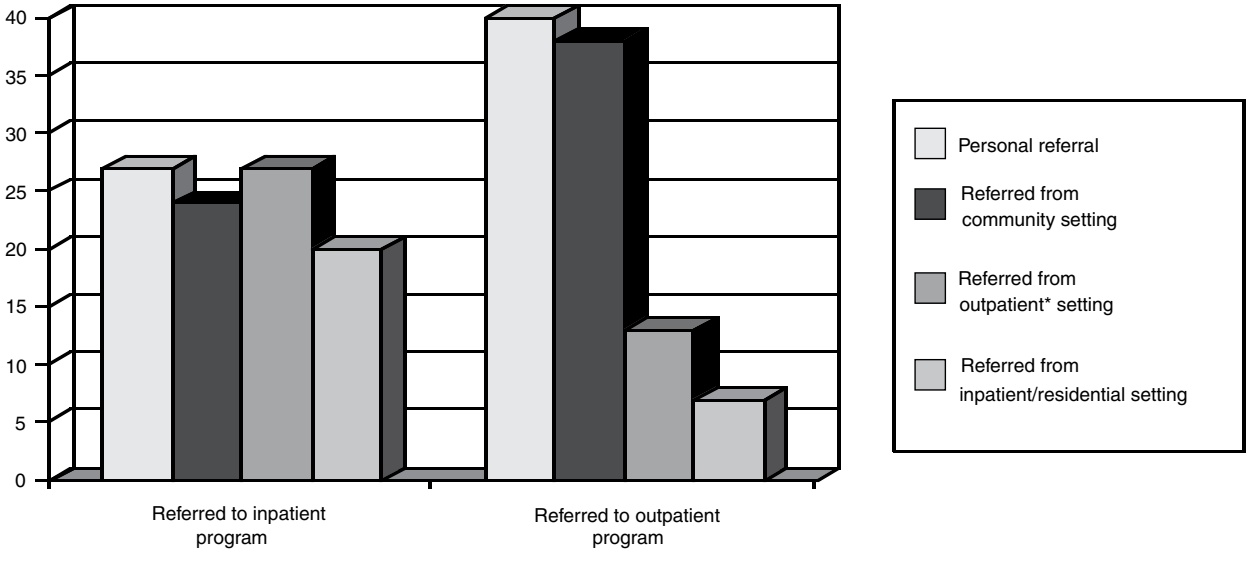
The most frequent referral source occurs in the personal referral category. About a third of the adults have referrals from family or friend. Between about 30 percent and 40 percent of the children are referred by family or friend. As would be expected, children seldom refer themselves for care.

- Adults referred to inpatient care: 25 percent were referred by self, and 12 percent were referred by family or friend (table 20.2).
- Adults referred to outpatient care: 36 percent were referred by self, and 9 percent were referred by family or friend (table 20.2).
- Children referred to inpatient care: 27 percent were referred by family or friend (table 20.3).
- Children referred to outpatient care: 38 percent were referred by family or friend (table 20.3).

Other frequently mention referral sources include courts or corrections agency, social service agency, private practice mental health professional, general medical program or physician, and educational system.

- Adults referred to inpatient care: 10 percent were referred by police, and 10 percent were referred by outpatient mental health care program (table 20.2).
- Adults referred to outpatient care: 9 percent were referred by court or corrections agency (table 20.2).
- Children referred to inpatient care: 10 percent were referred by a social service agency, 12 percent were referred by a private practice mental health professional, and 9 percent were referred by a general medical program or physician (table 20.3).
- Children referred to outpatient care: 17 percent were referred by court or corrections agency, and 13 percent were referred by the educational system (table 20.3).

Personal Group. Among adult admissions to inpatient and outpatient care with a personal referral, the most frequently reported referral source was self (25 percent and 36 percent, respectively, table 20.2).



*The term "Outpatient" refers to less than 24-hour care programs.
Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

Figure 20.2. Child—Percent Distribution by Source of Referral for Children Admitted to Specialty Mental Health Organizations by Level of Care: United States, 1997.

Table 20.2. Adult Admissions—Number and percent distribution by source of referral to specialty mental health organizations by level of care: United States, 1997

Referral Source	Total	Inpatient			Outpatient*		
		Number	Percent	(95% CI)	Number	Percent	(95% CI)
	4,115,536	1,748,642			2,366,894		
Personal Referral		**658,339**	**37.6%**	**(33.0%, 42.3%)**	**1,070,940**	**45.2%**	**(41.3%, 49.2%)**
Self		442,717	25.3%	(22.0%, 28.7%)	853,225	36.0%	(32.6%, 39.5%)
Family or friend		215,622	12.3%	(9.7%, 15.0%)	217,715	9.2%	(7.8%, 10.6%)
Referral from Community Setting		**328,896**	**18.8%**	**(14.2%, 23.4%)**	**482,052**	**20.4%**	**(17.6%, 23.2%)**
Social service agency		68,522	3.9%	(2.3%, 5.5%)	145,051	6.1%	(4.8%, 7.5%)
Court or corrections agency (except police)		73,671	4.2%	(2.7%, 5.8%)	202,877	8.6%	(6.9%, 10.3%)
Police		169,957	9.7%	(5.5%, 13.9%)	52,936	2.2%	(1.2%, 3.2%)
Educational system		2,738	0.2%	(0.0%, 0.3%)	11,825	0.5%	(0.2%, 0.8%)
Other community setting		14,008	0.8%	(0.3%, 1.3%)	69,363	2.9%	(1.8%, 4.0%)
Referral from Outpatient* Setting		**439,558**	**25.1%**	**(21.2%, 29.1%)**	**432,668**	**18.3%**	**(15.8%, 20.8%)**
Private practice mental health professional		120,619	6.9%	(4.9%, 8.9%)	73,449	3.1%	(2.3%, 3.9%)
Outpatient* mental health care program		172,872	9.9%	(6.9%, 12.9%)	143,325	6.1%	(4.4%, 7.7%)
General medical program or physician		115,654	6.6%	(5.0%, 8.3%)	157,965	6.7%	(5.3%, 8.0%)
Alcohol/drug abuse treatment facility		4,948	0.3%	(0.0%, 0.5%)	43,460	1.8%	(1.2%, 2.4%)
Other outpatient* program or care		25,465	1.5%	(0.5%, 2.4%)	14,469	0.6%	(0.3%, 0.9%)
Referral from Inpatient/ Residential Setting		**321,849**	**18.4%**	**(15.2%, 21.6%)**	**381,234**	**16.1%**	**(13.9%, 18.4%)**
State or county mental hospital		17,940	1.0%	(0.5%, 1.6%)	49,389	2.1%	(1.4%, 2.8%)
General hospital inpatient psychiatric service		41,091	2.3%	(1.4%, 3.3%)	134,864	5.7%	(4.5%, 6.9%)
Other psych. hospital or inpatient psych. service		37,315	2.1%	(1.3%, 3.0%)	55,913	2.4%	(1.7%, 3.0%)
Hospital medical service		131,497	7.5%	(5.5%, 9.5%)	55,260	2.3%	(1.6%, 3.0%)
Alcohol/drug abuse treatment facility		3,684	0.2%	(0.0%, 0.5%)	22,418	0.9%	(0.5%, 1.4%)
Residential setting (e.g. group home, halfway house)		51,172	2.9%	(1.9%, 4.0%)	43,359	1.8%	(1.2%, 2.5%)
Nursing home		37,794	2.2%	(1.3%, 3.0%)	14,055	0.6%	(0.3%, 0.9%)
Other inpatient or residential setting		1,356	0.1%	(0.0%, 0.2%)	5,976	0.3%	(0.0%, 0.5%)

*The term "Outpatient" refers to "less than 24-hour care programs" (i.e., mental health services that are not provided overnight). Included are outpatient and partial care services provided in organized mental health care settings.

Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

Table 20.3. Child Admissions—Number and percent distribution by source of referral to specialty mental health organizations by level of care: United States, 1997

Referral Source	Total	Inpatient			Outpatient*		
		Number	Percent	(95% CI)	Number	Percent	(95% CI)
	1,252,773	286,452			966,321		
Personal Referral		**77,934**	**27.2%**	**(16.3%, 38.1%)**	**386,786**	**40.0%**	**(35.8%, 44.2%)**
Self		1,458	0.5%	(–0.3%, 1.3%)	24,520	2.5%	(1.7%, 3.3%)
Family or friend		76,476	26.7%	(15.8%, 37.6%)	362,266	37.5%	(33.5%, 41.5%)
Referral from Community Setting		**70,265**	**24.5%**	**(18.2%, 30.8%)**	**369,054**	**38.2%**	**(33.6%, 42.8%)**
Social service agency		28,191	9.8%	(6.2%, 13.5%)	163,824	17.0%	(14.0%, 19.9%)
Court or corrections agency (except police)		11,335	4.0%	(2.1%, 5.8%)	69,344	7.2%	(5.5%, 8.8%)
Police		17,895	6.2%	(3.3%, 9.2%)	9,218	1.0%	(0.3%, 1.6%)
Educational system		11,641	4.1%	(1.4%, 6.7%)	123,516	12.8%	(10.5%, 15.0%)
Other community setting		1,203	0.4%	(–0.4%, 1.2%)	3,152	0.3%	(0.0%, 0.6%)
Referral from Outpatient* Setting		**78,625**	**27.4%**	**(19.9%, 35.0%)**	**134,607**	**13.9%**	**(10.6%, 17.2%)**
Private practice mental health professional		33,952	11.9%	(8.0%' 15.7%)	25,712	2.7%	(1.6%, 3.7%)
Outpatient mental health care program		26,623	9.3%	(5.3%, 13.3%)	30,774	3.2%	(2.0%, 4.4%)
General medical program or physician		17,446	6.1%	(2.4%, 9.8%)	75,011	7.8%	(5.3%, 10.2%)
Alcohol/drug abuse treatment facility		604	0.2%	(–0.2%, 0.6%)	2,518	0.3%	(0.1%, 0.5%)
Other outpatient program or care		0			592	0.1%	(–0.1%, 0.2%)
Referral from Inpatient/ Residential Setting		**59,628**	**20.8%**	**(14.8%, 26.9%)**	**75,874**	**7.9%**	**(6.1%, 9.6%)**
State or county mental hospital		1,884	0.7%	(0.0%, 1.3%)	2,190	0.2%	(0.0%, 0.5%)
General hospital inpatient psychiatric service		2,910	1.0%	(0.2%' 1.9%)	21,529	2.2%	(1.2%, 3.3%)
Other psych. hospital or inpatient psych. service		13,686	4.8%	(2.3%' 7.2%)	19,203	2.0%	(1.3%, 2.6%)
Hospital medical service		14,140	4.9%	(1.7%, 8.2%)	11,910	1.2%	(0.6%, 1.9%)
Alcohol/drug abuse treatment facility		307	0.1%	(–0.1%, 0.3%)	2,310	0.2%	(–0.2%, 0.7%)
Residential setting (e.g., group home, halfway house)		17,896	6.2%	(3.2%' 9.3%)	11,430	1.2%	(0.6%, 1.7%)
Other inpatient or residential setting		8,805	3.1%	(1.3%, 4.9%)	7,302	0.8%	(0.3%, 1.2%)

*The term "outpatient" refers to less than 24-hour care programs (i.e., mental health services that are not provided overnight). Included are outpatient and partial care services provided in organized mental health care settings.

Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

For child admissions to inpatient and outpatient care, the most frequently reported referral source was family or friend (27 percent and 38 percent, respectively, table 20.3).

Community Setting Group. Within the community setting referral group for adults (table 20.2), no specific referral source is predominant. Police referrals represent 10 percent of referrals for adult inpatient admissions, and court or corrections agency (except police) represents 9 percent. Social service agency referrals account for 10 percent of referrals provided to children admitted to inpatient care and 17 percent to outpatient care (table 20.3). Almost 13 percent of referrals for children admitted to outpatient services come from the educational system.

Outpatient Setting Group. Among adults admitted to inpatient care, significant differences were not found in the proportions referred by a private practice mental health professional, outpatient (OP) mental health care program, or general medical program or physician (table 20.2). This finding also held true among children admitted to inpatient care (table 20. 3). A higher proportion of adult admissions to outpatient care received referrals from OP mental health care programs (6 percent) and general medical program or physician (7 percent) compared with other sources within the outpatient setting group. Among children admitted to outpatient care, a higher proportion receive a referral from a general medical program or physician (8 percent) than from other sources within the group.

Inpatient / Residential Setting Group. Within this group, the most frequently reported referral source for adults admitted to inpatient programs was a hospital medical service (8 percent; table 20.2), constituting nearly half of the 18 percent referred from all inpatient/residential settings. General hospital inpatient psychiatric service (6 percent) was the most frequently reported source of referral for adults admitted to outpatient care. In table 20.3, a nearly equal distribution of referrals from residential setting (6 percent), other psychiatric hospital or inpatient psychiatric service (5 percent), and hospital medical service (5 percent) was found for children admitted to inpatient care. For children admitted to outpatient care, no referral source dominated.

Referral Source by Type of Organization

Adults admitted for inpatient and outpatient[1] care at VA medical centers were primarily referred by themselves or family and friends—personal referral (67 percent for inpatient, 66 percent for outpatient; table 20.4). This finding is contrasted with 10 percent personal referrals for adults admitted to inpatient State/county hospitals.

For children admitted for outpatient care at State/county hospitals, 51 percent were referred from a community setting, primarily courts and correction agencies. The same applies for outpatient residential treatment centers (RTCs), where 52 percent of the children admitted were referred by a community setting.

Multivariate Analyses

Logistic regression was used to examine the odds of being referred to an inpatient program versus an outpatient program based on age, sex, race/ethnicity, diagnosis, and referral source. Table 20.5 shows that adults are twice as likely as children to be referred for inpatient care (odds ratio = 2.00). Males are 30 percent more likely than females to be referred to an inpatient program (odds ratio = 1.30). Persons diagnosed with schizophrenia are more than twice as likely as persons diagnosed with "other disorders" to be referred to an inpatient program (odds ratio = 2.27), and persons diagnosed with affective disorders are 72 percent more likely to enter inpatient programs than those with "other disorders" (odds ratio = 1.72). In contrast, persons diagnosed with adjustment disorders are less likely to enter an inpatient program than those diagnosed with "other disorders" (odds ratio = 0.40). Clients with a personal referral source are more likely to be referred to an outpatient program than the reference group, persons with an inpatient referral source (odds ratio = 0.73). The likelihood of being admitted for inpatient care was not associated with race/ethnicity.

Discussion

The *1997 CPSS* data showed that 1.7 million adults were admitted to an inpatient mental health program and 2.4 million to an outpatient program. These figures represent approximately 2 percent of the 197 million adult civilian population in 1997. More than a quarter of the adults were self referred, an indicator of the extent of consumers' involvement in directing their own services. The concept of self-directed services supports Goal 2 of the President's New Freedom Commission report, which focuses on consumer-driven mental health services.

Interaction between mental health providers and providers of general medical care is evident in the *1997 CPSS* data. Approximately one in five admissions for inpatient specialty mental health care were referred from other inpatient settings, and the majority of these referrals were from a general hospital's medical service. This finding highlights the link between inpatient mental health care and inpatient general hospital care, in support of Goal 1 of the President's New Freedom Commission report, addressing the necessity of linkages between mental and physical health care.

While physicians are generally knowledgeable about mental health treatment strategies (Katerndahl & Ferrer, 1995), some research suggests that referrals from hospitals and physicians are less frequent than needed (Lee, Brasel, & Lee, 2004). Lee and colleagues (2004) found that more than half of emergency care practitioners generally do not refer trauma patients for mental health follow-up because the practitioners lack the time to consider such a referral, or because the symptoms are not obvious. Lee and colleagues (2004) concluded that there needs to be additional training and screening related to mental health problems in trauma patients. Weis and Grunert (2004) reinforced the need for mental health screening and suggested that utilization of a physician screening tool following traumatic injuries might be helpful in making mental health referrals. Other factors physicians are encouraged to consider in an appropriate referral for mental health services

[1] The term "Outpatient" refers to less than 24-hour care programs providing outpatient and partial care services.

Table 20.4. Adult and child IP and OP* admissions—Number and percent of admissions by source of referral by type of specialty mental health organization: United States, 1997

	Facility to which the person is referred	Personal Referral				Referral from Community Setting				Referral from Outpatient* Setting				Referral from Inpatient/ Residential Setting			
		Number	Row %	95% CI		Number	Row %	95% CI		Number	Row %	95% CI		Number	Row %	95% CI	
AI	State & county mental hospitals	17,440	10.2	7.1	14.5	59,765	35.1	28.4	42.4	44,326	26.0	19.0	34.6	48,728	28.6	22.1	36.2
	Private psychiatric hospitals	122,367	35.1	28.3	42.6	39,905	11.5	7.1	17.9	121,737	35.0	28.1	42.5	64,236	18.5	14.1	23.8
	Non-Federal general hospitals	412,062	43.4	37.5	49.6	133,244	14.1	10.7	18.3	235,322	24.8	19.7	30.8	167,939	17.7	13.9	22.2
	VA medical centers	68,309	67.2	61.7	72.2	8,567	8.4	6.2	11.4	12,695	12.5	9.0	17.1	12,129	11.9	8.8	16.0
AO	State & county mental hospitals	6,797	24.1	19.0	30.0	5,688	20.1	12.1	31.5	6,464	22.9	11.0	41.5	9,313	33.0	23.6	43.9
	Private psychiatric hospitals	50,286	38.0	31.2	45.4	14,740	11.2	7.6	16.1	38,031	28.8	22.2	36.4	29,142	22.0	15.8	30.0
	Non-Federal general hospitals	185,477	42.8	36.3	49.7	36,481	8.4	6.0	11.8	106,835	24.7	19.7	30.5	104,112	24.1	19.1	29.8
	VA medical centers	89,359	65.7	57.7	72.9	10,790	7.9	4.9	12.6	23,748	17.5	13.0	23.1	12,088	8.9	6.2	12.6
	Multiservice MH organizations	410,277	41.7	37.3	46.2	254,093	25.8	22.1	29.9	174,709	17.8	14.6	21.4	144,922	14.7	11.8	18.3
	RTC	23,321	47.6	39.3	56.1	15,857	32.4	23.0	43.4	6,881	14.1	9.1	21.0	2,927	6.0	3.1	11.1
	Freestanding OP clinics/partial care	305,423	50.5	45.6	55.4	144,403	23.9	19.7	28.7	76,000	12.6	10.0	15.7	78,730	13.0	9.9	17.0
CI	State & county mental hospitals	1,861	9.3	4.78	17.5	8,533	42.83	32.3	54	4,319	21.7	12.39	35.14	5,211	26.15	16.3	39.1
	Private psychiatric hospitals	34,784	23.3	17.8	29.9	29,068	19.46	15.2	24.6	47,491	31.8	25.01	39.43	38,062	25.48	19.6	32.5
	Non-Federal general hospitals	28,505	32.9	19	50.6	20,745	23.94	15.4	35.2	22,673	26.2	14.04	43.45	14,739	17.01	8.18	32
CO	State & county mental hospitals	1,520	25.1	11.6	46.1	3,068	50.7	31.5	69.7	506	8.4	3.3	19.7	958	15.8	6.1	35.2
	Private psychiatric hospitals	29,482	38.3	31.2	46.0	21,741	28.3	20.1	38.2	15,635	20.3	12.8	30.8	10,035	13.1	8.1	20.4
	Non-Federal general hospitals	65,638	39.9	30.5	50.2	34,849	21.2	15.8	27.9	46,449	28.3	20.0	38.3	17,478	10.6	6.7	16.6
	Multiservice MH organizations	161,414	42.3	38.2	46.5	159,716	41.8	37.2	46.6	34,159	9.0	6.5	12.2	26,564	7.0	4.9	9.8
	RTC	15,348	31.3	24.0	39.7	25,641	52.3	42.5	61.9	4,522	9.2	5.7	14.6	3,493	7.1	4.7	10.8
	Freestanding OP clinics/partial care	113,384	39.4	33.8	45.2	124,039	43.1	36.6	49.7	33,336	11.6	8.1	16.3	17,346	6.0	3.9	9.2

AI=Adult Inpatient AO=Adult Outpatient CI=Child Inpatient CO=Child Outpatient

*The term "outpatient" refers to less than 24-hour care programs (i.e., mental health services that are not provided overnight). Included are outpatient and partial care services provided in organized mental health care settings.

** Estimate is based on five or fewer sample cases or has a relative standard error of 50 percent or higher; therefore, it is not shown because it does not meet standards of reliability.

Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

Table 20.5. Multiple logistic regression model of the effects of demographics, diagnoses, and source of referral on inpatient admission for mental health care

Effect	Odds Ratio	95% CI
Age		
Adult age 18 and older	2.00	(1.56, 2.58)
Child under age 18	1.00	
Gender		
Male	1.30	(1.12, 1.50)
Female	1.00	
Race/Ethnicity		
Black or African American	1.03	(0.81, 1.31)
Hispanic or Latino and Other	0.87	0.64, 1.17
White	1.00	
Diagnosis		
Schizophrenia	2.27	(1.75, 2.94)
Adjustment disorders	0.40	0.28, .058
Affective disorders	1.72	(1.41, 2.10)
Other disorders	1.00	
Source of referral		
Personal referral	0.73	(0.56, 0.94)
Referral from communilty	0.74	(0.54, 1.03)
Referral from outpatient*	1.24	(0.94, 1.63)
Referral from inpatient	1.00	

*The term "outpatient" refers to less than 24-hour care programs (i.e., mental health services that are not provided overnight). Included are outpatient and partial care services provided in organized mental health care settings.

Source: 1997 Client/Patient Sample Survey. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

are family involvement, type of insurance, and diagnosis (White, Bateman, Fisher, & Geller, 1995).

Courts or corrections agencies constitute an important referral source for patients entering State/county mental hospitals and a less important source for the private psychiatric hospitals or non-Federal general hospitals, suggesting a difference in referral source by ownership of the mental health organization —public vs. private. Using data from the *1975 and 1980 CPSS*, Nakao, Milazzo-Sayre, Rosenstein and Manderscheid (1986) found a relationship between ownership of mental health organizations and referral from court or corrections agencies, with publicly owned programs receiving a larger proportion of court or corrections referrals than privately owned facilities.

Few referrals in the *1997 CPSS* are reported from "other community settings." These other settings, consisting of nontraditional and non-health-related services such as self-help groups or spiritual advisors, were found to be important treatment venues (Wang et al., 2005). Van Citters and Bartels (2004) reviewed the literature on referrals to community-based mental health outreach services for older adults and found that gatekeepers and nontraditional referral sources were effective in identifying socially isolated older adults in need of mental health services. With so few referrals from "other community settings," these important sources may be overlooked.

Based on data from the *1997 CPSS,* 300,000 children were admitted to inpatient programs and 1.0 million were admitted to outpatient programs, representing nearly 2 percent of the 70 million children in the Nation in 1997. Of the 1.3 million children admitted to specialty mental health organizations, approximately half of the children receiving outpatient services and a quarter of those receiving inpatient services were referred by their families. Pottick and Davis (2001) found that the family members were particularly skilled in finding mental health resources.

Referral to an inpatient or outpatient program is often related to severity of the problem at the time of referral. Using the *1997 CPSS* data, Pottick and colleagues (2004) showed that, for children entering the mental health system, severity of the illness is associated with the level of care to which the child is referred. According to their findings, more than half of children with a Global Assessment of Functioning (GAF) score of 50 or less were referred to an inpatient program, while only about a third with that score were referred to an outpatient program. A GAF score of 50 represents a serious degree of impairment in functioning in most social areas; scores less than 50, more severe impairment.

Approximately 28,000 children in inpatient programs and 164,000 children in outpatient programs were referred by social service agencies. Hurlburt and colleagues (2004) suggest that more children may need to be referred for mental health services. This study and examined specialty mental health service use for 1 year after contact with child welfare, using a nationally representative cohort of 2,328 children aged 2 to 14 in 97 U.S. counties. Their data showed that only 28 percent of children involved with the child welfare system received specialty mental health services during the year, although 42 percent had a clinical-level Child Behavior Checklist indicating the need for referral.

The *1997 CPSS* data have some limitations. The data were collected in 1997, and social trends and policy changes since that time may have influenced current referrals to specialty mental health organizations. The CPSS data do not capture other factors that might be related to a referral, such as family resources or geographic distance to a facility. Many children are treated for mental health disorders secondary to substance abuse problems. If these children were treated in dedicated substance abuse programs, they would not be included in the *1997 CPSS*. However, substance-abusing youth with co-occurring disorders treated in specialty mental health programs would be included in the sample. Also, the CPSS excludes persons seen by psychiatrists in private practice and those receiving care from private counseling or psychotherapy service providers.[2]

Summary

Approximately 2 percent of the general civilian population is treated in specialty mental health organizations. Personal referral is the most frequently mentioned referral category for both adults and children. General medical programs or physicians and hospital medical services are important referral sources for persons admitted to inpatient mental health care, showing the importance of and need for interactions between mental and physical health care providers. Referrals from courts or corrections agencies may be related to the ownership of the organization to which the client is referred, with the greater proportion of court or corrections referrals going to public facilities and a smaller proportion going to private ones.

REFERENCES

Adams, N., Daniels, A., & Reis, S., with guest editors Manderscheid, R. W., Daniels, A., Adams, N., & Carroll, C. D.(2005). Transformation of the mental health system using quality as a lever for change in transforming mental health. *International Journal of Mental Health, 34*(1),10–25.

Hurlburt, M. S., Leslie, L. K., Landsverk, J., Barth, R. P., Burns, B. J., Gibbons, R. D., et al. (2004). Contextual predictors of mental health service use among children open to child welfare. *Archives of General Psychiatry, 61*(12),1217—-1224.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press.

Katerndahl, D., & Ferrer, R. L. (2004). Knowledge about recommended treatment and management of major depressive disorder, panic disorder, and generalized anxiety disorder among family physicians. *Primary Care Companion of the Journal of Clinical Psychiatry, 6*(4), 147–151.

Lee, S., Brasel, K., & Lee, B.(2004). Emergency care practitioners' barriers to mental health assessment, treatment, and referral of post-injury patients. *Wisconsin Medical Journal, 103*(6), 78–82.

Nakao, K., Milazzo-Sayre, L. J., Rosenstein, M. J., & Manderscheid, R.W. (1986). Referral patterns to and from inpatient psychiatric services: A social network approach. *American Journal of Public Health, 76*(7), 755–760.

Pottick, K. J., & Davis, D. J. (2001). Attributions of responsibility for children's mental health problems: Parents and professionals at odds. *American Journal of Orthopsychiatry, l71*(4), 426–435.

Pottick, K. J., Warner, L. A., Isaacs, M., Henderson, M. J., Milazzo-Sayre. L., & Manderscheid, R. W.(2004). Children and adolescents admitted to specialty mental health care programs in the United States, 1986 and 1997. In R. W. Manderscheid & M. J. Henderson (Eds.) *Mental health, United States, 2002* (pp. 314–326) (DHHS Pub No. (SMA) 3938). Rockville, MD: Substance Abuse and Mental Health Services Administration..

President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental care in America. Final report* (DHHS Pub. No. SMA-03-3832). Washington, DC: Department of Health and Human Services. Available at www.mentalhealthcommission.gov/reports/FinalReport/toc.html.

Shah, B. V., Barnwell, B. G., Hunt, P. N., & LaVange, L. M. (1995). *SUDAAN Reference Manual, Release 6.40.* Research Triangle Park, NC: Research Triangle Institute.

Van Citters, A. D., & Bartels, S. J. (2004). A systematic review of the effectiveness of community-based mental health outreach services for older adults. *Psychiatric Services, 55*(11), 1237–1249.

Wang, P. S, Lane, M., Olfson, M., Pincus., H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62,* 629–639.

Weis, J., & Grunert, B. K. (2004). Post-traumatic stress disorder following traumatic injuries in adults. *Wisconsin Medical Journal, 103*(6), 41–42.

White, C. L., Bateman. A., Fisher, W. H., & Geller, J. L. (1995). Factors associated with admission to public and private hospitals from a psychiatric emergency screening site. *Psychiatric Services; 46*(5), 467–472.

[2] The diagnostic groupings used in the survey are defined as follows: Schizophrenia: 295; 299. Adjustment disorders: 309 (except 309.21, 309.81) and 309.82). Affective disorders: 296; 298.0; 300.4; 301.11; 301.13. The codes are combined DSM-IV and ICD-9-CM.

Chapter 21

Mental Health Consumer Organizations: A National Picture

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Mental health consumer organizations are those organizations run by consumers[1] for the purpose of providing services to other consumers (National Mental Health Consumers' Self-Help Clearinghouse, n.d.). The principal value underlying consumer organizations is empowerment (Mowbray & Moxley, 1997; National Mental Health Consumers' Self-Help Clearinghouse, n.d.; Van Tosh & del Vecchio, 2000), and the process by which they operate is through peer support (Clay, 2005; National Mental Health Consumers' Self-Help Clearinghouse, n.d.).

The President's New Freedom Commission on Mental Health (NFCMH) (2003) explicitly recognized the critical role that consumer organizations play in the recovery of people with serious mental illnesses. Its final report described consumer organizations as promising best practices and critical features of the infrastructure in a transformed, consumer- and family-driven mental health system.

Since 1949, the Center for Mental Health Services (CMHS) (and its predecessor organization in the National Institute of Mental Health), has conducted surveys of the traditional mental health sector (i.e., State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals with separate psychiatric services, Veterans Administration medical centers, multiservice mental health organizations, and outpatient clinics). Data from these ongoing surveys describe trends in the delivery of services and supports to consumers of mental health services and their families.

Before 2002, consumer organizations and other groups and organizations in the mental health self-

[1] Although persons who use or have used mental health services refer to themselves in various terms (e.g., mental health consumer, psychiatric survivor, ex-patient, client, and recipient), for consistency throughout this chapter, the term "consumer" will be used.

help sector had not been surveyed as part of the national mental health data infrastructure; however, their growing inclusion in the continuum of services and supports critical for the recovery of mental health consumers highlighted the need to add them. Therefore, in 2002, CMHS conducted the Survey of Organized Consumer Self-Help Entities (hereafter referred to as the CMHS Survey).

This chapter presents data from the CMHS Survey, including national estimates of the number of mental health consumer organizations; descriptions of their characteristics; and the services, supports, and activities undertaken within them. As the first national survey of consumer organizations, the CMHS Survey reports data that establish a baseline from which to track the changing role of consumer organizations within the context of mental health transformation. Further, this chapter will discuss the policy implications of the findings in light of the 2003 report of the President's New Freedom Commission on Mental Health, specifically with respect to the potential role of consumer organizations in overcoming barriers to mental health care.

Methods

The first step in surveying mental health consumer organizations was to develop an operational definition. As stated earlier, consumer organizations are broadly defined as those that are run by and for consumers. There is a growing literature describing organizations that are peer-, consumer-, user-, or client-run; or consumer-operated, -administered, -managed, or -directed (Chamberlin, Rogers, & Ellison, 1996; Kaufmann, Schulberg, & Schooler, 1994; Mowbray & Moxley, 1997; Segal, Hardiman, & Hodges, 2002; Trainor, Shepherd, Boydell, Leff, & Crawford, 1997; Van Tosh & del Vecchio, 2000). However, the variability in definitions of these organizations across studies limits the generalizability of their findings, which are often based on small sample sizes.

The CMHS Survey sought to address some of these methodological issues. It operationally defined consumer organizations within the context of mental health transformation (NFCMH, 2003a, p. 27), in which care is driven, or controlled, by consumers. According to Campbell and Leaver (2003), Van Tosh and del Vecchio (2000), Chamberlin, Rogers, and Ellison (1996), and Johnson, Teague, and McDonel Herr (2005), control in consumer organizations can be specifically identified by such indicators as (1) membership on the board of directors and (2) authority over the budget for the organization. Specifically, if an organization has a board of directors, that board must consist of more than 50 percent consumers. (Agreement about using this proportion was reached through the consensus of the consumers involved in the 1998 CMHS-funded Consumer Operated Service Program Initiative, which studied the effectiveness of consumer organizations). In conjunction with other indicators, consumer control over the budget is considered to be a measure of the autonomy of the organization—an important ingredient of consumer organizations (Van Tosh & del Vecchio, 2000).

For this chapter, then, consumer organizations are defined as those in which more than 50 percent of the people making decisions about how the money is spent are mental health consumers.

Based on this determination, consumer organizations were selected from the full CMHS Survey universe, which contains all mental health mutual support groups and self-help organizations run by and for consumers and family members, and consumer-operated services located in the same geographical areas covered by the National Comorbidity Survey (NCS). The NCS consisted of 172 counties in 34 States, selected by the Survey Research Center at the University of Michigan with probability proportional to size (Kessler, 1994). Data were collected through computer-assisted telephone interviews on over 120 variables, including but not limited to questions about the history of the group, organization or service, governance, funding sources, demographic characteristics of participants, and activities.

Based on this definition, 223 consumer organizations fit the selection criteria. This number was then weighted to produce a total of 2,098 consumer organizations nationally. (For further detail about the CMHS Survey and how the consumer organizations were selected, please see Appendix C.)

Findings

Despite variations in structure, degree of formalization, size, and mission, among other qualities, there is considerable agreement in the literature about the factors that make up consumer organizations (Johnsen, Teague, & McDonel Herr, 2005; Mowbray & Moxley, 1997). A number of researchers describe consumer organizations as ideally having a combination of the following characteristics, which can be used as a measure of the autonomy of the organization (Van Tosh & del Vecchio, 2000): (1) the organization is a nonprofit corporation; (2) it has a

budget and paid staff; (3) it provides opportunities for volunteers; and (4) its participants are involved in decisions about how the money is spent. The authors found that over one-quarter of consumer organizations (29.3 percent, Standard Error [SE] 7.6) possess this specified combination of characteristics.

The following descriptive data about consumer organizations are organized similarly to Van Tosh and del Vecchio's 2000 description of the first 14 CMHS-funded consumer/survivor operated self-help programs (Van Tosh & del Vecchio, 2000).

Number of Consumer Organizations in the United States

- The CMHS Survey estimates that there are approximately 2,100 consumer organizations in the United States.

History

- Over three-fifths (63.8 percent, SE 5.7) of consumer organizations were started by consumers, 16.9 percent (SE 4.7) by groups or organizations they were a part of or affiliated with, and 8.6 percent by family members.

- The median length of time consumer organizations have been in existence is 11.59 (SE 1.4) years; therefore, approximately one-half of the organizations were started prior to 1990. Perhaps this finding demonstrates considerable stability in operation or can be related to the CMHS funding of the first consumer-operated grant program from 1986–1990.

Staffing

- Percentage of consumer organizations having paid staff is 89.5 percent (SE 4.0).

- Percentage of consumer organizations having volunteers on staff is 74.8 percent (SE 3.3).

- In consumer organizations with paid staff, the mean number of paid staff is 19.3 (SE 4.8).

- In those with volunteer staff, the mean number of volunteers is 14.4 (SE 1.2) (table 21.1).

- Nearly all consumer organizations (95.5 percent, SE 2.6) provide reasonable accommodations for staff.

Funding/Resources

- Nearly all (87.2 percent, SE 4.4) consumer organizations have a budget.

- Approximately one-half (52.5 percent, SE 10.3) of consumer organizations have a budget of less than $100,000; slightly more than one-third (37.1 percent, SE 11.0) have a budget between $100,000 and $500,000.

- Approximately four out of five (80.7 percent, SE 3.9) consumer organizations with budgets receive grants and/or contracts (table 21.2).

- About 14.7 percent (SE 4.3) of consumer organizations with budgets give grants and contracts to individuals or other organizations.

- Around 67.6 percent (SE 4.9) of consumer organizations rent their office space, 26.2 percent (SE 3.5) use donated space, and 15.9 percent (SE 3.5) own their office space.

Table 21.1. Mean and median number of paid staff, and volunteers, in consumer organizations with paid staff (n = 1,711) and in consumer organizations with volunteer staff (n = 1,570)

	Mean	SE	Median	SE
Paid staff	19.3	4.8	—	—
Volunteers	14.4	1.2	7.8	2.4

Table 21.2. Source of funding for consumer organizations with budgets (n = 1,830)

	Percent	SE
Grants or contracts	80.7	3.9
Contributions, donations, bequests, memorials	76.5	6.9
Fund raising activities	66.3	4.8
Group or organization part of or affiliated with	65.5	8.0
Services or products sold or provided	34.7	9.0
Membership fees or dues	19.4	4.5

- Approximately one-fifth (17.9 percent, SE 3.3) of consumer organizations are housed within local community mental health agency office space, and 43.5 percent (SE 5.6) are housed in generic office or commercial space.

Population Served

- English is primarily spoken by the members or clients of nearly all (99.5 percent, SE 0.4) consumer organizations. Close to one-quarter (22.2 percent, SE 3.4) report that Spanish is primarily spoken by their members.

Program Governance

- About 86.6 percent (SE 4.8) of consumer organizations are incorporated as not-for-profit organizations.

- Participants are involved in making decisions about how the money is spent in 83.4 percent (SE 7.0) of consumer organizations.

- Thirty percent (30 percent, SE 7.2) of consumer organizations have both a board of directors or governing board made up of greater than 50 percent consumers *and* a single consumer participant/staff member, such as an executive director, taking part in making decisions about how the money is spent. An additional 29.4 percent (SE 6.8) have a board without a director. In 15.2 percent (SE 4.6) of consumer organizations, there is a single consumer decision maker such as an executive director with no board. Approximately one-quarter (25.4 percent, SE 8.0) of consumer organizations have neither a board nor a single director making decisions about how money is spent, implying that all decisions are made by participants.

Interaction With the Mental Health System

- Word of mouth (99.9 percent, SE 0.1) is the most common way that people find out about consumer organizations. Although there is a history of ambivalence between consumer organizations and the traditional mental health system, in 2002, 93.1 percent (SE 4.5) of consumer organizations received referrals from that very system (table 21.3).

Table 21.3. How people find out about consumer organizations

	Percent	SE
Word of mouth	99.9	0.1
The group or organization you are part of or affiliated with	94.0	2.9
Referrals from psychiatrists, therapists, hospitals or mental health agencies	93.1	4.5
Material you produce or distribute	91.9	4.2
Information and referral services, such as hotlines or self-help clearinghouses	74.7	7.6
Information provided over Internet	57.2	7.1
Local newspapers, TV, magazines	56.9	6.5

- Consumer organizations were asked how their participants view working with psychiatrists and therapists; 68.1 percent (SE 6.0) report that their participants view their organization's activities as complementary to those provided by psychiatrists and therapists, while 25.8 percent (SE 6.6) report that they have some participants who see the organization's activities as complementary and others who view them as substituting for psychiatrists and therapists.

- Psychiatrists and therapists are on the paid staff of 15.2 percent (SE 4.6) of consumer organizations; of these, three-fifths (60.4 percent, SE 12.4) identify themselves as consumers or family members.

Services, Supports, and Activities

- The mean number of services, supports, and activities undertaken in consumer organizations is 11.4 (SE 0.3).

- A wide range of services and supports are provided and activities undertaken in consumer organizations (table 21.4).

- Approximately four-fifths (80.4 percent, SE 4.9) of the consumer organizations engage in advocacy or rights protection; within these, legislative action (86.3 percent, SE 3.8) and involvement in antistigma campaigns (72.7 percent, SE 8.1) are the most common activities (table 21.5).

Table 21.4. Proportion of consumer organizations providing specified services, supports, and activities (n = 2,099)

	Percent	SE
Advocacy or rights protection*	80.4	4.9
Face-to-face support groups	80.2	3.3
Public and community outreach*	79.0	3.3
Social or recreational	78.4	6.9
Write or produce material or information	77.6	3.4
Formal training/classes not job related	76.0	3.8
Distribute material or information	70.4	9.7
Telephone support (hot, warm, information)	69.7	4.2
Creative or performing arts	68.6	5.4
Case management	60.8	7.0
Help with housing problems*	58.1	6.8
Face-to-face mentoring or buddy system	56.4	6.9
Research activities	53.7	7.0
Outreach to members	53.4	8.8
Operate a drop-in center	47.6	8.7
Internet listserv or Web site	45.6	6.0
Help people get jobs*	45.5	6.7
Spiritual or faith based	19.9	3.7
Respite care	—	
Babysitting or child care	—	

*Specifically identified in the report of the President's New Freedom Commission on Mental Health.

Table 21.5. Proportion of consumer organizations engaged in advocacy or rights protection (n = 1,688)

	Percent	SE
Legislative action	86.3	3.8
Antistigma campaigns	72.6	8.1
Policy development	64.8	12.4
Direct action (demonstrations)	59.9	7.9
Community organizing	58.2	9.7
Going to court	44.9	8.9

Table 21.6. Proportion of consumer organizations engaged in public and community education/outreach (n = 1,659)

	Percent	SE
Provide speakers for events	97.3	1.2
Representatives for community boards, forums, conferences	79.8	11.1
Outreach in hospitals, homes, streets	71.1	10.4
Conduct workshops or educational events	65.3	12.8
Classes/training for nonmembers	51.3	8.5
Sponsor public hearings/forums	41.3	8.7
Mobile outreach	39.4	6.9
Faith-based events	26.1	5.5
Theatre or performing arts	21.5	6.0

- Four-fifths (79.0 percent, SE 3.3) of the consumer organizations engage in public and community education and outreach; within these, nearly all (97.3 percent, SE 1.2) provide speakers for events in the community at large (table 21.6).

- Three-quarters (76 percent, SE 3.8) of consumer organizations provide opportunities for participants to take part in classes and receive training in addition to activities that may be job related. Approximately three-quarters of these provide classes in recreational activities such as exercise or arts and crafts (77.7 percent, SE 6.5) and "self-care training" (73.7 percent, SE 11.9), defined as stress management, coping skills, and money management skills. Slightly more than half (52.1 percent, SE 8.7) of these consumer organizations provide leadership training.

- Three-fifths (60.8 percent, SE 7.0) of all consumer organizations provide access to case management services or help people to get the services they want or are entitled to; of these, nearly half (49.0 percent, SE 8.7) provide help directly, not on referral. Although nearly all provide help obtaining services from the mental health system (97.5 percent, SE 2.5), of the consumer organizations providing this service, three-quarters or more also help their clients negotiate the broad range of services outside the mental heath system (table 21.7).

Table 21.7. Proportion of consumer organizations providing case management services or help to people to get services they want or are entitled to (n = 1,275)

	Percent	SE
Provide case management	49.0	8.7
Help people get services in:		
Mental health system	97.5	2.5
Disability benefits	93.6	3.8
Housing	86.8	6.0
Workplace/employment	82.6	7.1
Medicaid and health insurance	81.2	7.2
Legal or justice system	73.8	11.3

Table 21.8. Proportion of consumer organizations providing job services and supports (n = 955)

	Percent	SE
Provide peer bridger or peer educator program	65.8	11.7
Job training (interview skills/ resume development)	62.8	18.2
Employment counseling (job club/ placement)	44.1	12.8
Help getting further education	42.7	11.4

- Of consumer organizations that directly help with housing problems, more than four out of five provide help with landlord/tenant problems (86.1 percent, SE 7.1) and in finding housing (85.8 percent, SE 7.5). Slightly less than one-fifth (16.6 percent, SE 8.7) operate housing programs. In addition, 61.1 percent (SE 12.1) help people move. When asked whether the type of housing they help to provide was permanent, transitional, or emergency, approximately one-third (34.55 percent, SE 10.2) report that they help people get permanent housing.

- Peer bridger or peer educator programs are provided in approximately two-thirds (65.8 percent, SE 11.7) of consumer organizations that help people to get jobs (table 21.8). When asked whether they provide assistance with permanent, transitional, or voluntary jobs, approximately two-fifths (39.0 percent, SE 7.2) of these organizations report that they are helping people get permanent jobs.

- Of the consumer organizations engaging in research activities, approximately three-fourths (73.3 percent, SE 7.6) conduct their own independent research.

The CMHS Survey database also contains data on consumer supporter organizations (sample n = 230, weighted n = 1,450), defined by CMHS as organizations in which both consumers and consumer supporters work and in which the budget is controlled by consumer supporters (individuals who provide support in a nonprofessional capacity to a consumer ages 18 or older). These are sometimes described as consumer partnership organizations (Solomon & Draine, 2001). In the organizations in the CMHS Survey, the consumer supporters or partners are family members.

When the authors examined differences between consumer supporter organizations and consumer organizations with respect to the proportions providing specified services, supports, and activities, they found that these two types of organizations were similar with the exception of three services. Consumer organizations were significantly more likely to help people to get jobs (consumer organizations 46 percent, consumer supporter organizations 26 percent, chi-square 4.54, p = 0.04), provide a face-to-face mentoring or buddy system (consumer organizations 56 percent, consumer supporter organizations 37 percent, chi-square 4.52, p = 0.04), and provide opportunities for creative or performance arts (consumer organizations 69 percent, consumer supporter organizations 37 percent, chi-square = 8.76, p = 0.005).

Limitations

Before discussing the implications of these findings, some caveats and limitations need to be identified. First, because of the broad definition of "consumer" used in the CMHS Survey (i.e., a person who self-identifies as having received mental health services), there may be instances in which consumer supporters (family members and significant others), sometimes also called secondary consumers, identified themselves as primary consumers rather than family members. Future researchers should be careful to avoid any such ambiguity when constructing definitions. Second, although it may be tempting to compare the CMHS Survey findings with studies reported elsewhere, including papers previously published on the CMHS Survey (Goldstrom et al., in press), the reader is cautioned to make certain

that the definitions of consumer organizations are comparable and the number of organizations is sufficient for analytical purposes. Third, although these data provide us with a good snapshot of consumer organizations at a single point in time, they are not outcome data. Therefore, the data tell us nothing about how the consumers, both the providers and recipients, perceive their benefit or objectively benefit from the services, supports, and opportunities provided. Fourth, provision of specified services, support, and opportunities tells us nothing about the need or demand for such activities.

Policy Implications

Only one out of two people with serious mental illnesses seeks treatment. The President's New Freedom Commission on Mental Health cites six barriers to people getting help: stigma, fragmented services, costs, workforce shortages, lack of available services, and not knowing where and how to get care. Consumer organizations are in a unique position among the organizations serving people with mental illnesses. By their very nature, consumer organizations help to overcome each of the six barriers.

Stigma. For individual mental health consumers facing stigma and discrimination, consumer organizations provide a haven where the principles of empowerment, recovery, and mutual support prevail. Public and community education, particularly as it relates to reducing and eliminating stigma and discrimination and rights protection, is of particular concern to the President's Commission. Most consumer organizations actively work to fight stigma and discrimination in the broader community; approximately four out of five (79 percent) engage in public and community education or other forms of outreach to people who are not participants. The President's Commission report specifically recommends the advancement and implementation of a national campaign to reduce the stigma of seeking care. As CMHS moves forward with its national campaign to reduce stigma and discrimination through the Self-Determination Initiative and its Resource Center to Address Discrimination and Stigma (ADS) and the Elimination of Barriers Initiative, the CMHS Survey data demonstrate that efforts to reduce stigma and discrimination already constitute a major role played by consumer organizations.

Fragmented Services. Many of the consumer organizations' services and supports are provided under one roof, in "one-stop shops," so the barriers of fragmentation are ameliorated. As table 21.7 demonstrates, consumer organizations provide links for consumers to services and supports, not only in the mental health sector, but also to the array of services and supports in other areas critical to recovery in the community (e.g., help in getting insurance benefits as well as housing and employment). Consumer organizations help bridge the divide between the mental health system and other systems of care.

Costs. The CMHS database contains only organizations that provide services and supports at no cost to consumers. The costs of providing services and supports are reduced by the use of volunteers and donated space, for example.

Workforce Shortages. Consumer organizations help to address workforce shortages among mental health providers by providing services and supports in communities where mental health providers are scarce or unavailable. Today, as increasing number of consumers are being certified and their services are being reimbursed by Medicaid, we can expect fundamental changes in the character of the workforce serving people with serious mental illnesses.

Lack of Available Services. The President's Commission report (NFCMH, 2003, p. 29) states that the array of community-based options must be expanded. Table 21.4 demonstrates the breadth of services and supports provided through the mental health self-help sector.

Not Knowing Where and How to Get Care. The CMHS Survey data demonstrate that the average consumer organization provides 11 to 12 of the services, supports, and opportunities specified in the CMHS Survey, through any one site. Three-fifths (60.8 percent, SE 7.0) of consumer organizations report that they help people to obtain the services they want or to which they are entitled. The on-site availability of these case management services, coupled with the sheer array of services and supports provided across all systems of care, not just the mental health system, can help consumers meet their information needs efficiently.

In addition, the President's Commission strongly endorses protecting and enhancing the rights of people with serious mental illnesses (NFCMH, 2003, p. 45). The CMHS Survey data demonstrate that slightly more than four out of five (80.4 percent, SE 4.9) consumer organizations report engaging in advocacy or rights protection.

Other areas of concern raised by the President's Commission, which are critical to the SAMHSA mission, are the importance of jobs, housing, and social relationships for recovery. The report (NFCMH, 2003, p. 29) cites as "alarming" the low rate of employment for adults with mental illnesses and states that

consumers need employment and income supports. According to the CMHS Survey, nearly half (45.5 percent, SE 6.7) of consumer organizations report that they provide help to people to obtain jobs. In the housing arena, the report acknowledges a shortage of affordable housing and recommends making housing with supports widely available (NFCMH, 2003, p. 42). The CMHS Survey found that more than half of consumer organizations (58.1 percent, SE 6.8) report helping people face these and other housing difficulties. Further, 78.4 percent (SE 6.9) of all consumer organizations report providing social and recreational opportunities.

Conclusions

A transformed consumer-driven system of care can be conceived of as one with consumers and their organizations at its hub, where consumers choose what they need from an array of services and supports (U.S. Department of Health and Human Services, 2005a). Consumer organizations provide, within a nonstigmatizing environment, what the traditional mental health system cannot offer. They integrate the fragmented services needed for recovery that span multiple systems of care, such as housing, employment, and social services. Although partnerships around recovery between CMHS and other Federal agencies serving people with serious mental illnesses are developing (U.S. Department of Health and Human Services, 2005b), State agencies and local communities struggle with shrinking resources and the seemingly impossible coordination of care across multiple agencies with different funding streams. Consumer organizations may be the only organizations in the community that are in fact interacting with each of the disparate agencies and providing integrated services, supports, and opportunities for recovery in one location.

Approximately 2,100 organizations in the United States are controlled by mental health consumers; more than half the number of organizations serving adults in the traditional mental health sector (n = 3,793) (U.S. Department of Health and Human Services, 2004). Optimism about their potential, however, must be tempered by a concern about their general unavailability to most consumers. A recent survey (Hall, Graf, Fitzpatrick, Lane, & Birkel, 2003) reported that within the last year, only 29 percent of consumers received services from consumer organizations. There are 3,066 counties in the United States, and even if consumer organizations were equally dispersed geographically, there is less than one consumer organization per county. Further, consumer organizations are always in danger of losing funding; they are often the last to be funded and first to be cut when budgets are tight (Clay, 2005).

It is hoped that data from the CMHS Survey will contribute to the development of replicable models of consumer organizations and outcome studies to move consumer organizations "officially" from the realm of emerging best practices (NFCMH, 2003) into evidence-based, or best practices. However, Salzer et al. (2002) comment that consumer-provided services have emerged as a best practice based on changing service philosophies that increasingly accept them as an important way to expand the continuum of services, as well as the growing, albeit limited, body of research that has found consistently positive outcomes (Campbell, 2005; Davidson et al., 1999; Hall, Graf, Fitzpatrick, Lane, & Birkel, 2003; Kyrouz & Humphreys, 1997; Solomon & Draine, 2001; Sommers, Campbell, & Rittenhouse, 1999). Cook (2004) goes on to say that the research evidence alone will not meet the needs of those faced with designing tomorrow's service system within a recovery framework. She advocates for consensus-building on transformation of the mental health system based on the principles of fairness, efficiency, and consumer choice, *as well as* empirical evidence.

This debate may continue for some time. In the interim, the data presented here set the baseline for future surveys in this area and provide a basis on which to empirically track the role of consumer organizations within mental health transformation.

REFERENCES

Campbell, J. (2005). The historical and philosophical development of peer-run support programs. In S. Clay, with B. Schell, P.W. Corrigan, & R.O. Ralph (Eds.), *On our own, together: Peer programs for people with mental illness* (pp. 17–64). Nashville, TN: Vanderbilt University Press.

Campbell, J., & Leaver, J. (2003). *Emerging best practices in organized peer support.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

Chamberlin, J., Rogers, E. S., & Ellison, M. L. (1996). Self-help programs: A description of their characteristics and their members. *Psychiatric Rehabilitation Journal, 19*(3), 33–42.

Clay, S., with contributions from Schell, B., Corrigan, P. W., & Campbell, J. (2005). With us: Where are we going? In S. Clay, with B. Schell, P. W. Corrigan, & R. O. Ralph (Eds.), *On our own, together: Peer programs for people with mental illness* (pp. 239–257). Nashville, TN: Vanderbilt University Press.

Cook, J. A. (2004). Blazing new trails: Using evidence-based practice and stakeholder consensus to enhance

psychosocial rehabilitation services in Texas. Introduction to special issue. *Psychiatric Rehabilitation Journal, 27*(4), 305–306.

Davidson, L., Chinman, M., Kloos, B., Weingarten, R., Stayner, D., & Tebes, J. K. (1999). Peer support among individuals with severe mental illness: A review of experience. *Clinical Psychology: Science and Practice, 6*(2), 165–187.

Goldstrom, I. D., Campbell, J., Rogers, J. A., Lambert, D. B., Blacklow, B., Henderson, M. J., et al. (in press). National estimates for mental health mutual support groups, self-help organizations, and consumer-operated services. *Administration and Policy in Mental Health and Mental Health Services Research.*

Hall, L. L., Graf, A., Fitzpatrick, M., Lane, T., & Birkel, R. (2003). *Shattered lives: Results of a national survey of NAMI members living with mental illness and their families.* Arlington, VA: National Alliance for the Mentally Ill.

Johnsen, M., Teague, G., & McDonel Herr, E. (2005). Common ingredients as a fidelity measure for peer-run programs. In S. Clay, with B. Schell, P. W. Corrigan, & R. O. Ralph (Eds.), *On our own, together: Peer programs for people with mental illness* (pp. 213–237). Nashville, TN: Vanderbilt University Press.

Kaufmann, C. L., Schulberg, H. C., & Schooler, N. R. (1994). Self-help group participation among people with severe mental illness. In F. Lavoie, T. Borkman, & B. Gidron (Eds.), *Self-help and mutual aid. International and multicultural perspectives* (pp. 315–331). Binghamton, NY: Haworth Press Inc.

Kessler, R. C. (1994). The national comorbidity survey: Preliminary results and future directions. *International Journal of Methods in Psychiatric Research, 4,* 114.1–114.13.

Kyrouz, E. M., & Humphreys, K. (1997). A review of research on the effectiveness of self-help mutual aid groups. *International Journal of Psychosocial Rehabilitation, 2,* 64–68.

Maton, K. I. (1993). Moving beyond the individual level of analysis in mutual help group research: An ecological paradigm. *Journal of Applied Behavioral Science, 29*(2), 272–286.

Mowbray, C., & Moxley, D. (1997). A framework for organizing consumer roles as providers of psychiatric rehabilitation. In C. Mowbray, D. Moxley, C. Jasper, & L. Howell (Eds.), *Consumers as providers in psychiatric rehabilitation* (pp. 35–44). Columbia, MD: International Association of Psychosocial Rehabilitation Services.

National Mental Health Consumers' Self-Help Clearinghouse. (n.d.). *Consumer run businesses and services: Technical assistance guide.* Philadelphia, PA: Author.

New Freedom Commission on Mental Health. (2003a). *Achieving the promise: Transforming mental health care in America. Final report* (DHHS Pub. No., SMA-03-3832.). Rockville, MD: Author.

New Freedom Commission on Mental Health. (2003b) *Report of the Subcommittee on Consumer Issues: Shifting to a recovery-based continuum of community care.* Retrieved November 25, 2003, from http://www.mentalhealthconmmission.gov/subcommittee/consumer _022803.doc.

Riessman, F., & Carroll, D. (1995). *Redefining self-help: Policy and practice.* San Francisco: Jossey-Bass Publishers.

Salzer, M. S., Berkey, K., Dodson, J., Duckery, T., Rodgers, W., Rodgers, J., et al. (2002). *Best practice guidelines for consumer-delivered services.* Prepared for Behavioral Health Recovery Management Project: An Initiative of Fayette Companies, Peoria, IL; Chestnut Health Systems, Bloomington, IL; and the University of Chicago Center for Psychiatric Rehabilitation. Retrieved September 20, 2005, from www.bhrm.org/guidelines/salzer.pdf.

Segal, S. P., Silverman, C., & Temkin, T. (1995). Characteristics and service use of long-term members of self-help agencies for mental health clients. *Psychiatric Services, 46*(3), 269–274.

Segal, S. P, Hardiman, E. R., & Hodges, J. Q. (2002). Characteristics of new clients at self-help and community mental health agencies in geographic proximity. *Psychiatric Services, 53*(9), 1145–1152.

Solomon, P., & Draine, J. (2001). The state of knowledge of the effectiveness of consumer provided services. *Psychiatric Rehabilitation Journal, 25*(1), 20–27.

Sommers, D., Campbell, J., & Rittenhouse, T. (1999). *An annotated bibliography on consumer-operated services.* St. Louis, MO: Missouri Institute of Mental Health Program in Consumer Studies and Training. Retrieved May 19, 2003, from http://mimh200.mimh.edu/PieDb/01599.htm.

Trainor, J., Shepherd, M., Boydell, K. M., Leff, A., & Crawford, E. (1997). Beyond the service paradigm: The impact and implications of consumer/survivor initiatives. *Psychiatric Rehabilitation Journal, 21*(2), 132–140.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (1998). Final notice establishing a final estimation methodology for children with serious emotional disturbances (SED). *Federal Register, 63*(137), 38,661–38,665.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (1999). Final notice establishing a final estimation methodology for adults with serious mental illness (SMI). *Federal Register, 64*(121), 33,890–33,897.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services. (2004). In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States, 2002.* (DHHS Publication. No. SMA 3938). Rockville, MD: Author.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (2005a). *Free to choose: Transforming behavioral health care to self-direction.* (DHHS Pub. No. SMA-05-3982). Rockville, MD: Author.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (2005b). *Transforming mental health care in America. Federal action agenda: First steps.* (DHHS Pub. No. SMA-05-4060). Rockville, MD: Author.

Van Tosh, L., & del Vecchio, P. (2000). *Consumer-operated self-help programs: A technical report.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

Chapter 22

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Introduction

Late in 1987, research staff from the American Psychiatric Association (APA), the American Psychological Association, the National Association of Social Workers (NASW), and representatives of professional psychiatric nursing formed a work group on human resources data with staff from the National Institute of Mental Health (NIMH). This work group had four major purposes:

1. To identify common, basic human resources data that could be reported on by these mental health disciplines (psychiatrists, psychologists, social workers, and psychiatric nurses).

2. To prepare a chapter for *Mental Health, United States, 1990* (Dial et al., 1990) that presented and described these data.

3. To identify data gaps and plan steps by which these gaps might be corrected.

4. To improve survey comparability among the participating disciplines so that the essential pool of common core data could be expanded.

The work group has addressed each of these purposes: a common, basic data set was developed and published in *Mental Health, United States, 1998* (Manderscheid & Sonnenschein, 1998); chapters were developed on human resources for the 1990, 1992, 1996, 1998, and 2000 editions of *Mental Health, United States* (Manderscheid & Sonnenschein, 1992, 1996; Manderscheid & Henderson, 1998, 2001); and a plan was developed to fill data gaps and to improve data comparability for the professions that provide mental health services. In addition to the four original disciplines, early in the 1990s, representatives of clinical mental health counseling, marriage and family therapy, and psychosocial rehabilitation were added to the work group. More recently, representatives of school psychology, sociology, and pastoral counseling have been added.

This chapter is designed to update information in similar chapters from the 1990, 1992, 1996, 1998, and 2000 editions of *Mental Health, United States.* It presents information on the size and characteristics for eight of ten disciplines (specific data are not available for sociology and only limited data for pastoral counseling). Results are restricted to data elements that are comparable across the disciplines. Exceptions to this general approach are noted in the footnotes and in the appendix to this chapter, and readers are encouraged to review this appendix for descriptions of the survey methodologies used to collect the data reported here. Clearly, a strong need exists in the mental health field for increased precision and comparability of human resources data. Because mental health is a very labor-intensive field, the preponderance of financial resources is spent in the area of human resources, so the policy and resource implications of human resource data are enormous. To plan adequately for future services, both the public and private sectors require access to such data. This chapter is another step along a path that is of potential benefit to the entire field. *Mental Health United States 2002* (Manderscheid & Henderson, 2004) featured a separate chapter, Perspectives on the Future of Mental Health Disciplines (see Wilk et al., 2002, pp. 17–42). Changes since that time are integrated into this chapter.

At the outset, it is important to specify the scope and limitations of the data in this chapter. The reader needs to be sensitive to data coverage within and across disciplines, as well as over time.

The chapter addresses two types of human resources:

1. Clinically trained mental health personnel, who, because of recognized formal training or experience, could perform direct clinical mental health care, whether or not they are currently doing so.

2. Clinically active mental health personnel who are currently engaged in providing direct clinical mental health care (a subset of total mental health personnel).

The numbers of clinically trained mental health personnel and clinically active mental health personnel are specified only for professionals from the eight mental health disciplines with specific data. Clinical supervision of trainees is considered to be a direct clinical activity. When possible, coverage includes an entire discipline rather than the membership of a professional association. The analyses for each discipline specify the scope of coverage. Time frames for the statistical information vary somewhat from discipline to discipline. The reader should note the variability within and across disciplines (see appendix).

Psychiatry

This section describes the current workforce in psychiatry. Demographic and training characteristics, as well as professional activities and settings, are

characterized. Data sources for this section include the American Medical Association (AMA) *Physician Characteristics and Distribution in the United States* (2004); the 2002 membership records of the APA; the 1990–91 through 2002–03 APA annual census of residents (1991, 1995, 1999, 2003); the AMA 2000–01 *Graduate Medical Education Database;* the 2001–02 joint Association of Medical Colleges (AAMC) and AMA - National Graduate Medical Education (GME) census; the 1988–89 APA Professional Activities Survey (PAS); the 2002 APA National Survey of Psychiatric Practice (NSPP); and the 1998 APA National Survey of Psychiatric Practice (NSPP).

The AMA *Physician Characteristics and Distribution in the United States* (2004) contains information on all physicians practicing in the United States who are self-designated or self-identified as psychiatrists. As a result, the AMA database may include some physicians with no specialty psychiatric training. In comparison, the APA data, which supplement the AMA estimates by providing data not otherwise available, include only APA members who have completed psychiatric residency or have board certification. The APA membership database does not represent the universe of psychiatrists; however, it represents the majority of psychiatrists in the United States.

Demographic and Training Characteristics

Although there has been a 38 percent increase in the number of clinically trained psychiatrists in the United States, from 1983 to 2002 (AMA, 2004), the rate of growth has slowed in recent years. In fact, the rate of growth from 2000 to 2002 was less than 1 percent (see table 22.1). According to APA membership records of U.S. members, membership is approximately 72 percent male and 28 percent female, a small increase in female members since 2000 (CMHS, 2004). In 2002, the median age of female and male APA member psychiatrists was 49 and 57, respectively. Approximately 53 percent of female APA members are under age 50, compared with 29 percent of male APA members.

White non-Hispanics are overrepresented in the APA membership (75 percent) compared to general population (69 percent), as are individuals of Asian origin (10 percent vs. 4 percent), while other racial/ethnic groups are underrepresented. Persons of Hispanic descent account for nearly 5 percent of the APA membership and 14 percent of the general population, African-Americans account for nearly 3 percent of the APA membership and 12 percent of the general population, and American Indians account for 0.1 percent of the APA membership and 0.9 percent of the general population.

As reported in table 22.3, there are approximately 14 clinically active, private sector non-Federal psychiatrists per 100,000 individuals in the U.S. population (AMA, 2004). The distribution of clinically active psychiatrists, however, varies across geographic regions, ranging from 6 per 100,000 in Idaho to 28 per 100,000 in New York, 32.3 per 100,000 in Massachusetts, and 57.6 per 100,000 in the District of Columbia.

Data indicate that the psychiatric workforce in general continues to age, with 64 percent of clinically trained psychiatrists having completed their highest professional degree more than 21 years ago (table 22.4; APA, 2002). Over the past decade, APA membership has declined, specifically for younger psychiatrists. For example, in 1990 psychiatrists under age 45 constituted 37 percent of the APA membership, but by 2002 that number had dropped to 21 percent. Other data corroborate the aging of the psychiatric workforce as well. According to the AMA (2004), psychiatrists under age 45 constituted 46 percent of the psychiatric workforce in 1990 and only 30 percent in 2002.

While during the 1980s, the number of medical students entering psychiatric residencies increased by almost 25 percent (Dial et al., 1990), data from the APA annual census of residents indicate that during the 1990s, this growth plateaued (see table 22.8). The 2002–03 data in table 22.8 indicate a decrease of about 8 percent in the total number of residents since the mid-1990s. However, a steady increase in the proportion of female residents continues. In 1998–99, 53 percent of psychiatric residents were male and 47 percent were female, compared with 56 percent and 43 percent, respectively, in 1990–91 (1 percent missing data). The 2002–03 GME track documented that 49 percent of psychiatric residents were male and 50 percent were female (less than 1 percent missing data). It is important to note that the 2002–03 training data were derived from the joint AMA and AAMC Graduate Medical Education track, rather than APA's annual census of resident, which was the source of data on residency training during the 1990s. The scope of the programs covered by the survey conducted by the 2002–03 AAMC/AMA GME track is restricted to American Council for Graduate Medical Education (ACGME)-accredited programs, whereas APA's annual census of residents traditionally surveyed ACGME-accredited as well as AOA-approved programs, consultation-liaison, research,

Table 22.1. Changes in supply of clinically trained mental health personnel by discipline and total number of hours worked for specified years

	1983	1984	1988	1989	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Hours Worked By Discipline																	
Psychiatry[1]																	
35 hours or more																	
Less than 35 hours (Excluding child psychiatry)	26,476				31,173	32,203			34,088	34,970	35,330						
TOTAL (Including child psychiatry)	29,853				35,249	36,482			39,197	40,352	40,731		40,867		41,145		
Psychology																	
35 hours or more	39,955			48,785				57,948		56,224		59,641					64,511
Less than 35 hours	4,725			7,745				11,869		16,794[2]		17,815[2]					20,372
TOTAL	44,680			56,530				69,817		73,018[2]		77,456[2]			88,491		84,883
Social Work																	
35 hours or more				65,880													
Less than 35 hours				15,857													
TOTAL				81,737	86,378	88,889	90,303	93,245			96,407 (192,814)[3]		97,290 (194,580)[3]				103,128 (412,512)[3]
Advanced Practice Psychiatric Nurse[4]																	
35 hours or more		7,703					4,248		11,294				12,920			6384	
Less than 35 hours		2,331					1,362		4,036				3,686			2367	
TOTAL		10,034	3,497[5]		5,033[5]		5,610[5]	6,800[5]	15,330[6]				16,606			8751	
Counseling[7]																	
35 hours or more													24,864		25,744		23,123
Less than 35 hours													83,240		86,187		77,410
TOTAL									61,100			96,263	108,104		111,931		100,533

Table 22.1. Changes in supply of clinically trained mental health personnel by discipline and total number of hours worked for specified years (Continued)

	1983	1984	1988	1989	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Marriage and Family Therapy[8]																	
35 hours or more								31,203		29,852			25,346				30,095
Less than 35 hours								15,024		14,373			21,765				20,063
TOTAL								46,227		44,225			47,111				50,158
Psychosocial Rehabilitation																	
35 hours or more							29,435		84,100								
Less than 35 hours							5,655		15,900								
TOTAL			20,909				35,000		100,000								
School Psychology[9]																	
35 hours or more																	
Less than 35 hours																	
TOTAL					21,012	21,693	22,214	23,782	24,804	25,870		26,482	31,278				37,893

[1] The American Medical Association *Physician Characteristics and Distribution in the United States*, 2004 Edition, includes physicians who are self-designated or self-identified as psychiatrists regardless of specialty training. Psychiatric residents and fellows and inactive psychiatrists have been excluded.

[2] These are clinically trained psychologists. Estimates are based on trained psychologists reporting hours worked.

[3] The number in parentheses is the total of clinically trained social workers from a conservative estimate that the 96,407 and 97,290 National Association of Social Workers (NASW) members in 1998 and 2000, respectively, are only 50 percent of the total social work labor force. However, the 2004 figure is based on Bureau of Labor Statistics data and suggests that the 103,128 NASW members in 2004 represent 25 percent of the total social work labor force.

[4] Estimates for 1984 and 1996 were based on employed nurses with graduate degrees in psychiatric nursing, not on the population of certified nurses. In 1988 it was estimated that there were 10,567 such employed nurses; in 1984 the estimate was 10,034.

[5] Data are based on the total number of PMH-APRNs board certified by the American Nurses Credentialing Center (ANCC) as of October 2003, including clinical nurse specialists (adult and child) and psychiatric nurse practitioners (family and adult). Missing data are excluded.

[6] A total of 17,318 were trained, with 1,988 (11.5 percent) estimated to be nonemployed.

[7] Data from National Board for Certified Counselors 1998 State Counseling Board Survey; comparison with similar States; number of National Certified Counselors; with growth rate taken from National Certified Counselor data. Full- and part-time ratios taken from table 22.5.

[8] Estimates for 1995 and 1997 were revised to reflect clinically active MFTs. Previous estimates inaccurately included MFTs who were still in training. Estimates of hours worked for 2000 and 2004 are based on the 2000 and 2004 American Association for Marriage and Family Therapy Practice Research Network Project funded by the Center for Substance Abuse Treatment . Data were collected from random samples of AAMFT clinical members (Northey, 2002). For years prior to 2000, the total was distributed into full- and part-time based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

[9] 1992–2000 data source: Thomas (2000); 2004 data source: Charvat (2004).

Table 22.2. Percentage of clinically trained mental health personnel, by discipline, sex, age, and race for specified years

Sociodemographic characteristics	Psychiatry[1] 2002	Psychology 2004[2]	Social Work 2004[3]	Adv. Practice Psychiatric Nursing 2003[5]	Counseling[4] 2004	Marriage and Family Therapy[6] 2004	Psychosocial Rehabilitation 1994	School Psychology 2004[7]	Pastoral Counseling (AAPC Members) 2001[8]
Total (N)	**(24,932)**	**(84,883)**	**(103,128)**	**(8,751)**	**(100,533)**	**(50,158)**	**(9,437)**	**(37,893)**	**(2,812)**
Male (N)	**(17,941)**	**(41,389)**	**(18,563)**	**(476)**	**(28,149)**	**(15,047)**	**(3,223)**	**(11,277)**	**(1,920)**
Under 35	1.5	2.8	8.5	4.0	11.1	6.2	38.4	26.1	0.9
35–39	5.6	5.3	5.5	4.4	4.1	6.1	20.1	6.9	2.0
40–44	9.4	7.1	9.5	10.1	8.3	6.3	17.7	7.5	4.9
45–49	12.2	9.8	18.3	19.1	9.5	13.7	10.7	14.4	12.0
50–54	13.6	17.9	28.1	25.8	14.1	20.5	5.5	16.0	15.7
55–59	13.3	21.1	14.9	11.1	21.3	23.1	3.6	15.2	20.4
60–64	11.3	13.7	11.9	2.7	18.2	13.6	2.3	12.4	16.1
65–69	9.0	6.5	2.7	1.1	9.0	6.3	1.2	1.1	11.4
Over 69	24.2	15.7	0.6	0.4	4.5	4.0	0.5	0.4	16.7
Unknown	0.1	NA		21.2					
American Indian/ Alaska Native	0.1	0.3	0.0	0.6	0.5	2.0	0.4	0.4	0.2
Asian/Pacific Islander	8.8	1.4	1.5	1.3	0.7	1.5	2.0	0.5	1.5
Hispanic	4.5	2.2	4.3	1.5	1.9	2.5	6.4	2.8	0.4
Black (not Hispanic)	1.9	1.6	6.4	2.5	3.8	2.2	20.8	1.3	2.0
White (not Hispanic)	75.6	94.4	85.1	82.4	80.0	91.3	69.8	93.4	83.8
Other		0.1				0.8			
Not specified	9.0	0.0	2.7	11.3	13.1	5.6	0.6	1.2	12.1
Female (N)	**(6,948)**	**(43,494)**	**(82,502)**	**(8275)**	**(72,384)**	**(35,108)**	**(6,114)**	**(26,616)**	**(892)**
Under 35	3.8	8.9	13.7	2.9	18.2	6.1	44.3	29.4	0.7
35–39	12.1	12.2	8.9	3.2	3.5	6.6	15.5	11.1	2.0
40–44	17.6	11.9	12.1	6.2	9.0	8.0	14.5	9.5	7.5
45–49	19.6	13.2	19.0	14.4	9.5	11.2	10.7	14.0	14.9
50–54	16.7	17.1	19.9	19.6	14.0	21.1	7.4	14.0	20.7
55–59	11.2	16.5	16.8	16.7	18.3	21.4	4.1	11.8	21.7
60–64	6.1	9.7	6.3	10.0	15.9	15.0	2.3	8.7	17.3
65–69	3.7	4.2	2.6	3.9	8.2	6.6	0.8	1.0	0.1
Over 69	9.1	6.3	.7	1.0	3.4	4.0	0.4	0.5	7.3
Not specified	0.1	NA		22.8					
American Indian/ Alaska Native	0.1	0.3	0.2	0.5	0.5	1.4	N/A	0.7	0.1
Asian/Pacific Islander	13.2	2.0	1.1	1.0	0.8	1.5	N/A	0.6	0.8
Hispanic	4.3	2.9	2.6	2.6	2.1	2.7	N/A	3.2	0.6
Black (not Hispanic)	4.0	2.7	4.2	3.2	4.2	1.6	N/A	2.1	2.0
White (not Hispanic)	73.8	91.8	89.3	80.5	82.6	92.5	N/A	92.7	83.8
Other		0.4				0.7		0.8	
Not specified	4.6	0.0	2.5	12.2	9.8	4.5	N/A		12.7

[1] 2002 American Psychiatric Association membership residing in the United States, excluding medical students; psychiatric residents; corresponding members and fellows; inactive members, associates, fellows; and honorary and distinguished fellows. The not specified race category includes "Other." Note that gender was not reported for 43 psychiatrists.

[2] Sources: 2003 American Psychological Association Directory Survey, 2002 Association of State and Provincial Psychology Boards (ASPPB) Directory, and 2004 Committee for the Advancement of Professional Practice (CAPP) grant application counts. Compiled by the American Psychological Association Research Office.

[3] Based on National Association of Social Workers Practice Research Network (PRN) Survey 2004, indicating that 18 percent of NASW clinically trained members are male. Specific categories are based on NASW PRN 2000.

[4] Data are based on the National Board for Certified Counselors database of National Certified Counselors.

[5] Data are based on the total number of PMH-APRNs board certified by the American Nurses Credentialing Center (ANCC) as of October, 2003 including clinical nurse specialists (adult and child) and psychiatric nurse practitioners.

[6] Data based on 2000 American Association for Marriage and Family Therapy PRN project funded by the Center for Substance Abuse Treatment. Data were collected from a random sample of AAMFT clinical members with an 82 percent response rate of eligible participants, as well as from the 2002 California Association for Marriage and Family Therapy (CAMFT) 2002 Member Practice and Demographic Survey, which was sent to a random sample of the 3,900 of the 14,500 clinical members of CAMFT and had a 27 percent response rate. The "Hispanic" category was treated as a separate question; accordingly, percentages do not sum to zero.

[7] Source: Charvat (2004).

[8] Data are for the year 2001–2002; the totals for race ethnicity are 1,939 for males and 903 for females.

Table 22.3. Estimated number of clinically active (CA) or clinically trained (CT) mental health personnel and rate per 100,000 civilian population, by discipline: United States, and each region and State for specific year

Region and State	Counseling (2004)[4]	Counseling (2004)[4]	Marriage and Family Therapy (2004)[5]	Marriage and Family Therapy (2004)[5]	Psychosocial Rehabilitation (1996)	Psychosocial Rehabilitation (1996)	School Psychology (2004)[6]	School Psychology (2004)[6]
	# of CT Persons	Rate per 100,000	# of CT Persons	Rate per 100,000	# of CT Persons	Rate per 100,000	# of CT Persons	Rate per 100,000
United States	100,533	34.7	50,158	17.3	100,000	37.7	37,893	13.1
New England	6,898	48.6	1,783	12.5	12,200	91.2	3,224	22.7
Connecticut	1,369	39.4	785	22.6	3,000	91.7	1,375	39.6
Maine	825	63.4	86	6.6	1,000	80.5	274	21.1
Massachusetts	3493	54.3	747	11.6	4,600	75.2	997	15.5
New Hampshire	490	38.1	785	5.1	1,900	162.1	278	21.6
Rhode Island	207	19.3	69	6.4	700	70.9	176	16.4
Vermont	514	83.0	30	4.8	1,000	169.8	124	20.0
Middle Atlantic	10,264	25.6	2,447	5.2	22,400	58.6	7,638	19.0
New Jersey	2,706	31.4	767	8.9	4,100	50.9	1,307	15.1
New York	4,033	21.0	1,064	5.6	7,700	42.5	4,600	24.0
Pennsylvania	3,525	28.5	616	5.0	10,600	8.2	1,731	14.0
East North Central	17,935	39.2	3,382	7.4	10,700	24.4	6,019	13.1
Illinois	4,952	39.2	413	3.3	3,100	26.1	2,006	15.9
Indiana	1,371	22.1	1,133	18.3	600	10.2	498	8.0
Michigan	5,503	54.6	976	9.7	3,000	30.7	900	8.9
Ohio	3,566	31.2	379	3.3	3,400	30.4	1,514	13.3
Wisconsin	2,543	46.5	481	8.8	600	11.6	1,101	20.1
West North Central	5,280	27.1	1,664	8.5	10,000	53.8	2,911	14.9
Iowa	580	19.7	156	5.3	1,700	59.6	475	16.1
Kansas	312	11.5	278	10.3	1,100	42.4	800	29.6
Minnesota	140	2.8	747	14.8	2,000	42.7	897	17.7
Missouri	3,111	54.7	256	4.5	3,400	62.9	208	3.7
Nebraska	876	50.6	106	6.1	500	30.2	375	21.7
North Dakota	131	20.9	20	3.2	500	78.0	64	10.2
South Dakota	130	17.1	101	13.3	800	108.4	92	12.1
South Atlantic	20,041	37.2	4,696	10.1	18,800	39.0	5,531	10.3
Delaware	250	30.7	43	5.3	200	27.3	112	13.8
District of Columbia	1,162	207.8	54	9.6	700	132.3	80	14.3
Florida	5,472	32.3	2,026	12.0	5,700	38.9	1,652	9.7
Georgia	3,018	35.0	557	6.5	1,000	13.4	727	8.4
Maryland	1,736	31.7	162	3.0	6,900	135.5	750	13.7
North Carolina	3,070	37.0	621	7.5	1,200	16.2	700	8.4
South Carolina	1,357	33.0	251	6.1	500	13.3	688	16.7
Virginia	2,881	39.8	947	13.1	2,500	37.1	679	9.4
West Virginia	1,095	60.5	35	1.9	100	5.5	143	7.9
East South Central	4,368	25.3	1,280	7.4	2,400	14.7	1,071	6.2
Alabama	1,417	31.6	219	4.9	600	13.9	191	4.2
Kentucky	781	19.1	430	10.5	1,000	25.6	353	8.6
Mississippi	880	30.7	385	13.5	200	7.3	80	2.8
Tennessee	1,290	22.1	246	4.2	600	11.2	447	7.7
West South Central	16,490	50.5	4,284	13.1	5,900	19.9	2,997	9.2
Arkansas	523	19.2	90	3.3	800	31.7	228	8.4
Louisiana	1,745	39.0	787	17.6	1,200	27.6	390	8.7
Oklahoma	2,598	74.5	507	14.5	300	9.0	248	7.2
Texas	11,624	52.8	2,900	13.2	3,600	18.5	2,131	9.7
Mountain	8,684	45.0	2,446	12.7	3,800	26.3	2,845	14.7
Arizona	2,338	42.1	342	6.2	1,700	67.4	700	12.6
Colorado	2,133	47.2	511	11.3	300	7.7	900	29.9
Idaho	567	41.6	211	15.5	0	0.0	278	20.4
Montana	848	92.8	52	5.7	200	22.8	215	23.5
Nevada	744	33.3	639	28.7	200	11.9	198	8.9
New Mexico	1,154	61.9	166	8.9	900	52.0	215	11.5
Utah	307	13.1	459	19.5	200	9.7	230	9.8
Wyoming	593	119.1	66	13.2	300	62.5	109	21.9

Continued

Table 22.3. Estimated number of clinically active (CA) or clinically trained (CT) mental health personnel and rate per 100,000 civilian population, by discipline: United States, and each region and State for specific year (Continued)

Region and State	Counseling (2004)[4] # of CT Persons	Counseling (2004)[4] Rate per 100,000	Marriage and Family Therapy (2004)[5] # of CT Persons	Marriage and Family Therapy (2004)[5] Rate per 100,000	Psychosocial Rehabilitation (1996) # of CT Persons	Psychosocial Rehabilitation (1996) Rate per 100,000	School Psychology (2004)[6] # of CT Persons	School Psychology (2004)[6] Rate per 100,000
Pacific	10,573	22.6	28,176	60.2	13,800	32.2	5,657	12.1
Alaska	317	50.3	92	14.6	0	0.0	165	26.2
California	4,399	12.5	26,855	76.0	11,300	35.0	4,336	12.3
Hawaii	501	41.3	113	9.3	500	42.1	60	4.9
Oregon	1,351	38.0	295	11.8	1,000	30.8	270	7.6
Washington	4,005	65.9	821	13.5	1,000	17.8	826	13.6

[1] For psychiatry, the numerator of the rate is based on clinically active psychiatrists in the private sector and does not include residents or fellows (see AMA Physician Characteristics and Distribution in the US 2004), and the denominator is from the U.S. Bureau of the Census (2002).

[2] Source: 2003 American Psychological Association Directory, 2002 ASPPB Directory, and 2004 CAPP grant application counts. Compiled by APA Research Office. Data for the numerator are from late 2003 to early 2004; denominator is estimated civilian population of the United States as of July 1, 2003. Source: Table ST-EST2003-01civ- Annual Estimates of the Civilian Population by Selected Age Groups for the United States and States: July 1, 2003 and April 1, 2000, Population Division, U.S. Bureau of the Census. Release Date: March 10, 2004 (www.census.gov/estimationprogram).

[3] Based on National Association of Social Workers' membership data, fall 2004 (MSW and DSW regular members).

[4] Data are from National Board for Certified Counselors 1998 State Counseling Board Survey; comparison with similar States; number of national certified counselors; with growth rate taken from National Certified Counselor data. Data for the denominator of the rate are from U.S. Census, July 1, 2003, estimates.

[5] Data for the numerator are based on 2004 American Association for Marriage and Family Therapy (AAMFT) Practice Research Network project funded by the Center for Substance Abuse Treatment. Data were collected from a random sample of AAMFT clinical members.

[6] Numerators for the rates are from Charvat (2004); denominators are based on estimates of the civilian population of the United States as of July 1, 2003 (Population Division, U.S. Census Bureau, Release Date: March 10, 2004).

[7] Data are based on the total number of PMH-APRNs board certified by the American Nurses Credentialing Center (ANCC) as of October 2003, including clinical nurse specialists (adult and child) and psychiatric nurse practitioners (family and adult). Missing data are excluded.

Table 22.4. Percentage of clinically trained mental health personnel, by number of years since completion of highest professional degree, for specified years

Discipline	(N)	Number of Years Since Completion 0–2	3–5	6–10	11–15	16–20	21+	Not Specific
Psychiatry (2002)[1]	(24,932)	0.0	0.2	9.1	13.0	13.0	64.2	0.6
Psychology (2002)[2]	(85,128)	4.2	10.2	16.1	15.3	15.9	33.8	—
Social work (2000)[3]	(97,290)	1.8	8.6	17.4	16.9	17.2	38.2	—
Psychiatric nursing (2003)[4]	(7,688)	5.5	7.8	14.0	19.9	21.4	25.4	6.1
Counseling (2004)[5]	(100,533)	8.4	12.5	20.6	20.6	13.6	24.4	0.0
Marriage and family therapy (2002)[6]	(50,158)	1.8	4.6	18.2	18.9	22.8	33.7	—
Psychosocial rehabilitation (1994)	(9,437)	2.3	3.2	16.3	18.9	18.7	40.6	—
School psychology (2004)[7]	(37,893)	11.4	13.4	14.1	13.0	10.0	38.1	—

[1] 2002 American Psychiatric Association membership residing in the United States, excluding medical students; psychiatric residents; corresponding members and fellows; inactive members, associates, fellows; and honorary and distinguished fellows.

[2] Estimates are for the doctoral-level clinically trained psychologists in the United States in late 2001 and early 2002 reporting years. Missing data are excluded.

[3] Estimates are based on National Association of Social Workers (NASW) Practice Research Network (PRN) survey, 2000, which requested years of experience since completion of first professional degree. The numbers reported reflect slightly different year ranges from other disciplines presented in table 22.4. The NSAW PRN survey data represent the following ranges: less than 2; 2–4 years; 5–9 years; 10–14 years; 15–19 years; and 20+ years. Thus, data are not comparable to other disciplines.

[4] All subjects have master's or doctoral education in nursing. The data in this table reflect the years since completion of highest nursing degree; they do not include years since doctoral degrees in non-nursing areas. Note that the highest degree might be a doctorate rather than a master's degree.

[5] Estimates are based on the 2000 National Study of the Professional Counselor, with growth rate taken from 2004 National Certified Counselor data.

[6] All data are based on 2002 American Association for Marriage and Family Therapy (AAMFT) PRN project funded by the Center for Substance Abuse Treatment. Data were collected from a random sample of AAMFT clinical members (Northey, 2004).

[7] Source: Charvat (2004).

and other postresidency programs. Although the 2002–03 data displayed in table 22.8 attempted to include programs not covered by the GME track and to follow up with nonresponding programs, methodological differences across data sources, as well as factors such as program mergers, closures, and downsizing in the late 1990s may account for some of the decline in 2002–03 numbers in psychiatric residency training. Furthermore, the 2002–03 data were based on an 84.2 percent response rate from training programs in the United States.

During the 1990s, there has been a 63 percent increase in the proportion of international medical graduates (IMGs) entering psychiatric residencies (APA, *Census of Residents,* 1990–1998). The greatest increase occurred during the early to mid 1990s, with the proportion of IMGs increasing 92 percent between 1990 and 1996. In recent years, however, this trend appears to have subsided, with a nearly 6 percent decrease in the proportion of IMGs between 2000 and 2002. Furthermore, in the past 2 years, the proportion of Hispanic, African-American, Asian, and Native American residents has increased, while the proportion of White residents has decreased considerably, from 62.5 percent in 2000 to 55.7 percent in 2002.

Professional Activities

It is important to note some methodological differences in collecting data on professional activities from 1988 to 2002, in that questions were asked in different ways in some cases. However, both surveys used the AMA 2002 Physician Masterfile, which includes all U.S. physicians self-identified as psychiatrists as a sampling frame, and both were weighted to provide national estimates

Findings from the 2002 NSPP indicate a decrease in the number of psychiatrists working in more than one setting, with 45 percent of psychiatrists working in more than one setting during the course of a week compared to 76 percent in 1988. Among psychiatrists working full time (35 hours or more per week) in the United States in 2002, 50 percent worked in two or more settings (table 22.5), whereas 22 percent of psychiatrists working part time (less than 35 hours per week) practiced in two or more settings. In 1988, 79 percent of psychiatrists who worked full time and 59 percent of psychiatrists who worked part time worked in multiple settings. Consequently, the mean number of settings in which psychiatrists work per week decreased slightly between 1988 and 2002 (from 2.3 to 1.6). Overall, the

Table 22.5. Percentage of clinically trained mental health personnel, by discipline, employment status, and number of employment settings, for specified years

	Discipline and Year							
Employment Setting	**Psychiatry[1] 2002**	**Psychology[2] 2004**	**Social Work[3] 2004**	**Adv. Practice Psychiatric Nurses 2003[7]**	**Counseling[4] 2004**	**Marriage/ Family Therapy[5] 2004**	**Psycho-Social Rehab. 1994**	**School Psychology 2000[6]**
Full time (N)	(748)	(39,029)	(55,689)	(4,520)	(23,123)	(30,095)		(26,611)
One setting	49.9	49.6		98.1	80.0	41.9	77.5	94.0
Two or more settings	50,1	50.4		19.5	20.0	58.1	22.5	N/A
Part time (N)	(197)	(12,325)	(23,719)	(2,367)	(77,410)	(20,063)		(4,667)
One setting	77.6	66.2		98.6	65.0	47.7	54.8	38.1
Two or more settings	22.4	33.8		17.7	35.0	52.3	45.2	61.9

[1] Respondents to the 2002 American Psychiatric Association National Survey of Psychiatric Practice currently active in psychiatry (N = 1,095). Full time is defined as 35 or more hours per week; data have been weighted. Note: 150 psychiatrists had missing information on employment status.

[2] Total is based on an estimate of the clinically active psychologists (51,354). Percentages are derived from proportions in the APA Directory Survey.

[3] Data are based on National Association of Social Workers (NASW) PRN survey, 2004; 22 percent of regular members reported a combination of full-time and part-time employment, and data from these members are not included in this table.

[4] Data are based on National Board for Certified Counselors (NBCC) National Study of the Professional Counselors (2000). Full time is defined as 35 or more hours per week.

[5] Data are based on 2004 American Association for Marriage and Family Therapy (AAMFT) Member Survey based on a sample of 2,236 AAMFT clinically trained providers.

[6] Source: Thomas (2000).

[7] Data are based on the total number of PMH-APRNs board certified by the American Nurses Credentialing Center (ANCC) as of October 2003, including clinical nurse specialists (adult and child) and psychiatric nurse practitioners (family and adult). Missing data are excluded.

mean number of hours psychiatrists work per week fell from 48 hours in 1988 to 43 in 2002. However, the proportion of psychiatrists working full time has increased slightly from 74 percent in 1988 to 76 percent in 2002.

In 2002, active psychiatrists reported spending 45 percent of their patient care time in either an individual or group practice (2002 APA NSPP). Previously, hospitals have been one of the major work settings for psychiatrists, but substantial changes in the health care delivery system may have resulted in a decline in the proportion of psychiatrists primarily working in hospitals. Of active psychiatrists responding to the 2002 APA NSPP, 11 percent reported a hospital as their primary work setting—down from 28 percent in 1988. The number of psychiatrists working in outpatient clinics increased during this period: 30 percent of psychiatrists in 2002 reported outpatient clinics as their primary work setting (see table 22.6), compared with 10 percent in 1988. Furthermore, in 2002, psychiatrists reported that nearly 16 percent of psychiatric patient care time was spent either in a general or psychiatric hospital compared to 28 percent of psychiatric patient care time in outpatient facilities, including private, public, and health maintenance organization (HMO) clinics.

In addition to working in more than one setting, psychiatrists usually are involved in several work activities. As shown in table 22.7, in 2002, 94 percent of psychiatrists were involved in patient care, 85 percent in administration, and 20 percent in research. Psychiatrists spent a mean of 26.1 hours per week or 60 percent of their work week in direct patient care in 2002, compared to 67 percent in 1988. In addition, psychiatrists appear to have spent 8.7 hours per week in administrative activities in 2002, up from 5.8 hours per week in 1988. The decrease in direct patient care hours and increase in administrative hours during this period may be due to changes in the organization and financing of the Nation's health care system.

Conclusion

Over the past two decades, the number of clinically trained psychiatrists has increased slightly; however, the rate of growth in the number of clinically trained psychiatrists has decreased. The number of female psychiatrists entering the field has increased, and the median age of psychiatrists has increased since 1988 (Manderscheid & Henderson, 2001, 2004). The number of psychiatric residents has decreased slightly during the past decade. There has, however, been significant growth in the number of IMGs entering psychiatric residencies during the 1990s, although this trend has subsided since 2001. Stricter visa laws as a result of the events of September 11 may continue to decrease the number of IMGs entering U.S. residencies (Manderscheid & Henderson, 2004).

One major change over the past decade has been the decrease in time psychiatrists are spending in direct patient care, with more of their time being devoted to administrative activities. This change is of particular concern, given its impact in decreasing the available psychiatric workforce for direct patient care, especially in light of the increased demand for psychiatric services. Nearly two out of every five psychiatrists work in more than one setting. In the past 20 years, hospitals have declined as a primary work setting for psychiatrists. The number of psychiatrists working in other organized care settings (e.g., HMOs), on the other hand, has increased. Psychiatrists continue to be involved in many types of work activities, including direct patient care, research, administration, and teaching (Zarin et al., 1998).

Research has shown that psychiatrists treat a patient population with more severe and complex problems than other general medical and mental health providers (Olfson & Pincus, 1996; Pincus et al., 1999). Analyses of the National Medical Expenditure Survey data indicate that compared with psychologists, psychiatrists tend to see a larger proportion of persons who are socially disadvantaged, who report that their health interferes with their work, and who have higher utilization of nonhospital outpatient mental health care. In addition, psychiatrists provided significantly more visits than psychologists for schizophrenia, bipolar disorder, substance abuse, and depression, but fewer visits for anxiety disorders and isolated symptoms.

As the U.S. health delivery system evolves and the demand for psychiatric services rises, it will be increasingly important to track and understand the characteristics of psychiatric workforce as well as the populations it serves.

Psychology

Prior to World War II, psychologists were primarily employed in traditional academic settings. A small proportion actively engaged in mental health service delivery worked outside universities. This picture began to change in the mid-1970s, with statutory recognition of the profession by State regulatory agencies (DeLeon, Vanden Bos, & Kraut, 1984).

Table 22.6. Percentage of clinically trained mental health personnel, by discipline and primary and secondary employment setting, for specified years

	Discipline and Year							
Employment Setting	**Psychiatry[1] 2002**	**Psychology[2] 2004**	**Social Work[3] 2000**	**Advanced Practice Psychiatric Nursing 2003[6]**	**Counseling[4] 2004**	**Marriage/ Family Therapy[5] 2004**	**Psycho-Social Rehab. 1994**	**School Psychology[7] 2000**
Primary employment setting (N)	(958)	(51,354)	(86,831) No Change	(4,520)	(100,533)	(50,158)	N/A	(31,278)
Hospital	10.7	9.0	7.9	36.0	3.7	6.4		0.0
Mental health setting	N/A	3.0	3.9		3.3	6.0		
Other health setting	N/A	6.0	4.0		0.4	0.4		
Clinic	30.0	6.0	23.0	9.1	22.5	19.3		2.1
Mental health setting	N/A	—	17.6		18.7	17.3		2.1
Other health setting	N/A	—	5.3		3.8	2.0		0.0
Academic setting	0.8	17.0	13.0	1.9	33.4	3.7		87.8
University/college	N/A	13.0	5.4		13.6	1.4		5.2
Elementary/ secondary schools	N/A	4.0	7.6	0.4	19.8	2.3		82.6
Individual practice	34.5	38.0	18.5	15.8	15.1	40.0		3.9
Group practice	13.8	14.0	6.7	5.8	5.0	9.0		3.9
Nursing home	0.6	1.0	2.3	1.9	0.4	0.0		
Social service agency	N/A	—	14.5	8.8	3.9			0.0
Other/not specified	9.6	14.0	14.1	15.0	16.0	7.0		2.33.2
Secondary employment setting (N)	(362)	(23,638)	(37,067)	(1926)	(23,625)	(11,307)	N/A	N/A
Hospital	10.2	7.0	5.1	0.0	6.3	17.1		
Mental health setting	N/A	1.0	1.5		5.0	14.3		
Other health setting	N/A	6.0	3.7		1.3	2.8		
Clinic	22.1	4.0	20.7	16.2	16.9	17.1		
Mental health setting	N/A	—	12.9		11.3	17.1		
Other health setting	N/A	—	7.3		5.6	0.0		
Academic setting	0.9	22.0	9.4	4.7	25.0	8.6		
University/college	N/A	19.0	6.1		12.5	8.6		
Elementary/ secondary schools	N/A	3.0	3.3	1.9	12.5	0.0		
Individual practice	20.3	29.0	27.1	15.5	21.6	28.5		
Group practice	7.2	10.0	7.6	16.9	10.0	12.8		
Nursing home	7.7	2.0	2.8	4.3	0.6	1.4		
Social service agency	N/A	—	11.9	10.2	3.8	8.6		
Other/not specified	31.5	26.0	15.9	30.4	15.6	5.7		

Note: cell numbers may not equal total numbers and percentages may not equal 100 because of rounding.

[1] Respondents to the 2002 APA NSPP who are currently active in psychiatry (N = 1,095); the primary and secondary settings were identified based on the proportion of patient care time spent in different settings. Data have been weighted. Note: 137 psychiatrists had missing information on primary employment setting.

[2] Total represents estimates of clinically active psychologists, based on percentages of APA clinically trained members who are clinically active (60.5 percent).

[3] Source: National Association of Social Workers (NASW) Practice Research Network (PRN) survey (2000b). Response categories from the PRN survey were collapsed into the Center for Mental Health Services (CMHS) required categories; those response categories that did not fit the required CMHS categories were included under "other/not specified."

[4] Estimates are based on the 2000 National Study of the Professional Counselor with growth rate taken from National Certified Counselor data.

[5] Estimates are based on 2004 American Association for Marriage and Family Therapy Clinical Member Survey.

[6] Data are based on the total number of PMH-APRNs board certified by the American Nurses Credentialing Center (ANCC) as of October 2003, including clinical nurse specialists (adult and child) and psychiatric nurse practitioners (family and adult). Missing data are excluded.

[7] Source: Thomas (2000).

Table 22.7. Percentage of clinically trained mental health personnel involved in each type of work activity, by discipline, for specified years[1]

	Discipline and Year							
Type of Work	**Psychiatry 2002**	**Psychology[3] 2004**	**Social Work[4] 2004**	**Adv. Practice Psychiatric Nurses[10] 2003**	**Counseling[5] 2004**	**Marriage/ Family Therapy[6] 2004**	**Psycho-Social Rehab. 1994**	**School Psychology 2000[7]**
(N)	(1,070)[2]	(51,354)	(103,128)	(7,759)	(100,533)	(50,158)	N/A	N/A
Patient care/ direct service	94.3	89.4	61.2	80.7	73.4	98.9	96.1	82.5
Research	20.0	24.5	0.3	1.3	0.4	N/A	N/A	2.0
Teaching	N/A	38.9	2.69	1.7	10.8	24.0	N/A	5.2
Administration	85.4	34.4	13.4	3.7	7.9	18.7	10.1	4.3
Other activities	85.1	39.4	8.8	12.6	7.5	36.5	N/A	6.0

[1] Percentages will not sum to 100 because clinically trained mental health personnel can be involved in more than one type of work activity.

[2] Respondents to the 2004 APA NSPP who are currently active in psychiatry (N = 1,095); data have been weighted. Note: 25 psychiatrists had missing information on type of work activity.

[3] Source: 2000 American Psychological Association Directory compiled by APA Research Office. Because 35,768 members did not specify work activities, percentages are based on the 25,298 members who responded and applied to the estimated number of clinically active psychologists in 2004.

[4] Source: National Association of Social Workers (NASW) PRN survey, 2004, which requested the principal role in the primary area of practice; thus, data are not comparable to other disciplines.

[5] Estimates are based on the 2000 National Study of the Professional Counselor, with growth rate taken from National Certified Counselor data.

[6] Estimates are based on 2004 national survey of clinical members of the American Association for Marriage and Family Therapy (AAMFT), which asked for primary and secondary job function.

[7] Data are from Thomas (2000) and replace earlier data.

[8] Includes staff supervision.

[9] Mainly consultation as other activity.

[10] Data are based on the total number of PMH-APRNs board certified by the American Nurses Credentialing Center (ANCC) as of October 2003, including clinical nurse specialists (adult and child) and psychiatric nurse practitioners (family and adult). Missing data are excluded.

In 1975, the United States had an estimated 20,000 licensed psychologists. This number doubled to 46,000 by 1986, and reached at least 85,000 by 2004 (see table 22.1).

Coupled with the dramatic growth in the number of practitioners was a significant increase in the role of psychologists as direct mental health service providers. Today psychologists are involved in every type of mental health setting, including those that are research or treatment oriented and general primary health care or specialty focused (e.g., sports and other injuries, elderly, seriously mentally ill). Given these more diversified workplaces, the roles of psychologists also have diversified and become more complex. In addition to the assessment and treatment of individual clients, psychologists now are involved in prevention, intervention at the community level, assessment of service delivery systems (outcomes), and client advocacy.

Demographic and Training Characteristics

The past two decades have been ones of growth and challenge for doctoral-level psychologists trained to provide mental health services. As noted above, in 1983, Stapp, Tucker, and VandenBos (1985) estimated the number of doctoral-level psychologists at 44,600. Twenty years later that number had risen to at least 85,000. This growth was fueled early on by a surge in degree production. The number of new doctorates awarded in the practice specialties in psychology rose from 1,571 in 1979 to nearly 2,400 in 1989 and to about 3,615 in 2004 (APA, 2005; Pion, 1991; Syverson, 1980; Thurgood & Weinman, 1990). The training system also has expanded during the past two decades, with a doubling in the number of doctoral psychology programs in clinical, counseling, and school psychology accredited by the APA. There

Table 22.8. Number of trainees by discipline for selected academic years, United States, 1984–2005

Number of Trainees	1984–85	1989–90	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05
Psychiatry[1]													
Total	5,312	6,072	6,089		6,076		6,076		5,714		5,582		
Full time	N/A	6,011	6,034		6,015		5,914		5,663		N/A		
Part time	N/A	61	55		61		135		43		N/A		
First year full time	843	1,178	1,277		1,214		1,033		1,305		1,143		
Residencies completed	1,295	1,371	1,442		1,296		N/A		N/A		N/A		
Psychology[2,3,4,5]													
Total	14,586	16,853	28,782			23,088		20,631			23,351		26,151
Full time	11,260	13,372	24,916			21,056		18,200			20,559		2,829
Part time	3,326	3,481	3,866			2,032		2,431			2,792		23,322
First year full time	N/A	2,335	7,365			4,466		4,249			4,606		4,483
Doctorates awarded	1,968	2,358	2,671			3,771		3,121			3,447	3,615	
Social Work[6]													
Juniors and seniors in B.A. program full time	14,581	17,688	24,536		27,015		24,475						
Master's degree students													
Total	21,999	27,430	33,212		35,338		35,539						
Full time	14,055	17,475	21,622		22,718		22,315						
Part time	7,944	9,955	11,590		12,620		13,219						
Doctoral students													
Total	1,430	1,794	2,097		2,087		1,953						
Full time	702	838	1,102		1,134		1,126						
Part time	728	956	995		953		827						
Degrees awarded													
BSW	6,347	7,250	10,511		12,356		12,798						
MSW	8,798	10,063	12,856		14,484		15,061						
DSW	181	247	294		258		267						
Advanced Practice Psychiatric Nursing													
Total	1,934[7,8,9]	1,853	1,674		1,401	1,274					1,550[1]		
Full time	677		439		364	458					537		
Part time	1,257		1,235		1,037	816					1,013		
Degrees awarded/training completed	771	643	568		4439	426					460		
Counseling[11]													
Total			29,906					20,637			48,794		
Master's degree students			28,270					19,576			46,425		
Doctoral students			1,636					1,061			2,369		
Marriage and Family Therapy[12]													
Total			6,776			9,277							
Students in COAMFTE programs			1,277							1,582		2,262	
Students in non-COAMFTE programs			5,499										
Student members						2,843				4,084		5,265	
Associate members						1,935				1,792		2,002	
Interns in California (CA)										8,377		9,287	
Students in CA													
School Psychology[14]													
Total			4,404				8,123						
New practitioners in field (minimum specialist degree)			1,800				1,897					1,750	

Continued

Table 22.8. Number of trainees by discipline for selected academic years, United States, 1984–2005 (Continued)

Number of Trainees	1984–85	1989–90	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05
Pastoral Counseling (AAPC Training Centers)													
Total									961		1,069		
Full time									133		157		
Part time									299		305		
First year full time									42		51		
Residencies completed									5		4		
Degrees awarded									78		63		
Training completed									11		21		
Master's degree students									303		331		
Doctoral students									96		98		
Postgraduate students									12		22		
New practitioners in field									2		17		

NA = Data not available

[1] The 1984–1998 data are based on American Psychiatric Association's Annual Census of Residents; for 1998–99, data are based on 95 percent response rate from training programs. Data for 2000–01 were derived from the Graduate Medical Education Database, ©2001, American Medical Association, Chicago, IL. Data for 2002–03 were derived from the joint Association of American Medical Colleges (AAMC) and the American Medical Association (AMA), National Graduate Medical Education (GME) Track.

[2] Numbers for students are derived from the APA 2005 Graduate Study in Psychology.

[3] Counts represent accredited programs only and responses to surveys and therefore are an undercount of the actual number of students in doctoral programs in psychology in the health service provider subfields. First-year full-time is counted as new enrollments (no indication of full-time or part-time status) from 1997–98 on. Numbers include Psy.D., Ph.D., and Ed.D. students.

[4] For the 1997–98 data, doctorates awarded include Ph.D. degrees reported by the National Research Council as well as 800 Psy.D. degrees estimated by APA's Research Office. Psy.D degrees are undercounted in this instance. In 1999–2000, 3,121 Ph.D. degrees in the health service provider subfields, plus approximately 1,000 Psy.D. degrees, are likely undercounted. From 2000 on, the numbers are still underestimates, as they are reliant on responses to a survey.

[5] Different methods of generating these data render longitudinal comparisons somewhat meaningless. Readers are cautioned against treating these as a time series. They are cross sectional and, in many cases, imprecise because of undercounting and nonresponse.

[6] Source: Lennon (2001).

[7] The 1984–85 enrollment figure is an estimate. The number of full-time students was 677, based on 35 percent of all master's students being full time. This number was estimated to reflect an expected 1,257 part-time students.

[8] The 1984 and 1989 data contain students enrolled in both advanced clinical practice and teaching. The sum of enrollments in advanced clinical practice and teaching make up the universe of master's students in psychiatric nursing. According to P. Rosenfeld, director of research at the National League of Nursing (NLN), rarely will a psychiatric nursing student be classified within any of the other available classifications for graduate students.

[9] For October 16, 1997, to October 15, 1998, unofficial and unpublished data are from the NLN.

[10] These 2002–03 enrollment and graduation figures are from a different data source than those of prior years. The 2002–03 data are from the American Association of Colleges and Nursing (see Berlin, Stennett, & Bednash, 2003; 2004). This report is based on an 82.7 percent response rate from baccalaureate and graduate programs in nursing. The actual numbers reported from these schools is adjusted for nonresponse, resulting in the numbers reported in this table. The numbers include clinical nurse specialists (CNSs) in adult and child psychiatric mental health nursing and adult and family psychiatric nurse practitioners (NPs).

[11] Declines from 1994–95 may be due in part to a stricter definition of counselor preparation programs in this edition.

[12] The 1994–95 data were estimated on the basis of several sources, including students enrolled in programs accredited by American Association for Marriage and Family Therapy (AAMFT) Commission of Accreditation for American Association for Marriage and Family Therapy (COAMFT); student members who are not in Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE)-accredited programs but are in programs of regionally accredited institutions; and AAMFT associate members. The associate membership category is for those who have completed their educational requirements but have yet to complete the clinical supervision requirements of their training. Data for 1997–98 are more reliable than those previously reported for 1994–95; they are based on a survey of 216 MFT training programs by AAMFT, March 1998. Data for 2000 based on 2000 AAMFT Practice Research Network (PRN) project funded by the Center for Substance Abuse Treatment. Data were collected from a random sample of AAMFT clinical members with an 82 percent response rate of eligible participants. For students in California in 2001–02 and 2003–04, estimates are based on the mean number of students in a convenience sample of 47 percent (N = 33) of accredited and approved California MFT programs extrapolated to 70 programs.

[13] Estimated based on the mean number of students in a convenience sample of 47 percent (N = 33) of accredited and approved California MFT programs extrapolated to 70 programs.

[14] Source: Thomas (2000); estimate of 1,750 new practitioners in the field in 2003–04 is from Curtis, Chesno Grier, and Hunley (2004).

were 134 such doctoral programs in 1979, 234 in 1989, and 369 in 2004. These counts do not include the programs that do not seek APA accreditation but do award doctoral degrees in psychology, which further expand the ranks of the clinically trained. The total number of graduate students enrolled in accredited doctoral programs has risen from 14,586 in 1984–85 to at least 26,151 in 2004–05 (data tables compiled by the APA Research Office from 2005 information). The number of enrollees has leveled off in recent years.

Despite this growth in the number of psychologists trained to provide direct services, these services continue to be relatively inaccessible in many areas of the country, and shortages of mental health personnel exist for certain target populations. These populations include seriously emotionally disturbed children and adolescents, adults with serious mental disorders, rural residents with mental health needs, and the elderly, to name a few.

Table 22.2 presents basic information on the demographic characteristics of psychologists who could provide mental health services (the clinically trained pool). In many ways this group reflects the changing demographic characteristics of psychologists as a whole. For example, women made up 51 percent of all clinically trained psychologists in 2002, up from 38 percent in 1989 (Dial et al., 1990). This growth is not surprising given that the participation of women in psychology as a whole has grown significantly over the past two decades (Pion et al., 1996). In 2003, 68 percent of all doctorates in psychology were awarded to women, compared with 49 percent in 1985 and 32 percent in 1975 (Henderson, 1996; National Science Foundation, 2004). The representation of women among new doctorates in clinical psychology was even higher than among new doctorates in psychology as a whole, at 71 percent, and in 2002, women accounted for almost 73 percent of all full-time graduate students in doctorate-granting departments of psychology (Coyle, 1986; Gilford, 1976; Oliver & Rivers, 2005).

Although psychology attracts a higher percentage of racial and ethnic minorities than many other disciplines, their representation remains relatively small at under 7 percent. This figure is lower than their representation in the U.S. adult population (at least 29 percent in 2003). As reported by the National Science Foundation (NSF), the proportion of doctorates in science and engineering fields earned by racial and ethnic minorities was 21 percent in 2003 (Burrelli, 2004). As table 22.2 indicates, in 2004, the population of clinically trained women was slightly more racially and ethnically diverse than that of men. The pool of clinically trained psychologists, like psychiatrists, continues to age. The mean age in 2004 was 52.7, compared with 44.2 in 1989. Similarly, the median years since receiving the doctorate increased from 12 years in 1989 to 19 years in 2004 (analyses are drawn from the APA membership profiles as well as tables 22.2 and 22.4). Results reveal that women are generally about 6 to 7 years younger than men (49.5 for women vs. 56.3 for men) and have earned their doctorates more recently (15 years for women vs. 23.5 for men) These findings are to be expected, given the trends in degree production noted earlier.

Professional Activities

Table 22.1 indicates that most of the psychologists who are actively providing services are working full time (almost 76 percent), and table 22.6 shows that 46 percent are doing so by filling a combination of two or more positions. It is more common for those who are working part time to be occupying one position.

Table 22.6 presents the primary and secondary employment settings of active health service providers in psychology. Half of the health service providers indicated that their primary setting was independent practice, with most having a solo practice (38 percent) rather than working in a group or medical/psychological group setting. The next most frequent setting, a far second, was the academic setting, including university/college counseling centers (13 percent), followed by nonpsychiatric hospitals (6 percent), clinics (6 percent), elementary and secondary schools (4 percent), and mental health hospitals (3 percent). About 14 percent were employed in other settings, such as government or business.

Forty-six percent, or about 23,638 of all clinically active psychologists, worked in more than one setting in 2002 (see table 22.6). Again, the most frequent setting was independent practice (individual and group) at 39 percent, followed by academic and other settings (23 and 26 percent, respectively). Much smaller percentages worked in other settings.

Table 22.7 reveals that almost 90 percent of those who are trained to provide direct services do, in fact, report this as an activity in which they are involved. But the table also demonstrates the wide variety of activities reported by clinically trained psychologists. About one-fourth conduct research; almost 39 percent provide some type of education (usually in higher education); more than one-third reported managerial or administrative responsibilities; and

about 39 percent mentioned other employment activities (such as publishing or writing) not captured by these categories.

Social Work

The primary mission of the social work profession is to enhance human well-being and help meet the basic human needs of all people, with particular attention to the needs and empowerment of people who are vulnerable, oppressed, and living in poverty. A historic and defining feature of social work is the profession's focus on individual well-being in a social context and the well-being of society. Fundamental to social work is attention to the environmental forces that create, contribute to, and address problems in living (NASW, 2000c, p. 1).

Founded on these core principles, social work evolved as a profession in the midst of the rampant social poverty during the tide of industrialization, urbanization, and immigration in the late 19th century. Three movements formed the basis of the profession: the charitable organizations, the settlement houses, and the societies founded to address child welfare issues at that time. The charitable organization movement, however, is credited as the originator of the social work profession—with its ambitious and organized goals to provide assistance, as well as understanding and solutions, to widespread poverty and family disruption (Popple, 1995).

By the end of the 19th century, the complexity of social problems clearly demanded professionals with more formal training grounded in science. In 1898, the first classes in social work were offered at Columbia University in New York City. Today, there are more than 200 accredited graduate social work programs (master of social work [MSW] or doctoral) as well as 430 accredited undergraduate social work programs (Lennon, 2001). Rigorous education standards at the bachelor's, master's, and doctoral levels ensure that social workers are prepared for professional practice through formal course work combined with fieldwork from an accredited social work degree program, professional supervision, adherence to the NASW professional Code of Ethics (2000a), and licensure or certification at the State level. In addition, the NASW offers professional practice credentials and standards as well as specialty certifications in case management; school social work; alcohol, tobacco, and other drugs; health care; and children, family and youth.

In the early 1900s, the profession gained increasing credibility and integration into the workplace. By 1905, Massachusetts General Hospital in Boston had established a hospital-based social services department, followed in 1906 by a division designated to serve patients struggling with mental illness. In that same year, school social workers were introduced into the public school system. In 1912 the U.S. Children's Bureau was created, and by 1926, the U.S. Veterans' Bureau was hiring social workers in its hospitals (Popple, 1995). These early developments mirrored the continuing diversity of social work practice settings and skills.

In the decade following the Great Depression, the number of social work positions doubled from 40,000 to 80,000 as social services expanded in the pubic sector to address financial assistance, public health, and child welfare issues (Popple, 1995). Jane Addams, known for her leadership roles in the settlement house and peace movements, was awarded the Nobel Peace Prize in 1931 (Quam, 1995a). Frances Perkins, a social worker and Secretary of Labor under President Franklin D. Roosevelt, was instrumental in developing the New Deal Legislation in the 1940s. During her tenure as Secretary of Labor, she advocated for improved workers' conditions, including minimum wages, maximum hours, child labor legislation, and unemployment compensation (Quam, 1995b). As the Depression drew to an end, social workers could be found providing services in both the public and private sectors.

The 1960s brought a renewed commitment to public welfare as society again focused on issues of poverty. During that decade, the profession's historical commitment to social welfare issues continued and the scope of practice expanded to include not only casework and counseling, but also policy, planning, program administration, and research.

Today, social workers are employed in a wide range of settings, serving as therapists, administrators, advocates, case managers, consultants, researchers, policy makers, teachers, and supervisors. Social workers use their skills and knowledge to provide social services and counseling; increase the capacity and problem-solving skills of clients, family members, and communities; connect people to resources; and influence social policies (Barker, 1999). Clinical social work is identified as one of the five core mental health professions by the National Institute of Mental Health (NIMH) and the Health Research and Services Administration (HRSA). In addition, all 50 States regulate the profession of social work through licensure, certification, or registration, as well as through the use of professional titles.

NASW is the largest professional association of social workers. Formed in 1957 through the merger

of seven affiliated social work organizations, it now serves 153,000 members in the United States and abroad. NASW seeks to advance the profession of social work as well as to enhance the effective functioning and well-being of individuals, families, and communities through its work and its advocacy.

Demographic and Training Characteristics

The number of clinically trained social workers continues to grow as the largest professional group of mental health and therapy services providers. According to NASW membership data, there were 103,128 clinically trained social workers in 2004 (see table 22.1). Since 1989–90, there has been a steady increase in the number of MSW degrees awarded—up by nearly 50 percent. The number of doctoral degrees awarded since 1989–90 has fluctuated. The 1998–99 numbers reflect an 8 percent increase in doctoral degrees awarded since 1989–90. Clinically trained social workers or those with master's degrees are qualified to provide a wide range of social work services—therapy, case management, advocacy, education, teaching—and are eligible for licensure or registration in every State. According to the NASW 2004 Practice Research Network (PRN) survey, 94 percent of all regular NASW members (bachelor's, master's, or doctorate in social work) hold some form of State social work license, certification, or registration. Formal training in social work occurs primarily in accredited undergraduate programs that offer baccalaureate social work (BSW) programs or in accredited professional schools of social work offering MSW, DSW, Ph.D., or other doctoral programs (Barker, 1999). Training entails a combination of formal course work and direct supervised work with clients. For the purposes of this section, clinically trained social workers were defined as those holding a master's or doctoral degree from an accredited graduate-level social work program. The numbers in parentheses reflect an estimate of the number of clinically trained social workers in the United States, because not all clinically trained social workers are members of NASW. We arrived at this estimate by using data from the Bureau of Labor Statistics that suggest that NASW membership accounts for approximately a quarter of the total social work labor force. Tables 22.2 through 22.7 present data on clinically trained social workers who are NASW members and may not represent all the social workers in the United States.

The data for this section and its tables were drawn from membership information and informed by the two NASW PRN surveys (2000b; 2005). Conducted in 2000 and 2004, the NASW PRN surveys captured demographic and practice data from two random samples of 2,000 regular members each. On the basis of the sampling techniques and the high rate of responses (81 percent and 70 percent, respectively), which minimized potential for selectivity and nonresponse bias, these results are highly representative of the membership.

The social work field continues to be predominantly White (87 percent) and female (82 percent; see table 22.2). The schools of social work report a similar gender distribution for MSW enrollees and degree recipients in 1997–98, averaging about 84 percent female and 16 percent male (Lennon, 2001). There has been a slight increase in the percentage of clinically trained social workers who are people of color, from 8 percent in 1998 to 11 percent in 2000 (table 22.2). However, nearly one-fourth (24.2 percent) of students awarded MSW degrees in 1998–99 were people of color (Lennon, 2001). This figure is more consistent with the 2000 U.S. Census findings that people of color represent 25 percent of the U.S. population. Thus, the percentages in table 22.2 may underrepresent the ethnic/racial diversity among social workers. Both the schools of social work data and NASW data indicate that the majority of people of color among social workers (about 5 percent) are African-Americans. Given the ethnic and racial diversity of the U.S. population, culturally competent practice is a critical model/focus for social work practice (NASW, 2001), as is the recruitment and retention of people of color within the profession.

Table 22.3 shows both the geographic distribution of social workers and the concentration of social workers by region and State. Consistent with earlier findings, New York and California have the highest numbers of social workers, 15,905 and 8,267, respectively. On average, there are 30.73 social workers for every 100,000 people, a decrease since 2000. Yet table 22.3 also shows the wide variance in the concentration across the United States, ranging from more than 200 social workers per 100,000 citizens in the District of Columbia to 12 per 100,000 in North Dakota. In fact, 12 States have fewer than 20 social workers per 100,000 residents—Alabama, Arkansas, Georgia, Mississippi, Nebraska, Nevada, North Dakota, Oklahoma, South Carolina, South Dakota, Texas, and West Virginia—all States with significant rural populations. California averages 23 social workers per 100,000—a relatively low ratio. Conversely, Washington, DC, Massachusetts, New York, Rhode Island, Maine, and Connecticut all report high concentrations of social workers—ranging from 77 to 227 per 100,000 people.

Clinical social workers, as reflected by NASW membership, are highly experienced. Nearly three quarters (72 percent) of social workers have 10 or more years of experience since completing their first degree, with a significant number (33 percent) having 20 or more years of experience. Slightly more than 10 percent of members had 4 years or less of experience. Data for table 22.4 were drawn from the PRN survey (NASW, 2000b), which captures different interval levels based on completion of the first professional degree, and thus are not comparable to other disciplines or earlier years. The Council on Social Work Education reports a steady influx of newly degreed professionals into the field, although after 10 years of increasing enrollments, the number of students enrolled in MSW degree programs was fairly constant between 1996–97 and 1998–99 (see table 22.8). Although it appears that newly degreed social workers are less likely to join NASW as regular members, given that fewer than 2 percent of members had fewer than 2 years of experience, some may take advantage of transitional membership categories for newly degreed social workers, which could influence that small number. The extent to which workforce retention/loss issues may influence this number is not clear.

Professional Activities

The majority of social workers are employed in either full time (54 percent) or in a combination of full-time and part-time employment (23 percent). Just under one-fourth of social workers report part-time employment only. Table 22.5 does not include data on the number of employment settings for social workers because the NASW PRN (2005) survey did not capture those data.

Outpatient mental health is the predominant employment setting for social workers, whether as independent practitioners or employees in outpatient mental health clinics. Slightly more than 18 percent of social workers identified independent practice as their primary employment setting, a nominal increase since 1998. Clinics continued to be the primary employment setting for social workers, with an overall rate (23 percent) only slightly higher than in 1998. However, the majority in this category (17.6 percent) worked specifically in mental health clinics. Individual practice remains the predominant setting for secondary employment (28 percent), despite a significant decline from 1998 (22 percent). Nearly 21 percent held secondary employment in an outpatient clinic, again, primarily in mental health (12.9 percent).

The largest increases since 1998 for secondary employment were in social service agencies—from 4.7 percent to 11.9 percent. A large percentage (15.9) identified "other" settings for secondary employment. This category reflects not only those who checked "other" or did not specify but also those employed in employee assistance programs, government or military agencies, managed care settings, and criminal justice settings. The NASW PRN survey (2000b) indicates that nearly 6 percent were employed primarily by government or military agencies.

As table 22.7 shows, direct service is still the primary work activity for clinical social workers; more than 61 percent identified patient care/direct service as their principal role in their primary area of practice. Administration was the second highest area at 13 percent. Teaching and research represent 2.69 percent and 0.3 percent, respectively. Seeing such a high percentage in direct service is not surprising, because the social worker profession has a strong tradition in clinical and casework and comprises the majority of the mental health professional groups. The NASW PRN survey (2005) gathered data only about the principal role in the social worker's primary practice setting and thus does not reflect the multiple work activities of social workers in their primary and secondary employment. Twenty-two percent of social workers have both full-time and part-time jobs. The social work data in table 22.7 are not comparable to the other disciplines.

Psychiatric Registered Nurses and Advanced Practice Psychiatric Nurses

The current psychiatric nurse workforce practices in a variety of roles and is a core discipline in mental health care delivery systems across all levels of care. The workforce includes registered nurses with basic nursing education who are working in psychiatric mental health settings, referred to in this section as psychiatric registered nurses (PRNs); and registered nurses with master's and/or doctoral degrees with graduate education in psychiatric mental health conditions, referred to as psychiatric mental health advanced practice registered nurses (PMH-APRNs). To remain comparable to other mental health disciplines, the tables refer only to board-certified PMH-APRNs.

Various sources of data are used to capture a rich description of the demographics, training char-

acteristics, professional activities, and settings of the psychiatric nursing workforce. Data sources include the 2000 National Nurse Survey of Registered Nurses (*The Registered Nurse Population,* 2001), the National League for Nursing (NLN, 1994), American Nurses Credentialing Center (ANCC, 2003), and the American Association of Colleges of Nursing (Berlin, Stennett, & Bednash, 2004).

Psychiatric Registered Nurses (PRNs)

Approximately 80,000 PRNs are employees of hospitals and agencies providing mental health services (Manderscheid & Henderson, 2002). Nearly half of PRNs work in private, nonfederal psychiatric hospitals and general hospital psychiatric units; the other PRNs are community based (Manderscheid & Henderson, 2002). Compared with the general registered nurse (RN) population working in acute care hospitals, PRNs are older, with fewer younger RNs choosing to specialize in psychiatry (Hanrahan & Gerolamo, 2004). The average age of PRNs is 47 years, versus 44 years for RNs. Only 16.7 percent of PRNs are younger than 39 years, where 27.7 percent of RNs are 39 or younger. These data suggests that the workforce shortage of PRNs is more urgent than the national shortage of general RNs.

Compared with general RNs, a greater proportion of PRNs are males (6.7 percent vs. 16.2 percent, respectively). The PRN workforce has a better racial mix than general RNs, with a lower proportion of Whites (82.4 percent vs. 87.6 percent, respectively) and a higher proportion of Blacks (11.8 percent vs. 5.3 percent, respectively). More than half of PRNs have an associate degree in nursing, and 24 percent report a baccalaureate degree (Hanrahan & Gerolamo, 2004). The majority of PRNs are employed full time (73 percent) in direct patient care, supervisory, and administration functions, suggesting that PRNs play a large role in the direct management and coordination of acute inpatient psychiatric care (Hanrahan, 2004). Job turnover is higher for PRNs than general RNs. Most PRNs who changed jobs reported that they were attracted by a more interesting job or better opportunities. In sum, acute care PRNs are aging out of the workforce faster than general RNs. One implication of this finding is that there may not be enough registered nurses to staff environments that serve the most acutely ill clients. In addition, aging out will negatively affect recruitment into the advanced practice psychiatric nurse role.

Advanced Practice Psychiatric Mental Health Nurses (PMH-APRNs)

A PMH-APRN is a registered nurse with advanced academic and clinical experience, which enables him or her to diagnose and manage most common and many chronic mental and physical illnesses, either independently or as part of a health care team. A PMH-APRN focuses clinical practice on individuals, families, or populations at risk for developing and/or having a diagnosis of psychiatric disorders or mental health problems across the life span. PMH-APRNs are educated through programs that grant a minimum of a master's degree. An intensive clinical practicum and preceptorship are key components of most PMH-APRN programs. Competencies of the PMH-APRN include continuous and comprehensive services necessary for the promotion of optimal mental and physical health, prevention and treatment of psychiatric disorders, and health maintenance (Bjorklund, 2003). These competencies includes the assessment, diagnosis, and management of mental health problems and psychiatric disorders (National Panel for Psychiatric Mental Health NP Competencies, 2003). In most States, PMH-APRNs may prescribe medication (Haber et al., 2004). There are 140 graduate programs in nursing offering psychiatric mental health specialty preparation (Berlin, Stennett, & Bednash, 2004).

It is estimated that more than 20,000 graduate trained advanced practice psychiatric nurses were in the 2004 workforce (AACN, 2003). Of these nurses, 8,751 are board certified by the American Nurses Credentialing Center (ANCC, 2003). Three-quarters of board-certified PMH-APRNs are employed full time. Ninety-six percent of employed nurses are employed in nursing, which is a decrease from 99 percent in 1996. Table 22.2 shows that 94.6 percent of psychiatric nurses are female, and 80.5 percent of the females are White. Less than 3 percent of female graduate-prepared nurses are under age 35; in 1988, 18 percent were under age 35. This trend continues with the decline in percentages of nurses in the 35 to 39 and 40 to 44 age groups. The average age of female graduate-prepared psychiatric nurses was 55 years in 2003, up from 48 years in 1996. Four percent of male graduate-prepared nurses are under age 35, with an average age of 44 years in 2003.

Regional distributions of board-certified PMH-APRNs are presented in table 22.3. Most of these nurses reside in the New England, Middle Atlantic, or the South Atlantic regions, with the fewest in the West South Central region and the Mountain States. Geographic densities and shortages are affected by

variability in state regulations on privileges and titling. Massachusetts, one of the first states to grant prescriptive privileges to advanced practice nurses, shows the highest proportion of certified advanced practice psychiatric nurses. States such as Illinois have only recently granted titling and prescriptive privileges and have relatively small numbers of certified APRNs. Low numbers of PMH-APRNs in particular States may be a result of population density and the fact that many of these States have few graduate nursing programs (e.g., North Dakota, South Dakota, Wyoming).

A difference in health status between residents in rural and urban regions has prompted attention to the challenges facing rural health care and health care systems. One major issue is poor access to mental health services and a severe shortage in the mental health workforce associated with rural areas. According to a recent study of the rural mental health workforce, significant numbers of advanced practice psychiatric nurses choose to work in rural areas (Hartley, Hart, Hanrahan, & Lioux, 2004). Twenty states have at least 20 percent of their advanced practice psychiatric nurses in rural practice. Using a system for classifying rural areas based on census tract geography, population size, and commuting relationships, there are 3.11 advanced practice psychiatric nurses per 100,000 in the United States. However, in rural Maine, rural New Hampshire, and rural Vermont, estimate ratios of rural practicing advanced psychiatric nurses per 100,000 are 9.6, 8.7, and 10.4, respectively (Hartley et al., 2004).

Table 22.4 shows PMH-APRNs by number of years since completion of highest professional degree. Two-thirds of these nurses received their highest degree in nursing more than 10 years ago, indicating that PMH-APRN is a discipline with career longevity and experience. PMH-APRNs are required by certification and most State regulations to document continuing education. The percentage of PMH-APRNs receiving their highest degrees in recent years may be influenced by master's-prepared psychiatric nurses returning for doctoral education.

Table 22.5 shows that most full- and part-time employed PMH-APRNs hold one position in nursing. Fewer than 20 percent of full-time employed nurses hold a second position. A similar pattern holds true for part-time employed nurses. PMH-APRNs work primarily in hospitals, private practice, and mental health clinics (see table 22.6). Fewer than 2 percent of the nurses noted academia as a work site, which reflects the reality of nursing faculty shortage (AACN, 2003). There are no significant changes from 1996 and 2000 in the distribution of nurses in various work areas except for a rising number of nurses in the "other" category, which may be due to an increase in employment opportunities in the managed care sector.

Table 22.7 shows that more than 80 percent of PMH-APRNs report their dominant function as direct patient care, followed by "other activities" (12.6 percent), administration (3.7 percent), teaching (1.7 percent), and research (1.3 percent). Other functions are proportionally similar to previous years with administration, teaching, and research ranked respectively.

As of 2003, there were 1,550 enrollees in psychiatric mental health graduate programs, with only 35 percent (537) enrolled full time and 65 percent (1,012) enrolled part time (see table 22.8). The number of graduates increased from 426 in 1997–98 to 460 in 2003. About 71 percent of graduates are prepared as psychiatric nurse practitioners (NP), which includes those educated in combined NP/clinical nurse specialist (CNS) roles, with 29 percent being prepared as CNSs. This is a slight undercount since five psychiatric mental health nursing graduate programs are broadly categorized as dual programs (preparing graduates to sit for more than one certification) and those numbers are not entered into the total graduation figure. The recent proliferation of psychiatric nurse practitioner educational programs is producing a different nursing workforce than previously existed and may address the current shortage, as the number of nurses enrolled in these graduate programs is rising. In 1991, few nurse practitioner students (only 89) specialized in psychiatric nursing (NLN, 1994). In 2003, there were 941 enrollees of such programs, with 287 graduates (Berlin, Stennett, & Bednash, 2004).

A critical workforce shortage area is child psychiatry. Four out of five children who need mental health services are not receiving them (U.S. Department of Health and Human Services, 1999). PMH-APRNs are trained to provide the full range of assessment and treatment services, including medications, to seriously emotionally disturbed youngsters. Currently, 1,200 PMH-APRNs are certified to treat children and adolescents. The current workforce of PMH-NPs trained in child/family is expected to increase as a result of the recent opening of 15 new graduate programs.

Conclusion

For more than a century, psychiatric nurses have been an integral part of caring for the physical and mental health of individuals and families across the

life span. Over the past 20 years, educational preparation of psychiatric nurses has naturally evolved to include advances in brain-behavior science and the growing use of pharmacologic treatment. Because of this training, psychiatric nurses often manage mental illness complicated by comorbid physical illnesses such as diabetes, heart disease, HIV, or other health problems. Owing to their broad base of preparation and grounding in neuroscience, the demand for psychiatric nurses is growing. However, the aging out of the psychiatric nurse workforce threatens an adequate supply of these nurses. Addressing the shortage requires focused attention on recruitment and retention strategies, which should include educational grants and modification of State regulation to promote uniform and full scope of practice for advanced practice psychiatric nurses.

Counseling

The American Counseling Association (ACA) and the National Board for Certified Counselors (NBCC) define professional counseling as the application of mental health, psychological, or human developmental principles through cognitive, affective, behavioral, or systemic intervention strategies that address wellness, personal growth, or career development, as well as pathology. Patterson and Welfel (1994) note that the primary purpose of counseling is to empower the client to deal adequately with life situations, reduce stress, experience personal growth, and make well-informed, rational decisions.

Counselors work in a wide array of settings, including community counseling centers, government agencies, hospitals, rehabilitation centers, schools and colleges, businesses, and private practice. In addition to the traditional roles of individual counseling and supervision, counselors perform a variety of other functions related to preventing problems and promoting healthy development, including consultation, outreach, psycho-education, and other forms of indirect service.

The beginnings of counseling can be traced back to six distinct origins: (1) laboratory psychology, with its roots in Europe; (2) psychoanalysis; (3) the mental hygiene movement; (4) the vocational guidance movement; (5) the mental testing movement; and (6) Carl Rogers and the humanistic psychology movement. All these movements coalesced in the 20th century with the shift from an agrarian to an industrial society. This shift was accompanied by both bureaucratization of organizations and specialization of the workforce. Thus, the first organized counseling activities came out of the Vocational Guidance movement, which resulted from a need to adapt to these major lifestyle changes. Over time, all the early antecedents to modern-day counseling have had an influence as counseling has broadened its role.

Since the beginning of the 20th century, when Frank Parsons began what we think of as professional counseling, one of counseling's most important characteristics has been how much it is connected to the current socioeconomic and political context. Commonly referred to as the father of guidance and counseling, Frank Parsons established the Vocational Bureau of Boston in 1908 (Gibson & Mitchell, 1995). Parsons was an advocate for youth, women, the poor, and the disadvantaged (O'Brien, 1999). His book, *Choosing a Vocation,* was published in 1909, shortly after his death. It outlined his model of career guidance, which provided a basis for the career counseling of the time. Although career guidance initially took place in community agencies, it soon became popular in school settings as well.

As noted earlier, the mental testing movement influenced the establishment of counseling. Alfred Binet developed the first individual intelligence test in 1908 (Kimble & Wertheimer, 1998). Binet believed that guidance toward a career should be based on the measurement of aptitudes. Many others followed, developing testing into the major social force it is today. Another important force was the development of an emphasis on conscious and unconscious thoughts, feelings, and emotions, which began with Freud. As more individuals have taken advantage of developments in psychotherapy to seek to improve their mental health, professional counselors have met the need. Thus counseling, which at first focused on vocational guidance, soon came to emphasize assessment and testing. Later, counseling expanded to include work with individuals in emotional distress.

National legislation influenced the evolution of the counseling profession. Following World War II, the Federal Government developed and funded a variety of mental health services. For example, the National Mental Health Act of 1946 established the National Institute of Mental Health, which marked the beginning of publicly funded mental health services. At this point, the Veterans Administration began to see the need to help returning veterans readjust to civilian life, both vocationally and personally, and employed professionals to assist them in this process.

The passage of the National Defense Education Act (NDEA) in the late 1950s made it possible for graduate schools of education to establish funded programs to train school guidance counselors. This decision became a landmark, linking personal needs

and education with the Nation's well-being. The NDEA provided grants to States for stimulating the establishment and maintenance of local guidance programs and to institutions of higher education for training guidance counselors to staff local programs (Gibson & Mitchell, 1995). The intent of the school counseling addressed in the act was to establish a national cadre of counselors adept in helping students plan for post-high school education. Specifically, Congress wanted talented math and science students to be encouraged to further their education.

In an indirect but significant manner, the Soviet space and arms race gave rise to the establishment of counselor education programs across the Nation. Although school counselors began to serve a much broader role than envisioned by the NDEA, there is no question that the act provided a base from which counseling could grow. By the mid-1960s, notable contributions achieved by the act could be easily identified. These contributions included supporting 480 institutes designed to improve counseling capabilities and granting 8,500 graduate fellowships, which was a step toward meeting the need for more college teachers. By the end of the 1960s, more than 300 academic units housed postgraduate counselor education programs.

Another piece of legislation that had a great impact on the counseling profession was the Community Mental Health Centers Act of 1963. This act resulted in a substantial increase in employment opportunities for professional counselors across the country. Community mental health centers have traditionally employed a significant number of professional counselors, and many counselors who worked in this environment went on to establish independent private counseling practices.

Valuable information regarding counselor preparation is provided in the book *Counselor Preparation Programs, Faculty, Trends* (Clawson, Henderson, Schweiger, & Collins, 2004), which is the eleventh edition in a longitudinal study of counselor training. According to Clawson et al., the United States has 618 entry-level counselor training programs, of which approximately 31 percent are accredited by the Council for Accreditation of Counseling and Related Education Programs (CACREP). As shown in table 22.8, there were 46,425 master's students in 2004. At the doctoral level, there are 118 programs, 40 percent of which are CACREP accredited. In 2004, 2,369 students were in these doctoral programs, for a total of 48,794 counselor trainees.

Early counseling activities tended to be directive and counselor focused. This approach was challenged by Rogers (1942) with the publication of his landmark book *Counseling and Psychotherapy,* which had a profound impact on the way counseling was viewed. Counseling's focus consequently shifted from education to psychology, social work, and humanism. Rogers' work implied that one person's solutions may not be suitable for another's morals, values, and goals and that being an effective helper entails being familiar with the client (Patterson & Welfel, 1994). Rogers emphasized a nondirective, client-centered approach to counseling. As Smith and Robinson (1995) noted, Rogers' client-centered theory also emphasized the client as a partner in the healing process, rather than as a patient to be healed by the therapist. Although other competing theories have emerged and gained acceptance, emphasis on the importance of the relationship continues to be a hallmark of much counseling theory and practice. With this foundation, counselors use an appropriate combination of theories, techniques, and assessment and testing instruments to help clients achieve co-constructed goals.

Although a considerable overlap exists among the helping professions, counseling can be distinguished by its relationship-building as well as its focus on the individual within an environmental context. One focus of counseling is to help each individual define his or her goals while reaching his or her fullest potential. Counseling thus takes a broad view of mental health care, emphasizing its developmental, preventative, and educational aspects in addition to the traditional focus on the remedial treatment of illnesses (Hinkle, 1994, 1998). "Simply stated, mental health counseling believes that a person does not have to be sick to get better" (Smith & Robinson, 1995, p. 158). Counseling results in unforced and accountable behavior and actions on the part of the client while also educating the client with the necessary skills to regulate his or her positive, as well as negative, thoughts, feelings, and emotions.

Formal recognition of counseling as a unique profession has been fostered by the establishment of a professional counseling organization, a national counselor certification organization, accreditation standards for counselor training programs, and state licensure for counselors. The National Vocational Guidance Association, founded in 1913, and the National Association of Deans of Women, established in 1914, were the first two organizations begun specifically for counselors.

The American Counseling Association (ACA), established in 1952 as the American Personnel and Guidance Association, resulted from the merger of the National Vocational Guidance Association, the American College Personnel Association, and the National Association of Guidance Supervisors and Coun-

selor Trainers. These four organizations then became the founding divisions of the umbrella association, ACA. A number of counseling specialty areas have been added to the original founding divisions. The ACA divisions were formed with the idea of providing specific leadership, resources, and information for a particular specialty area. Two examples of specific divisions are the Association for Specialists in Group Work (ASGW) and the Association for Counselor Education and Supervision (ACES). While not all professional counselors are ACA members, its membership represents various specialty and interest areas in the field. The ACA currently has 44,000 members.

After many years of legislative activities, almost all the States (48) plus the District of Columbia and Guam have passed licensure or certification laws for master's-level practitioners. Legislative activities in the remaining two States should soon see results. The number of States with these laws indicates the increased acceptance of professional counseling as a unique and legitimate profession in the panoply of mental health service providers. Additional hallmarks of professional maturity are the development of accreditation and certification bodies for counseling.

In addition to licensure and certification, counseling has an accrediting body for its training programs. Accreditation is a method of strengthening the profession by upholding a set standard to which accredited university programs must adhere. Accreditation standards are typically set by a professional organization. The ACA (then called the American Personnel and Guidance Association) established CACREP in 1981 to oversee the quality of counselor training programs seeking accreditation.

CACREP established educational standards for master's- and doctoral-level counselor training programs. Becoming an accredited program is a voluntary process; however, virtually every counseling program in the country uses the CACREP curriculum and clinical training guidelines, even if programs that have not sought formal accreditation. One reason is that the guidelines are widely used as standards for preparation by State counseling licensure boards. Use of these guidelines also is a qualification for those who seek to become certified by NBCC. Thus, the CACREP standards have helped to ensure uniformity in training across the field. The 2001 Standards are the most recent CACREP guidelines. Among other requirements, students in an accredited program must complete work in eight common core areas. Currently, there are 181 accredited institutions, each having one or more accredited programs, in the United States and the District of Columbia, and this number is growing yearly.

Another hallmark of the profession's maturity is the establishment and development of a national certification program as a complement to State licensure. NBCC, established in 1982, is the largest certification organization for the profession of counseling worldwide. It began credentialing National Certified Counselors (NCCs) in 1983. Along with CACREP, NBCC has had a significant impact on the counseling field and provides a registry of those who have met its national certification standards. These individuals must fulfill three components to become National Certified Counselors: receive a graduate counseling degree from a regionally accredited university; receive a specific amount of supervised experience; and pass the National Counselor Examination (NCE). They are then entitled to use the designation *NCC.*

NBCC also has a Code of Ethics that details a minimal level of ethical standards to which NCCs are to adhere. In keeping with the advanced technology used in today's society, NBCC also outlines standards for the ethical practice of Web-based counseling. In addition to serving as a national registry, the NCE is required by most States for licensure. NBCC has 38,000 certified counselors in the United States, the District of Columbia, and Guam, as well as in 44 other nations.

Demographic Characteristics

For the purpose of collecting data for this chapter, we have emphasized the number of clinically trained counselors. Clinical training was reflected by creating an unduplicated total of NCCs, and licensed counselors by State where licensure numbers were unavailable. In States without counseling licensure, we determined totals by using the number of NCCs with an estimated number of licensable counselors using data from similar States and regions. The total number of counselors reflected in table 22.1 is the sum of these State totals. The ratios and percentages in the remaining tables are based on NBCC database queries, ACA membership statistics, a 1999 NBCC National Job Analysis of the Professional Counselor, and Clawson et al. (2004).

Table 22.2 illustrates that as a population, counselors are aging. In 2002, the largest proportion of clinical counselors was between the ages of 55 and 59 (30 percent). The proportion of counselors between the ages of 30 and 40 is 44 percent. In 2004, more than 40,000 students were in training, the great majority in master's programs, which they complete in 2 years (see table 22.8). Anecdotal numbers from training programs indicate that their en-

rollments are increasing, which will help offset the current small decreases in the numbers of professional counselors. Thus, it appears that there will be ample replacements for those who retire from the field.

Counselors practice throughout the country geographically, with the largest numbers in the Middle-Atlantic, the South Atlantic, and the East North Central States (see table 22.3). The overall numbers have decreased since 2002, possibly as a result of an earlier overestimation of counselors in States that did not yet have licensure as well as a significant number of counselors retiring from the field.

Looking Ahead

Today's counselors, like other mental health professionals, are faced with a world of rapid change. Managed care has changed the health care system dramatically for professional counselors. The emphasis now is on the shortest and least expensive mode of treatment. On the positive side, this emphasis on cost containment has led to an increased demand for master's-level counselors. All NCCs hold master's-level degrees, and 6 percent hold doctoral degrees. Likewise, all professional counselors who are members of ACA hold a minimum of a master's degree in counseling, which parallels the State licensure requirement for mental health counselors. Hence, the need for master's-level counselors resulting from the managed care system is likely to be met in the future.

Currently, a much larger female than male population makes up the counseling profession. Combined data show that 78 percent of professional counselors are female and 22 percent are male (table 22.2).

Multiculturalism is an important issue facing today's counselors. The U.S. population continues to become more and more diverse. However, the counseling profession is not representative of the population. Approximately 81 percent of the counselors currently practicing are White, compared with 5 percent African-American, 2 percent Hispanic/Latino, 1 percent Asian, and less than 1 percent Native American counselors. There is a need for an increasing number of counselors of various ethnic, racial, and religious backgrounds. Training programs are meeting the need for diversity by including courses on multiculturalism and other modes of training to expose counselors and students of counseling to a wide array of cultures, customs, and traditions so as to maximize their appreciation for and service to different cultures.

The field is making use of electronic communication in a number of different ways. One of the early electronic developments was the use of listservs for communication among counseling professionals. Today, a number of listservs are devoted to counseling issues. These listservs can be general in nature or for specialty areas, such as group counseling, both in the United States and abroad.

Another mechanism that has grown rapidly is the use of the World Wide Web. Almost all university counseling departments have a departmental Web page. These Web pages typically describe the program and its requirements and provide access to course syllabuses as well as information about the faculty. In some cases, much of the application process to the program can be completed online. The ACA and several of its divisions and NBCC have informative Web sites. One of the features of a Web page is the enhanced ability to link to other information sources quickly and easily is enhanced enormously, and this trend will continue into the future.

The use of electronic communication in counseling has profound practical and ethical implications. Counseling organizations are attempting to come to terms with this fact in various ways. Both the ACA and NBCC have developed a code of ethics for Web-based counseling. In addition, a variety of commissions and committees are studying these issues. Also, graduate counseling courses are being taught electronically, and entire degrees can be completed online. This fact raises the issues of accreditation, accountability, and quality. The use of real-time video for counseling sessions raises issues of confidentiality since the Internet still poses privacy questions.

Distance counseling is an approach that takes the best practices of traditional counseling as well as some of its own unique advantages and adapts them for delivery to clients via electronic means in order to maximize the use of technology-assisted counseling techniques. The technology-assisted methods may include telecounseling (telephone), secure e-mail communication, videoconferencing, or computerized stand-alone software programs. NBCC's new Distance Credentialed Counselor (DCC) credential is nationally recognized.

Distance counseling may be more convenient for some clients. While telecounseling takes place in real time and does depend on "making an appointment," it eliminates travel and related formalities. Telecounseling and various forms of e-mail or synchronous communication techniques demand special counseling and communication skills from the counselor, and in some ways, from the client as well.

Distance counseling methods can be used as part of the counseling process or as a stand-alone mental health service component. Certain types of clients actually seek distance counseling services for both practical and logistical reasons, as well as because of personal preference. Therefore, distance counseling techniques can help counselors reach a greater number of clients who need help. Currently, NBCC has certified 145 Distance Certified Counselors.

NBCC's Approved Clinical Supervisor (ACS) credential attests to the educational background, knowledge, skills, and competencies of approved clinical supervisors in counseling as well as among other types of mental health therapists. Professional counselors and other therapists with the ACS credential are identified as mental health professionals who have met national professional supervision standards. The ACS certification also promotes professional identity, visibility, and accountability among approved clinical supervisors. NBCC has currently certified 428 Approved Clinical Supervisors among professional counselors as well as among other mental health service providers.

Even more current is the Nation's awareness of the potential for national catastrophe and the emotional distress that results after disasters, whether manmade or natural. The events of September 11 reinforced the Nation's need for professional counselors. Counselors, as well as numerous other individuals from various health care disciplines, were called upon to respond to the psychological needs of those directly and indirectly affected by the terrorist attacks. Crisis counseling and grief counseling was, and continues to be, an integral part of the healing process. Whereas counseling programs typically have offered training in crisis intervention and post-traumatic stress counseling, the need to further develop these courses has resulted in university curriculum changes. Looking to the future, it is hard to predict the psychological impact these events have had or how many incidences of post-traumatic stress disorder, along with other mental health difficulties, may result. What is certain is that professional counselors can help people acquire the behaviors, beliefs, decision-making skills, and abilities to cope with the aftermath of crises and mental illness.

Marriage and Family Therapy

Marriage and family therapists are mental health professionals with a minimum of a master's degree and 2 years of supervised clinical experience. Marriage and family therapists (commonly referred to as MFTs or family therapists) are trained and licensed to independently diagnose and treat mental health and substance abuse problems. Marriage and family therapy is one of the core mental health disciplines and is based on the research and theory that mental illness and family problems are best treated in a family context. Trained in psychotherapy and family systems, MFTs focus on understanding their clients' symptoms and interaction patterns within their existing environment. MFTs treat predominantly individuals, but also provide couples, family, and group therapy. MFTs treat all clients from a relationship perspective that incorporates family systems.

Marriage and family therapy grew out of the public's demand for professional assistance with marital difficulties and from the development of a family systems therapy orientation by psychotherapy professionals and others (Nichols, 1992). From their beginnings in the 1930s and 1940s, MFTs have developed into uniquely qualified and distinct health care professionals who are federally recognized as a core mental health discipline, along with psychiatry, psychology, social work, and psychiatric nursing (42 CFR Part 5, Appendix C).

Federal law defines an MFT as an individual with a master's or doctoral degree in marital and family therapy, and at least 2 years of supervised clinical experience, who is practicing as a marital and family therapist and is licensed or certified to do so by the State of practice; or, if licensure or certification is not required by the State of practice, who is eligible for clinical membership in the American Association for Marriage and Family Therapy (42 CFR Part 5, Appendix C). The Department of Labor defines MFT services as: "diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Apply psychotherapeutic and family systems theories and techniques in the delivery of professional services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders" (21-1013 Marriage and Family Therapists). Research has found the services provided by MFTs to be effective (often more than standard treatments) for many severe disorders and to result in improved outcomes in both the health and functioning of clients (Doherty & Simmons, 1996; Pinsof & Wynne, 1995).

The profession of marriage and family therapy has burgeoned since the 1970s, with the number of therapists increasing from an estimated 1,800 in 1966 to 7,000 in 1979 to more than 50,000 currently.

Demographic and Training Characteristics

An estimated 50,158 MFTs were clinically active in the United States in 2001 (see table 22.1). Females represent over two-thirds of practicing MFTs (see table 22.2), and the median age is 54 (Northey, 2004; Riemersma, 2004).

Consistently, African-Americans and those of Hispanic descent are underrepresented among MFTs, compared with their proportions in the U.S. population. As table 22.2 shows, the ratios of MFTs of Asian origin and Native Americans are more in line with their representation in the total population. As in the other mental health disciplines, Whites are significantly overrepresented, making up 92 percent of MFTs, compared with 75.1 percent of the U.S. population. Gender differences exist, however. Slightly more minorities are found among male than female MFTs (8.7 versus 7.5 percent). Increased representation of minorities among MFTs appears promising. Almost 21 percent of the students enrolled in 2003 in training programs accredited by the Commissions on Accreditation for Marriage and Family Therapy Education (COAMFTE) are from minority population groups.

Table 22.3 reveals that the distribution of marriage and family therapists varies considerably across the United States. These variations can be explained by the existence (or lack thereof) of State regulation of the practice of marriage and family therapy or the presence of accredited university/college training programs. MFTs have strong representation in rural areas, with 31.2 percent of rural counties having at least one MFT.

In 2004, an estimated 25,368 individuals were in training to be MFTs (see table 22.8). This 7.6 percent decrease from 2001 is due to an overestimation of students training in California. The 2004 estimates are based on a larger sample of MFT programs in California, which decreased the California trainees, but actually increased trainees from throughout the country. Another 11,289, MFTs have graduated but are not yet practicing independently.

The primary agency recognized by the U.S. Department of Education for the accreditation of clinical training programs in marriage and family therapy at the master's, doctoral, and postgraduate levels is COAMFTE of the American Association for Marriage and Family Therapy (AAMFT). COAMFTE accreditation is required for programs to establish eligibility to participate in Federal programs. COAMFTE also is recognized by the Council for Higher Education Accreditation (CHEA, formerly CORPA), a nonprofit organization of colleges and universities that coordinates and provides oversight of accrediting bodies. As of 2002, COAMFTE had accredited or in candidacy status 55 master's degree, 18 doctoral degree, and 14 postgraduate degree programs in 36 States.

Three-quarters of MFTs in clinical practice hold a master's degree (75 percent); another 25 percent have doctoral degrees (Northey, 2004; Riemersma, 2004). Almost half of MFTs received their degree in marriage and family therapy. Upwards of 92 percent of MFTs are licensed as marriage and family therapists in their States (Northey, 2004; Riemersma, 2004).

Three-quarters (75.42 percent) of the estimated 50,158 clinically active MFTs in 2004 completed their training more than 10 years ago (see table 22.4), making them highly experienced as a group.

Forty-four of the 46 States that regulate MFTs require some continuing education. Almost every MFT obtained at least 1 hour of continuing education per year; the average number of hours required was 35 per 2-year renewal cycle. The mean number of continuing education hours obtained by MFTs is approximately 27 per year (Northey & Harrington, 2004; Riemersma, 2004).

Professional Activities

In 2004, most clinically active MFTs (60.0 percent) worked full time (see table 22.1), usually in one setting (41.9 percent) (see table 22.5). In the past 10 years the number of MFTs working in multiple settings has doubled for full-time MFTs (58.1 percent) and almost tripled for part-time MFTs (52.3 percent). Further, the vast majority of MFTs work in a private individual or group clinical practice settings (90.3 percent) at least part time (see table 22.6). However, the number of MFTs who work exclusively in private practice settings (27.4 percent) continues to drop from a high of 65.2 percent in 1998 and 50 percent in 2002. There is a concomitant shift in the numbers of MFTs working in public sector jobs, with 72.8 percent of MFTs working in hospitals, academic settings, clinics, or social service settings (see table 22.6).

Almost all MFTs are involved in the provision of direct services; increasingly, however, as shown in table 22.7, MFTs are involved in roles other than direct treatment, such as administering human service and agency organizations (18.7 percent) and teaching (24.0 percent), as well as other activities, such as developing prevention programs, enhancing public welfare (especially child welfare through family preservation services), developing public policy,

providing client advocacy, consulting to businesses, and, more recently, managing managed care cases (Northey & Harrington, 2004). On average, full-time MFTs work 41 hours per week and part-time MFTs work 12 hours, the latter seeing 20 clients per week (Northey, 2004).

MFTs treat the full spectrum of American society. More than half the clients seen are female (58 percent); 20 percent are racial and ethnic minorities; the average age of clients is 35, and 20 percent of clients are children (Northey, 2004b). Most MFTs report treating ethnic and racial minority clients (83 percent) and feel competent to treat them (Doherty & Simmons, 1995; Northey & Harrington, 2004; Riemersma, 2004). About half of the adult clients of MFTs have a college or postgraduate degree, whereas the other half have a high school degree and some college. MFTs treat a wide range of individual, couple, and family problems. Mood disorders and depression, couple relationship problems, family relationship problems, anxiety disorders, and adjustment disorders are the most commonly cited presenting problems (Northey, 2004).

The presenting problems treated by MFTs tend to be severe. Nearly half (49 percent) of the problems are rated as severe or catastrophic; another 45 percent moderately severe; and 6 percent mild. The severity of client problems is further supported by the fact that 29.3 percent had been hospitalized in the past year, 6.1 percent of them while under treatment by the MFT (Doherty & Simmons, 1995).

Despite their focus on family systems, MFTs do not treat only couples and family units. Indeed, two-thirds of cases seen by MFTs are individuals (67 percent), 13 percent are couples, and 16 percent are families (Northey, 2002). A significant proportion of the clients are children (20 percent).

Clients report being highly satisfied with the services of MFTs. In a national survey of clients, 98.1 percent rated the services as good or excellent; 97.1 percent said they got the kind of help they wanted; and 91.2 percent said they were satisfied with the amount of help they received. Furthermore, 94.3 percent said they would recommend their therapist to a friend (Doherty & Simmons, 1995).

Clients also reported overwhelmingly positive changes in functioning: 83 percent reported that their therapy goals had been mostly or completely achieved. Nearly 9 out of 10 (88.8 percent) reported improvement in their emotional health; 63.4 percent reported improvement in their overall physical health; and 54.8 percent reported improvement in their functioning at work (Doherty & Simmons, 1995).

Treatment by MFTs is naturally brief and cost-effective. The average length of treatment is 11.5 sessions for couples therapy, 9 sessions for family therapy, and 13 sessions for individual therapy. The average fee is $80 per hour, which makes the average cost per case $780 (Doherty & Simmons, 1995).

As of the end of 2004, 46 States and the District of Columbia regulate the practice of marriage and family therapy. The latest to pass a licensure bill was the District of Columbia, in November 2003. California was the first State to regulate the profession in 1963, followed by Michigan in 1966 and New Jersey in 1968. The most impressive growth in State regulation began in the 1980s, with the vast majority of State regulatory laws having been adopted since 1980.

All MFT licensure laws regulate the profession at the independent level of practice. The most common title for regulation is Licensed Marriage and Family Therapist, although a few States use Licensed Clinical Marriage and Family Therapist. Arizona was the last State to regulate the profession through certification rather than licensure, but that law was amended in 2003. Many States also provide an interim certification or license for postgraduates who are obtaining their 2 years of clinical experience for a license.

States' definitions of the practice of marriage and family therapy vary in the specific language used, but are consistent with AAMFT's Model Licensure Law, which states the following:

"Marriage and family therapy" means the diagnosis and treatment of mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Marriage and family therapy involves the professional application of psychotherapeutic and family system theories and techniques in the delivery of services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders.

While the overwhelming majority (91.5 percent) of the 50,158 MFTs nationwide hold a State marriage and family therapy license, 44.0 percent hold additional professional licenses. The additional licenses that MFTs hold include psychologist (2.7 percent), social worker (6.6 percent), professional counselor (12.1 percent), and nurse (2.9 percent) (Northey, 2002). Over two-thirds (69.5 percent) of MFTs hold only a marriage and family therapy license. There has been a 31 percent increase since 1995 of licensees. Regardless of their training, most MFTs (75.0 percent) describe their primary professional identity as marriage and family therapist (Northey, 2004a).

Psychosocial Rehabilitation

Psychosocial rehabilitation (PSR) is a rapidly growing approach to working with individuals with severe mental illness in the community. PSR programs usually provide any combination of residential services, training in community living skills, socialization services, crisis services, residential treatment services, recreation services, vocational rehabilitation services, case management services, and educational services. In recent years, PSR has been identified as a necessary ingredient for maintaining persons with severe mental illness in the community. PSR services reduce hospitalization, increase employment, and increase the quality of life of persons served. Thus, PSR services are an important part of mental health care in the community, addressing practical, day-to-day needs, such as housing, income, work, friends, and coping skills.

The focus of PSR activities on in teaching individuals with severe mental illness the skills necessary to attain goals of their choice in the community and on developing innovative supports. In providing these services, PSR providers draw upon theories and practices of psychology, education, sociology, social work, and rehabilitation. In addition, PSR has been at the forefront of disability and rehabilitation movements, working toward the empowerment of individuals with severe mental illness through the delivery of services and the integration of the client and the services into the normal life of the community. PSR has been successfully used with individuals who have disabilities other than mental illness and those who have concurrent disabilities of substance abuse, mental retardation, and hopelessness as well as physical disabilities, such as deafness. Specialized programs have also been developed for individuals older than 65.

The importance and success of the field is evidenced by its rapid growth. In 1988, 965 facilities identified themselves as offering PSR services. In 1990, 2,200 facilities were identified as offering PSR services to persons with severe mental illness. By 1996, 7,000 facilities were identified. With an average agency staff size of 16, a conservative estimate of the PSR workforce is 100,000 (see table 22.1).

Demographic and Training Characteristics

Like other mental health workers, PSR workers, as shown in table 22.2, are predominantly female (65 percent) and White (70 percent); assuming that the distribution of female is similar to that of males, approximately 21 percent are African-American, 6 percent are Hispanic, 2 percent are Asian, and .04 percent are Native American. The average age of PSR workers is 38, and they have been in the field for an average of about 15 years (see table 22.4). Those with advanced degrees have been in the field for an average of 8 years. As shown in table 22.5, PSR workers can be found in 48 of the 50 States, the District of Columbia, and the Virgin Islands.

Two percent of all PSR workers have a doctoral degree, 24 percent have a master's degree, 38 percent have a bachelor's degree, 13 percent have some college or an associate degree, and 22 percent have only a high school degree. Twenty-five percent of PSR workers with bachelor's degrees are currently working to attain a master's degree. Among PSR workers with master's or doctoral degrees, 24 percent have degrees in psychology, 36 percent in social work, 4 percent in psychiatry, 3 percent in counseling, and 3 percent in education. Sixteen percent have licenses or certificates in social work; 8 percent are certified as counselors; 6 percent are certified as teachers; and 3 percent are certified as addiction counselors.

As the value of PSR has become recognized, academic programs have developed that specialize in PSR or include PSR as a specialized part of their curriculum. Currently, there are thirteen Ph.D. programs, three combined M.D. and Ph.D. programs, ten master's-level programs, one bachelor's program, and one associate program in PSR. The number of programs is expanding rapidly as the field grows.

Because PSR encompasses an approach, a philosophy, and patterns of interpersonal interactions as well as didactic material, many agencies hire interested, caring people and train them on the job, through supervision, inservice training, and experience. Inservice training, which imparts various combinations of knowledge, attitudes, and skills, is provided in 19 States, by 7 county-level mental health authorities, 21 agencies, and 15 centers or institutes, 8 of which are affiliated with universities. These workshops and training sessions, which may last from 1 to 3 days, typically cover principles and values of PSR, functional assessment, choosing a rehabilitation goal, employment, case management, supported housing, teaching skills, stigma/discrimination issues, cultural diversity, clinical interviewing skills, program evaluation/research, supported employment, and career development. A practitioner typically emphasizes one of these fields over the others.

Professional Activities

Thirty-six percent of PSR workers are employed in residential programs; 32 percent in daytime facility-based programs; 15 percent in case management; 9 percent in vocational; and 6 percent in other areas. A majority are employed in a single setting (table 22.5).

PSR has taken a number of steps toward establishing itself as a distinct professional field, including developing a credentialing program called the Registry for Psychiatric Rehabilitation Practitioners. Many States are in the process of adopting the registry as a credential for this workforce. This program screens applicants for experience, education, training, and knowledge of psychosocial rehabilitation. Individuals who apply for the registry must meet certain educational requirements, have minimum levels of experience in the field, demonstrate written competence in the principles and practices of PSR, and provide evidence of ongoing training as well as references from three individuals familiar with their work.

Parallel to this process, competencies needed by PSR workers have been identified. These competencies have been derived from empirical literature that proves the efficacy of certain interventions and from experience in the field. They include knowledge and skills in the following areas: mental illness; specialized techniques of rehabilitation; establishing strong relationships with consumers; accessing community resources, such as families and self-help groups; cultural competency; and developing programs and relationships that promote recovery. The International Association of Psychosocial Rehabilitation Services (IAPSRS) has also developed standards for the implementation of psychiatric rehabilitation in the form of Practice Guidelines for the Psychiatric Rehabilitation of Persons with Severe and Persistent Mental Illness.

IAPSRS worked closely with the Commission on Accreditation of Rehabilitation Facilities (CARF), the Joint Commission for Accreditation of Health Care Organizations, the Council on Accreditation, and the Leadership Council in developing its guidelines. These guidelines were created by experts in the field on the basis of research and were validated by a field review by practitioners. The guidelines describe psychiatric rehabilitation approaches and interventions that are responsive to individual needs and desires and enhance recovery. Included are such areas as assessment, rehabilitation planning, skills teaching in all areas of functional limitations, facilitation of environmental supports, encouraging participation in community support and social activities, mental illness management, cognitive interventions, and methods of working with co-occurring disabilities. IAPSRS has also developed a code of ethics for its practitioners, with a process of adjudication for violations.

The body of research literature that supports the efficacy of PSR has been growing rapidly as its importance in the management of severe mental illness has become firmly established. Psychosocial interventions are reported in many different journals and books. IAPSRS has also taken the lead in developing a set of outcomes measures to be used by agencies in the field. These measures, which look at many domains of a person's life, have been incorporated into the data sets of other types of rehabilitation.

School Psychology

School psychologists are highly trained in both psychology and education to help children and adolescents succeed academically, socially, and emotionally. Their primary responsibilities lie in the application of psychological principles of mental health service delivery in educational settings and the assessment and planning of services for students with learning problems. Professional school psychology has grown significantly over the past 30 years, and in 2004 it is estimated that approximately 30,000 school psychologists certified by State boards of education or licensed by State boards of psychological services are practicing in the Nation's public schools (Charvat, 2004). Thousands more are primarily associated with the discipline as university instructors, as practitioners in private schools, as full- or part-time private practitioners, or in alternative settings. Most school psychologists serve in 15,000 local educational agencies and nearly 100,000 schools in all States and territories, as well as in Department of Defense schools nationally and internationally (National Association of School Psychologists, 2004).

School psychologists are involved in delivering a broad array of services related to mental health in the schools, including consulting with teachers and parents, developing and implementing educational programs, evaluating skills and development, and intervening directly with students and families. As part of the Individuals with Disabilities Education Improvement Act of 2004 (IDEA; P.L. 108-446), school psychological services are among the related services available to students with disabilities who need special education. School psychologists are also designated as pupil services personnel and among

the providers of "pupil services" under the No Child Left Behind Act of 2001 (P.L. 107-63). Thus, by Federal statute and in practice, school psychologists provide services to all students in both general and special education.

Demographic and Training Characteristics

The preeminent professional association representing school psychologists in the United States is the National Association of School Psychologists (NASP), which has more than 22,000 members (NASP, 2004). The demographic information on school psychologists in this chapter is based on NASP membership surveys (Curtis, Chesno Grier, Walker Abshier, Sutton, & Hunley, 2002; Curtis, Chesno Grier, & Hunley, 2004), NASP membership data (NASP, 1997, 1998, 1999, 2000, 2004), NASP inquiries regarding the number of school psychologists in the United States (Charvat, 2004; Thomas, 2000), and data published by the U.S. Department of Education (USDOE, 2002). The base number of 37,893 clinically trained school psychologists in the tables is the most accurate figure available. Data on gender, ethnicity, years of experience, and other demographic variables are also presented in the tables.

School psychology is still a relatively young profession. Prior to 1975, about 5,000 school psychologists were reported as being employed in more progressive school systems in urban and suburban areas, primarily in California, New York, Pennsylvania, and Ohio (Fagan & Sachs-Wise, 1994). The recognition of the civil right to education of children with disabilities through passage of the Education of All Handicapped Children Act of 1975 (P.L. 94-142) increased the number of school psychologists to its present level and their distribution across urban, suburban, and rural communities in all the States. As the profession has grown, it has become increasingly female. While a survey conducted in the early 1970s revealed that approximately 40 percent of school psychologists were female (Farling & Hoedt, 1971), in 2004 it is estimated that approximately 70 percent of clinically trained school psychologists are female (Curtis et al., 2002). Illustrating this trend, a national survey of university training programs found that more than 80 percent of full- and part-time enrolled students were female (Thomas, 1998).

Survey data on ethnicity suggest that there are relatively few minorities in the profession. However, the approximately 7 percent minority representation presented in table 22.2 reveals a slight increase over the course of a decade, with the number of Hispanic school psychologists doubling from 1.5 to 3.1 percent (Curtis et al., 2002). It is important to note that NASP membership data may underestimate the percentage of minorities in school psychology, as evidenced by the fact that a survey of all graduate education programs indicated that 17 percent of students in training were minorities (Thomas, 1998).

The data in table 22.3 show that school psychologists are not evenly distributed across the Nation. Lund and Reschly (1998) also reported significant State and regional variations, with most States not meeting the NASP standard of one school psychologist for every 1,000 students. Survey data indicate that 35.7 percent of full-time practicing school psychologists work in settings that meet the recommended ratio, though 25.2 percent work in settings with ratios of 2,000 students or more per school psychologist (Curtis et al., 2002). It is important to note that there is considerable State-by-State variation in the ratios (Thomas, 2000).

All professional school psychologists are required to be certified or licensed by the State in which they provide services. Most States use certification and authorize the State education agency to certify school psychologists. Although requirements vary from State to State, NASP offers a national certification (Nationally Certified School Psychologist, or NCSP) that is recognized by 26 States. The requirements are a master's degree or higher specialist degree in school psychology with a minimum of 60 graduate semester hours, a 1,200-hour internship (600 hours of which must be in a school setting), a score of 660 on the National School Psychology Examination (ETS Praxis Series II), and course content to ensure substantial preparation in school psychology. NCSP renewal occurs on a 3-year cycle and is contingent upon completion of 75 hours of continuing professional development.

On average, about 1,900 students graduate from school psychology training programs each year. Most of them enter the field having completed a 60-credit master's or specialist degree. Approximately 30 percent hold doctorate degrees in school psychology, education, or related fields (Curtis, Grier, & Hunley, 2004). Although the percentage of school psychologists with a doctorate has remained relatively constant in recent years, the percentage meeting the requirements for national certification continues to increase. In 2004, there are 8,388 Nationally Certified School Psychologists (NASP, 2004). School psychologists who are members of NASP or hold the NCSP are required to abide by the Professional Conduct Manual for School Psychologists, which con-

tains the Principles for Professional Ethics and the Standards for the Provision of School Psychological Services (NASP, 2000).

Nationally, 168 school psychology training programs are fully accredited by NASP/National Council for Accreditation of Teacher Education (NASP, 2004). Each year, approximately 1,750 school psychology students graduate from these and other institutions and become initially certified/licensed to practice in the Nation's schools (Curtis, Grier, & Hunley, 2004). The USDOE has reported that there are, on average, more than 600 unfilled, funded vacancies or additional certified personnel per year needed for the public schools (U.S. Department of Education, 1997a, b, 1998, 1999). A shortage of school psychologists is predicted in the immediate future in light of the increase in retirement rates among school psychologists and the proliferating need for mental health services in the schools. A recent study predicted a shortage of 9,000 school psychologists between 2000 and 2010 (Curtis, Grier, & Hunley, 2004).

Professional Activities

As shown in table 22.6, school psychologists are employed in a variety of settings, including public and private schools, universities, clinics, institutions, private practice, and community agencies. However, the majority (77.5 percent) practice in public schools, with significantly fewer (6.8 percent) practicing in private schools. Another 4.3 percent are in private practice. Some school psychologists are employed by mental health agencies that provide psychological services to the schools (Curtis et al., 2002). Although there are no officially recognized subspecialties within the profession, school psychologists' professional activities include a wide variety of services for diverse student populations. These services include consulting with teachers, parents, and school personnel about learning, social, emotional, and behavior problems; developing and implementing educational programs on classroom management strategies, parenting skills, substance abuse, anger management, teaching, and learning strategies; evaluating academic skills, social skills, self-help skills, personality, and emotional development; and intervening directly with students and families (including individual, group, and family psychological counseling), as well as helping solve conflicts related to learning and adjustment.

Demographic trends in the discipline suggest that the retirement of baby boomers in the next few years will contribute to a serious shortage of school psychologists that will peak in about 2010 (Curtis, Grier, & Hunley, 2004). Facing the possibility that the shortage will result in a reversal of the positive trends in the field, such as, for example, the decreasing student to school psychologist ratio, school psychologists and NASP are mobilizing to address the situation. Current efforts are focused on increasing awareness of the negative consequences of insufficient numbers of school psychologists, advocating for legislation that will strengthen the workforce, and considering potential new directions for the profession that will enhance school psychologists' contributions to the social, emotional, and academic learning of our Nation's students.

Sociology

The revival of the sociological practice movement can be traced back to the late 1970s (Friedman, 1987), a turbulent era in higher education, in which many academic institutions—particularly "small private liberal arts colleges, two-year private colleges, middle-level private urban universities, and a spate of remote State colleges and universities" (Bingham, 1987; Smith & Cavusgil, 1984)—experienced three major challenges: (1) declining enrollments among aging baby boomers and increasing enrollments among nontraditional adult and minority students (Strang, 1986); (2) closures, cooperative arrangements with other institutions, and mergers (Bingham, 1987); and (3) reduced government funding amid rising education costs, necessitating relief from private funding sources such as alumni, foundations, and corporations (Bryant, 1983). These changes, not typically shared by their larger, private academic counterparts, necessitated a conceptual shift in sociology away from theory and statistical testing that characterized the discipline's post-World War I efforts to legitimize itself and toward its original mission of social reform, based on application and intervention (Clark, 1990; Franklin, 1979; Huber, 1984, 1986; Kuklick, 1980; Parsons, 1959). New hands-on academic incentives—particularly workshops, supervised fieldwork, and internships—were designed to attract the changing student demographic and respond to economic constraints. Schools also integrated sociology departments into their respective communities and with their publics, balancing students' substantive disciplinary interests with more vocationally oriented courses (Ruggiero & Weston, 1986; see also Fleming & Francis, 1980; Olzak, 1981).

Sociology's theoretical and substantive contributions to mental and behavioral health care derive

from its philosophical origins as a social science and practice profession in Europe and America.[1] More recently, sociologist Thomas J. Scheff (1966) broke new ground in his seminal work, *Being Mentally Ill,* which devoted attention to the social contexts of mental health and mental illness and conceptualized behavioral health care as a distinct social system. Drawing ideas from his contemporaries such as Edwin Lemert (1951), Kai T. Erikson (1957), and Erving Goffman (1961), Scheff's effort remains the cornerstone of modern mental health law in the United States. Interdisciplinary support for Scheff's position came from psychiatrist Thomas Szasz (1974) in *The Myth of Mental Illness,* which linked mental illness to specific socioeconomic, political, and cultural conditions in the social environment (cf. Hollingshead & Redlich, 1958). Current sociological contributions in mental and behavioral health care fields derive from the practical experiences and casework of clinical sociologists who specialize in individual, family, and other interventive group practice (see, e.g., Brabant, 1996; James & Gabe, 1996; Kemper, 1990).

Demographic and Training Characteristics

During the past two decades, the demand for qualified mental and behavioral health care professionals, coupled with stringent practice standards, has given academic departments in the social and behavioral sciences and allied health care occupations the incentive to accredit their practice programs and provide their graduates with association and State professional credentials (Witkin, Atay, Manderscheid, & DeLozier, 1998, pp. 153, 168). Sociologists seeking work as mental and behavioral health care providers, administrators, researchers, and educators found it increasingly necessary to qualify themselves with definitions of title and practice, educational qualifications, and State examination requirements from nonsociological practice legislation.[2] Extradisciplinary oversight, however, has not always represented and advanced sociologists' career interests and standing in mental and behavioral health care fields, nor has it fully exploited the application of sociology's distinct theories, methods, and approaches to everyday problems, particularly its capacity to "benefit society and social life through research action or administration" (Fleischer 1998; portion quoted is from Olsen, 1991, p. 6).[3]

In an era of managed care, sociologists' entry into the heavily regulated behavioral health care industry has led many to realize the value of acquiring supplemental association and State professional credentials, which serve as recognizable symbols of their competence to serve the public welfare, health, safety and to contribute to the quality of social life. Sociologists understand that without practice credentials, their opportunities to engage work as unregulated behavioral health care researchers, interventionists, caseworkers, and administrators will continue to decline. As a result, they have begun to organize and revise their accreditation and credential programs. The Commission on Applied and Clinical Sociology (CACS) was established in February 1995 as a joint initiative of the Society for Applied Sociology (SAS) and the Sociological Practice Association (SPA). SAS and SPA were founded in 1978—SPA as the Clinical Sociology Association (CSA). In 1997, CACS completed program accreditation standards and peer review guidelines at the baccalaureate level for sociology departments interested in complementing their traditional academic emphases with clinical and applied education and training components. Comparable standards and guidelines at the master's level were published in 1999. Doctoral equivalents are under consideration. These measures, sensitive to evolving training and administration standards in behavioral health care, permit practicing sociologists to apply their unique perspectives, skills, assessments, and interventions to the complex set of interactions that characterize social relations between and among sundry behavioral health care populations, providers, networks, sponsors, and members and their institutional envi-

[1] For European roots in epistemology and phenomenology, see Husserl (1960, 1999; cf. Kockelmans, 1994; also see Geiger, 1969; Mannheim, 1936; Scheler, 1962; Schutz, 1962; Stark, 1958); for an American treatment, see Blumer (1969; Garfinkel, 1967; Mead, 1934, 1938; Merton, 1957; Mills, 1959); see Blumer (1969) and Garfinkel (1967) for the strain in social psychology; and Weinstein and Platt (1973) for the strain in psychoanalytic sociology.

[2] In some instances, as in the case of Wisconsin Assembly Bill 125, in 1991, sponsored by social workers, psychologists, marriage and family therapists, professional counselors, alcohol and substance abuse counselors, and others, sociologists were asked to comply with its extradisciplinary requirements within a specified period of time or else cease practice as unregulated professionals. The bill failed (Onnie, 1992).

[3] Many practicing sociologists argue that extradisciplinary oversight results in an oblique use of sociological knowledge, generating fewer benefits to society than would be possible with direct implementation legitimated, sanctioned, and regulated by sociologists in conjunction with the State, as can be accomplished in independent sociological practice legislation (for a discussion, see Fleischer, 1998).

ronments. These concerns and practices have often been overlooked or underused in the allied health care marketplace. Sociologists' treatments will add significantly to the mix of existing approaches.

Following the implementation of its pilot accreditation program in fall 1997, CACS reviewed its first application for accreditation and self-study from St. Cloud State University in St. Cloud, Minnesota, in February 1998. It conducted a site visit of St. Cloud's Applied Sociology Concentration in March 1998, and recommended full accreditation in August 1998. St. Cloud's program was reaccredited in August 2003. A second program, the Applied Sociology Program at Our Lady of the Lake University in San Antonio, Texas, was accredited in August 1999, and reaccredited in August 2004. CACS has since received several additional inquiries from sociology departments interested in having their applied or clinical programs accredited at the baccalaureate or master's level. CACS provided these programs with its published *Accreditation Standards* and *Policies and Procedures*. Three of these programs—Buffalo State College in New York, Valdosta University in Georgia, and Humboldt State University in Arcata, California—filed accreditation applications, presenting their self-study reports to separate Commission-sponsored Accreditation Review Committees (ARCs) in spring 2002. A site visit for Valdosta's undergraduate Concentration in Applied and Clinical Sociology was completed in spring 2003, and full accreditation was awarded in August 2003. Site visits for Valdosta's Master's Concentration in Applied Sociology and Humboldt's Master's Practicing Sociology Track were completed in fall 2003, and full accreditations were awarded in August 2004. The Sociology department at Buffalo State University withdrew its application of accreditation for its Bachelor of Science in Applied Sociology Program in April 2004.

CAC plans to replace its pilot accreditation program with an approved implementation, following its own accreditation by the Council on Higher Education Accreditation (CHEA) and/or recognition by the Association of Specialized Professional Accreditors (ASPA) or similar agencies. Sociological practice programs accredited by CACS are listed in its *National Directory of Applied and Clinical Sociological Practice Programs*. Program graduates are listed in its *National Registry of Sociological Practitioners*. Provisions will be made to "grandfather" qualified, nonprogram-accredited sociologists into the registry as well. The registry will be used to support graduates' candidacy for practice certification and their eligibility to enter and engage employment in interdisciplinary practice fields, including mental and behavioral health care. Later, it will be used to support their candidacy for State professional credentials through registration, certification, or licensure in compliance with State regulatory and jurisdictional requirements. Sociological practice legislation is currently under advisement by CACS. As in other professions, different classes of association and State professional credentials will be awarded on the basis of education and training. Core data will be incorporated into upcoming editions of *Mental Health, United States*.

SPA currently offers qualified candidates at the master's and doctoral levels two credentials. A Certified Sociological Practitioner (CSP) possesses the requisite knowledge and skills to apply sociology in one or more recognized subfields, such as organizational development, social policy assessment, conflict resolution, forensic counseling, and community intervention. A Certified Clinical Sociologist (CCS) specializes in providing evaluative, therapeutic, educational, and administrative services in the mental and behavioral health care fields.

SPA officials report that approximately 20 candidates were certified in 1998, adding to the association's base of 48 credentialed sociologists. Six additional applications for SPA certification were filed in 1999. By May 2002, the number of sociologists certified by SPA declined to 61 practitioners. No changes were reported through the end of 2004. Of the 61 practitioners, 22 (or 36 percent) have provided counseling and other mental and behavioral health care services to individuals, families, and small groups since their certification. This percentage increases to 45 percent (or 14 of 31 practitioners) with current SPA certification. Subspecialties include, but are not limited to, emotional therapy, grief work, sociotherapy, health education and family planning, individual and small group intervention, interpersonal and group conflict resolution, forensic counseling in the criminal justice system, clinical evaluation research, clinical administrative practice and consulting, and clinical training and supervision. Client populations include, but are not limited to, widows and other women, children, families, communities, law enforcement officers and firefighters, and public and private sector organizations. In short, SPA has certified 22 sociologists with clinical training in mental and behavioral health care fields. Only 14 (or 63.6 percent) are clinically active as of December 2004. Overall, male practitioners outnumber their female counterparts 12 to 10 (54.5 percent to 45.5 percent). This proportion evens to 50 percent, or seven males and females each, when the calculation is based on the subset of practitioners whose SPA certification is current.

Since 1983, the SPA certification program has served as a demonstration project to model and deploy a comprehensive national program, possibly in conjunction with the American Sociological Association. However, future plans in SPA include forming partnerships with other sociological, nonsociological, and professional associations, including SAS and the Society for the Scientific Study of Social Problems (SSSSP), to expand the pool of qualified candidates who are eligible to apply for SPA credentials. In October 2003, the SPA and SAS boards agreed to merge their associations and combine memberships. In 2004, negotiations still are in progress; the new entity will be named the Association of Applied and Clinical Sociology (AACS).

Professional Activities

Current data on applied and clinical sociologists, particularly those employed in mental and behavioral health care fields, other than those certified by SPA, are limited to disparate studies of independent researchers. To date, no discipline-wide or association-sponsored sociology groups have generated exhaustive findings for the universe of postsecondary-educated, trained, and active practitioners, though CACS is considering such efforts.

Data from the Open System Practitioner Survey in 1998, a diagnostic administered by *Mental Health Update* coauthor Michael Fleischer, its principal investigator, canvassed a nonrepresentative sample of 217 sociologists, graduates at all degree levels of 10 of 37 postsecondary institutions in the tri-State, Chicago metropolitan area between 1977 and 1992. Of these sociology graduates, 69.5 percent reported current or previous employment in the academic and nonacademic workplace and professional marketplace. Fewer than one-third said they practiced sociology in academic settings, whereas more than two-thirds said they did so in nonacademic settings. A total of 21.8 percent worked in mental health care and allied medical health care fields, domains comprising the second largest industry for applied and clinical sociologists behind law, social policy, and community service, in which 23.1 percent said they worked.

Noteworthy is that 9.2 and 2.6 percent, respectively, of practicing sociologists reported single and multiple professional association credentials (all nonsociological), and 25.8 and 3.3 percent, respectively, reported single and multiple State professional credentials (all nonsociological by default). Generalizable only to the sample that confirmed residence and employment in the referenced region between August and November 1993, 42 percent of practicing sociologists, a plurality, obtained nonsociological professional association credentials in social service and mental healthcare fields, whereas 41 percent acquired State professional credentials as certified and licensed social workers or similarly credentialed clinical and school social workers. Others reported having State credentials in marriage and family therapy and professional counseling.

In a separate study of 12,211 Ph.D. sociologists polled in the 1995 Survey of Doctorate Recipients, sponsored by the National Science Foundation's (NSF's) Division of Science Resource Studies, independent researchers Koppel and Dotzler (1999) found that Ph.D. sociologists favor academic over nonacademic jobs by a margin greater than three to one. Their data, weighted on 36 "best principle job codes," indicate that 45.8 percent of all Ph.D. sociologists employed during the week of April 15, 1995, taught sociology at postsecondary institutions. In contrast, 1 percent of nonacademically employed Ph.D. sociologists coded their work as sociological, whereas 2.4 percent coded it as psychological, and 1.8 percent as social work. An additional 1.9 percent classified their work as "other health occupations," as distinguished from medical science (nonpracticing); registered nursing, pharmacology, diet, and therapy; and health technology.

A more robust and accurate picture of sociologists' employment in the mental health workforce in the United States may be possible with congressional or other support of the Core Data Set (CDS), developed by the Alliance of Mental Health Professions (AMHP), in response to current disparities in questionnaire construction, item selection, sampling methodologies, data collection, and reporting procedures in national mental health association membership surveys. Serving as the basis for the human resources data set in *Decision Support 2000+* (see Henderson, Minden, & Manderscheid, 2001), CDS's sampling universe would be expanded to include *all* State-credentialed (registered, certified, and licensed) clinicians in addition to members of professional mental health associations. The benefits of this sampling frame are better accounting and control of providers who are cross-credentialed in multiple mental health professions and States, an end to duplication and fragmentation in data collection and reporting across professions, better information to policy makers in behavioral health care issues and service delivery, and the identification of interdisciplinary, evidence-based best practices.

Looking Ahead

The *Directory of Programs in Applied Sociology and Practice,* published biennially by the American Sociological Association, lists 35 baccalaureate, 102 master's, and 47 doctoral programs in sociological practice, all potential candidates for CACS accreditation (Fleischer, 1999). Specializations vary widely across interdisciplinary fields; however, many fall into mental and behavioral health care fields. These programs, responsive to the rapidly evolving standards of managed care education, training, administration, and intervention, will graduate candidates with the requisite clinical background to qualify them for SPA certification in mental and behavioral health care fields, and the acquisition of State professional credentials, once sociological practice legislation is enacted.

To date, the scarcity of clinically trained and active sociologists who practice in mental and behavioral health care fields yields insufficient data to project their composition and demographics over the next several years. Notwithstanding, CACS anticipates continued departmental interest in its post-secondary accreditation programs and expects that SPA-credentialed graduates of its accredited *clinical* programs will soon augment those who currently provide educational, administrative, evaluative, and therapeutic services in mental and behavioral health care fields.

Since September 11, 2001, a few sociology departments have reported noticeable trends in the educational and career interests of their new enrollees. Others have reported no change. One department has tracked an increase in the number of declared majors among returning adult students—particularly pilots, flight attendants, and support personnel laid off by the airline industry. These enrollees have concentrated their studies in the subfield of criminology in order to pursue new careers in law enforcement. They cite safety and security issues as primary concerns. Other enrollees, such as one former flight attendant supervisor, plan to use their sociology degrees to counsel trauma survivors and people in crisis situations. Some sociology departments have begun to review their curricular requirements and the substantive content and frequency of their core and elective offerings. A few will implement changes. One department, for example, plans to add a new course on terrorism to its program, its coordinator commenting that it should be popular among traditional and returning adult students. When they become available, data on clinically trained and active sociologists will permit a fuller analysis of these patterns, as well as the demand for clinical sociologists in mental and behavioral health care fields.

Pastoral Counseling

Identity and Practice

Pastoral counseling is a unique mental health discipline that integrates behavioral science with the spiritual dimension of life, as lived out through values, belief systems, and religious practices. Pastoral counselors, as mental health professionals, are recognized and endorsed, through ordination or by other means, by an identified faith group.

For the past 40 years, the American Association of Pastoral Counselors (AAPC), the credentialing and professional body for pastoral counselors, has certified pastoral counselors as well as pastoral counseling centers and training programs (American Association of Pastoral Counselors, 2001).

A landmark development in the field of pastoral counseling occurred in 1937 when Smiley Blanton, M.D., a psychiatrist, teamed with the Rev. Norman Vincent Peale to form the American Foundation for Religion and Psychiatry. This program continues as the Blanton-Peale Institute, an AAPC-accredited pastoral counseling service and training center that is now one of the largest providers of outpatient mental health care in New York City. The Blanton-Peale Institute is one of a large network of pastoral counseling centers and training programs around the country. Famed psychiatrist Karl Menninger was among the pioneers in the integration of psychological and theological disciplines, believing in the "inseparable nature of psychological and spiritual health" (American Association of Pastoral Counselors, 2001).

Pastoral counseling is a highly specialized discipline that requires extensive graduate education, clinical training, and continuing education/consultation. This discipline is dynamic in nature, as are the other major recognized medical and psychological disciplines applying specific modalities of treatment.

The United States has approximately 85 accredited Pastoral Counseling Centers, which provide a wide range of mental health services and work in close collaboration with other mental health professionals, including psychiatrists, clinical psychologists, clinical social workers, and other credentialed counselors. The Samaritan Institute, based in Denver, represents the largest network of

Pastoral Counseling Centers operating throughout the country. In addition, there are many independent, nonprofit centers in almost all States. Pastoral counselors, certified by AAPC, are employed in these Pastoral Counseling Centers, in private practice, or in community mental health agencies and religious institutions.

Certified Pastoral Counselors have become major providers of mental health services, offering individual, couple, family, child, adolescent, and group therapy. AAPC represents approximately 3,000 individual members and more than 100 faith groups.

Traditionally, religious communities have been a principle gateway for those seeking relief from a wide variety of problems, including mental and emotional illness, family conflict, substance abuse, depression and suicide, child and spousal abuse, violence, and other societal problems. Spirituality and religious affiliation have demonstrated their value as a resource for promoting recovery from illness, not just prevention of morbidity.

AAPC is a nationally recognized mental health organization which works cooperatively with other mental health provider and consumer groups, such as the Mental Health Liaison Group, the National Mental Health Association, the National Alliance for the Mentally Ill, the Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services. Increasingly, health care providers recognize the therapeutic benefits of spiritual sensitivity in their practices. They are recognizing the effectiveness of creatively using spirituality in the healing process. However, a lack of training and skill sets impose limitations on the ability of other health care providers to apply the spiritual dimension to behavioral science. Clinically, the spiritual dimension translates into using the patient's belief and value systems to effect mental, emotional, and spiritual healing. Pastoral counselors, consistent with the AAPC Code of Ethics, do not use proselytizing or religious conversion methods in the psychotherapy.

There is increasing scientific evidence that spirituality and religion are also beneficial in preventing and healing physical disease. Many physical symptoms and diseases have their etiology in mental and emotional problems. The elderly have an affinity for the spiritual dimension because they become more aware of their mortality and suffer more serious and chronic illness than other age groups. In a recent poll (American Association of Pastoral Counselors, 2001), the elderly represented higher levels of support for seeking the assistance of pastoral counselors over the assistance of family physicians and psychiatrists. Seventy-five percent of those polled from all groups stated that it would be important for elderly parents or relatives in need of treatment to receive assistance from a mental health professional that knew and understood their spiritual values and beliefs.

Pastoral counseling offers a modality of treatment that maintains the natural connection between the physical, mental, and spiritual realities of life and fosters a sound and lasting foundation for the prevention and treatment of mental and emotional illness. The wider use of pastoral counseling is consistent with the present administration's Faith-Based Initiative, an initiative which recognizes the merits of close collaboration with the Nation's faith groups in alleviating a variety of social and health-related problems.

Pastoral Counselor Training

Certified Pastoral Counselors are among the best trained mental health professionals. Through graduate study in theology as well as psychology, pastoral counselors are trained in two disciplines instead of one, integrating them into an effective psychotherapeutic modality of treatment. They are at the forefront of mental health professionals that have the training, background, and experience to integrate the power of spiritual resources competently and effectively with proven and accepted therapeutic methodologies. Consistent with the increasing interest on the part of other health disciplines, more than two-thirds of all U.S. medical schools now include course work, clinical case studies, and lectures on the topic of religion and spirituality.

The standards set by AAPC require intensive studies in behavioral science and many hours of clinical training and supervision. This is in addition to a graduate curriculum in religious and theological studies. The clinical training for Fellow certification involves the completion of at least 1,625 hours of supervised clinical experience and 250 hours of direct approved supervision. The three primary levels of AAPC-certified membership are Certified Pastoral Counselor—the initial level; Fellow-indicating advanced clinical competence and Diplomate-qualifying to work as a training supervisor. Fellow- and Diplomate-level Pastoral Counselors have been recognized as providers under TRICARE for military dependents, as well as in medically underserved States for the Federal Employees Health Benefits (FEHB) plans, with an Office of Personnel Management (OPM) recommendation for provider inclusion

in all States. Additionally, Certified Pastoral Counselors serve as providers in many mental health managed care plans.

OPM, which administers the FEHB health insurance program for Federal employees, in its decision to include Certified Pastoral Counselors in its program, stated, "We received several documents that compare the training of AAPC certified Counselors at the Fellow and Diplomate level with mental health professionals such as licensed clinical social workers. We have concluded that AAPC Counselors meet the requirements for comparable providers" (Frank O. Titus, Assistant Director for Insurance Programs, Federal Office of Personnel Management) (American Association of Pastoral Counselors, 2001).

Typical education and training for the Fellow level consists of a bachelor's degree from a college or university, a professional degree from a seminary or similar graduate educational institution, and a specialized master's or doctoral degree in the field, such as an M.A., D.Min., or Ph.D. degree. Candidates seeking AAPC certification are thoroughly evaluated to ensure that AAPC certifies only those who have reached appropriate levels of competence and who reflect the highest moral and professional standards. In addition to setting standards for the certification of individual pastoral counselors, AAPC sets standards and offers accreditation for Pastoral Counseling Centers, which includes the approval of training programs. All accredited centers and approved training programs are reviewed periodically to ensure maintenance of the standards.

Training is a top priority in pastoral counseling because the discipline continually seeks to provide the highest possible quality of care. Pastoral counselors impart their knowledge of mental health and addiction and skills to faith groups through community education events in congregations and to congregational leaders.

Consumer Attitudes

Past and recent public opinion polls have indicated that significant numbers of people desire to have the spiritual dimension and their personal value system incorporated into the treatment of mental and emotional illness for themselves and their families. In 1994, 96 percent of the U.S. population believed in God or a higher power, according to the Princeton Religious Research Center. Consumer attitudes have consistently reflected the desire to choose from a range of qualified providers, as demonstrated in research surveys, and pastoral counselors show up prominently in the preferences.

A 1991 Gallup poll (see American Association of Pastoral Counselors, 2001) showed that 66 percent of respondents preferred a professional counselor who represented spiritual values and beliefs, and 81 percent preferred to have their own values and beliefs integrated into the counseling process. A poll conducted in late 2000 by Greenburg Quinlan Research, Inc., of Washington, DC, not only underscored the findings of the Gallup poll but also revealed extensive consumer sentiment regarding pastoral counseling (American Association of Pastoral Counselors, 2001). The firm concluded, "There appears to be a favorable environment for the type of role Pastoral Counselors can play, especially for the growing elderly population. Voters say it is important to them that mental health counselors be able to integrate spiritual health and mental health in the course of counseling. These data also show a widely held belief that emotional well-being is closely linked with spiritual faith. Finally, the results show that a fear exists on some level that mainstream counseling and therapy may not always take seriously the spiritual and emotional beliefs of clients. These findings put the AAPC in a distinct position to make the argument that their members can fill a void that currently exists in treating mental and emotional problems" (American Association of Pastoral Counselors, 2001, Appendix C, p. 47).

Some survey findings from the Greenburg Quinlan Research, Inc., poll (American Association of Pastoral Counselors, 2001, Appendix C, pp. 47–48) are as follows:

1. Seventy-five percent of respondents say it would be important for an elderly parent or relative who was in need of treatment to get assistance from a mental health professional that knew and understood their spiritual beliefs and values.

2. Among senior citizens, there were higher levels of support for seeking the assistance of pastoral counselors than for seeking the assistance of family physicians and psychiatrists.

3. Eighty-three percent of respondents feel their spiritual faith and religious beliefs are closely tied to their state of mental and emotional health.

4. Seventy-five percent of respondents say it is important to see a professional counselor who integrates their values and beliefs into the counseling process.

5. Sixty-nine percent of respondents believe it would be important to see a professional counselor who represents their spiritual values and beliefs if they had a serious problem that required counseling.

6. In all age groups, consumer preference for the services of pastoral counselors trained in psychotherapy and spirituality polled substantially ahead of the services of other trained and certified counselors and of family physicians, and merely two percentage points behind the services of psychiatrists.

Pastoral Counseling and Preventive Services

Pastoral counseling represents a paradigm for preventive mental health care. From the perspective of community prevention, early and easy access to Pastoral Counseling Centers through the family, place of worship, and other referral services provides intervention before the illness becomes chronic or more resistant to treatment. A place of worship is a natural community gateway through which millions of persons pass each week and in which a wide spectrum of mental health problems are presented. Many mental health and addictive issues are amenable to early detection, intervention, and treatment. Numerous programs around the country train clergy in the identification of mental and emotional illnesses and in forming relationships with treatment service networks offering a variety of specialized providers, effecting an early referral and avoiding long, costly treatments for chronic conditions.

The stigma of mental illness, a major obstacle to treatment, is in great part mitigated when the client is referred to a Pastoral Counseling Center for treatment. Persons have already acquired a level of comfort with their place of worship and, therefore, are less resistant to entering a Pastoral Counseling Center. This setting, consequently, often provides a more acceptable, hospitable, and therapeutic atmosphere that helps to nurture the healing process. The spiritual dimension in mental health care also helps strengthen inner personal resources for the maintenance of health following early intervention and treatment.

Many Pastoral Counseling Centers perform mental health screening to prevent or mitigate the effects of mental and emotional illnesses. The AAPC has been a principal party in a national campaign to fight depression through the education and training of community clergy and congregations, representing a wide variety of faith groups and congregations. This project has given trainees the knowledge and skills to identify people with depressive illnesses and link them with appropriate resources. These pastoral care and counseling tools will continue to be used long after this project is completed. Many congregation members have been screened for depression through this program, often being referred for further evaluation and treatment. Close working relationships with religious groups and their leaders enable pastoral counselors to be in the forefront of many valuable programs of disease prevention and health maintenance, especially for underserved the elderly and minority populations. Because Certified Pastoral Counselors bring a mature, holistic, and experienced presence to the public need for preventive services, their participation in these types of preventive activities helps to ease the enormous pressure and costs on the mental health delivery system.

Another example of preventive services, Addiction and the Family: Core Competencies for Pastoral Counselors, took place on November 19–21, 2004. Eighty-one pastoral counselors representing accredited AAPC and Samaritan Centers met in Rockville, Maryland, for the National Association for Children of Alcoholics (NACoA) Faith Based-Based Core Competencies Training Event. The goal of this training initiative "is the gradual integration of the Core Competencies for Clergy and Other Pastoral Ministers in Addressing Alcohol and Drug Dependence and the Impact on Family Members into the daily customs of clergy, pastoral ministers and religious leaders. The transformation of skill, knowledge, and behavior is a necessary antecedent to the desired change in daily practice" (Executive Summary, NACoA's Core Competencies Workshop: Final Evaluation, p. 3; available from NAPC).

In November 2001 the Johnson Institute and the National Association for Children of Alcoholics—the Clergy Training Project partnership—convened a panel to recommend the development of "core competencies"—knowledge and skills—for congregational leaders to assist families, children, and individuals affected by alcohol and drug abuse. A second meeting was held February 26–27, 2003, representing a broad based panel. This meeting resulted in the *Core Competencies* monograph, published by the Substance Abuse Mental Health Services Administration (SAMHSA), which provided support for the meetings.

The need for such training and the integration of learned skills into the daily practice of congregational ministry is significant. According to SAMHSA,

an estimated 7.7 million persons aged 12 or older need treatment for an illicit drug problem; 18.6 million need treatment for an alcohol problem. Of the 7.7 million individuals who need treatment for an illicit drug problem, only 1.4 million received treatment at a specialty substance abuse facility. Of those not getting needed treatment, an estimated 362,000 reported knowing they needed treatment—among them approximately 88,000 individuals had sought but were unable to obtain the necessary care (*Core Competencies for Clergy and Other Pastoral Ministers,* p. 1).

The capacity of pastoral counselors to enhance the health and well-being of communities is significant. As a result of this training initiative, pastoral counselors, working with local faith communities, behavioral health providers and organizations like the Johnson Institute and NACoA, will be able to provide the necessary knowledge and skills to religious leaders in the areas of assessment, referral, pastoral care, and community education to help those in need to access appropriate levels of care and treatment.

Additionally, AAPC is working with the American Academy of Child and Adolescent Psychiatry and Family Communications (producers of *Mister Rogers' Neighborhood*) to develop and implement a training model (train the trainer) for preschool child care providers to enhance their intervention skills to address a child's acting out and impulsive behavior. Training for the child's primary caregiver(s) would be provided as well. The training would take place in faith-based child care programs, which nationally provide the highest percentage of care with the least trained staff. It would have a threefold benefit: enhancing skills of staff care givers, assisting children to better manage their behavior, and providing the opportunity for early assessment , intervention, and treatment. It would assist in the fulfillment of The President's New Freedom Commission on Mental Health goal #4, "Early Mental Health Screening, Assessment, and Referral to Services Are Common Practice."

The Future of Pastoral Counseling

The aforementioned examples of preventive care offer a window on the future of pastoral counseling. The profession has evolved from an intrapsychic model of care of the individual psyche, to the self in a system, to the context of the broader community. The focus is increasingly on the way cultural and political contexts shape people's lives. Gender, class, race, economics, privilege, age, sexual orientation, and religious worldview have become important factors influencing behavior and identity. New voices in pastoral counseling directs attention to the complexity of the person in culture. Particularity and difference—a respect for the knowledge and truth in a variety of voices—began to push against what had traditionally been held as more commonly applied universal diagnostic and treatment procedures in addressing human thought and action.

Intercultural influences have also had their impact. Ethnic racial communities and international communities and religious institutions have continued to grow and gain prominence. What was previously referred to as a "melting pot" where people from abroad and with cultural differences could be Americanized is now a cultural marketplace where a multitude of contexts and perspectives provide many places for a person to stand and view the world. "Globalization" was the norm in a clinical model that exported Western pastoral care and counseling to the non-Western world. In the communal contextual model, "internationalization" is now the order of the day where a mutual exchange of pastoral care knowledge takes place between Western and non-Western contexts. The emphasis is on authentic participation of all people so that each voice can be heard.

As Larry Kent Graham noted,

> In short, the field of pastoral care and counseling is in the process of "widening its horizons" …conceptually, methodologically, sociologically, culturally, and functionally. Conceptually, this ferment requires a more comprehensive view of the relationship between persons and the larger world shaping them. Methodologically, it incorporates political, cultural, and sociological disciplines into psychological-therapeutic perspectives, with theology, ethics, and pastoral practice reasserting their centrality as the grounding standpoints for theological construction and concrete practice.… Sociologically and culturally, a new paradigm will have to take into account the care needs of a pluralistic world that is fundamentally structured by unjust power differentials and fragmented by contending value orientations between groups.… Ethically, it calls for the development of criteria which guide practice with respect to just and liberated relationality at all levels of the social order. Further a new paradigm must attend to the limits and possibilities inherent in the social locations in which care is mediated and in the variety of lay, clergy, and secular providers of religiously based care. Persons practicing with a new paradigm in mind will need to create structures for accountability, economic viability, and accessible

> and diverse services, in the light of conceptual, methodological, sociological, and cultural factors (Graham, 1995, p. 221).

The effects of this paradigm shift in models and the financial, social, political, cultural, and professional changes on pastoral counseling centers have been persistent and progressive. Practitioners are beginning to see the need to develop skills and knowledge in a multiplicity of modalities and theoretical perspectives that will yield a variety of approaches for an array of contexts. There is a movement to look beyond the office and step into the community—to stand where those seeking care stand—to understand the places where people live and develop—to appreciate the specific needs and struggles they encounter there. Because care and counseling knowledge is multifaceted, pastoral counselors are finding it helpful to collaborate with partners who have complementary skills and knowledge. Pastoral counselors are talking more with diverse groups of people and thus expanding their understanding of themselves in the world. Boundaries are being examined not only in terms of making issues separate and distinct, but in terms of how issues interrelate and come together.

There is a need for a more viable business model to support the profession's new directions. Moving forward, there is an interest in funding and support for these more collaborative, inclusive, relational, communal, connectional styles of programming. Pastoral Care and Counseling Centers will most likely hang on to traditional programs and sources of funding as these continue to work and meet needs. Yet with fewer referrals from traditional sources and less money from those referrals, they will also need to look in new directions and areas for ways to create economic stability and address community needs. The profession is at the threshold of a new context, where the clinical pastoral counseling model touches the communal contextual model.

In his book *Boundary Leaders* (2004), Gary Gunderson discusses leadership in this "in between" place. Boundary leadership refers to "a way of seeing yourself…a way of seeing your time and place and your web of relationships… Within the unlimited, endless boundaries of 'boundary' leader, you will find that you know who you are, where you are, what you are to do there. You will find your own individual opportunities to build the capacity of others to choose life. You will find the zones, the places, where structures, ideals, organizations, visions, values—states of mind—bump against one another, those permeable walls where all our hopes, dreams, and aspirations can emerge" (p. 8). Boundaries are the places where things come together and new relationships emerge, but they are not simple points of contact where one thing touches another. Boundaries come together in "boundary zones" where one paradigm washes over another. Gunderson uses the ecological image of the wetlands where salt water comes together with fresh water. There is no line of demarcation where salt water ends and fresh water begins, but there are vast estuaries full of beauty and incredibly rich and complex life forms where fresh and salt water clash, engage each other, and engender a new creative process. In this environment, life must adapt and adjust. Boundary zones are fields of relationship and power which are seldom, if ever, clear, stable, or certain. They are places of conflict where the powerful try to protect what they have from what they fear, but they are also places of courage, innovation, flexibility, adaptability—of newness and creative growth.

Leaders of pastoral care and counseling centers are roaming these boundary zones—struggling with those parts of themselves that would protect what has been while at the same time scanning the horizon for new opportunities to connect with those in need and others who care. Thus, new programming takes on an experimental nature. Projects are more likely to be research and development operations in which they are testing and shaping rather than implementing well-planned and -executed endeavors. As they engage in new clinical, communal models of care trials, they begin to see new structures take form. These structures will incorporate the best of what has been with the most relevant and meaningful aspects of what they have been embracing.

Pastoral counselors come face to face with individuals, families, and communities in the midst of change and transitions. The profession of pastoral counseling cannot expect anything less of itself than it does for the clients and community it serves—that is, to embrace the newness of what is possible and in the context of creative colleagues and leaders search for what can excite, energize, and mobilize the community for changing the world—or at least a corner of it.

Discussion

This chapter presents the current status of human resources in mental health. Each of the participating service-providing professions has presented, separately, demographic information about its clinically active mental health personnel and trainees. Previously, however, an overview of common patterns

has not been available. This section, for the first time, offers a comparison of the current (for 2000 or later) distribution and demographic structure (age, gender, and race/ethnicity data) of clinically active mental health personnel in the different provider groups.

An examination of table 22.3, the distribution of rates of the distribution of clinically active providers per 100,000 persons in the civilian population by region and State, reveals that the highest rates of psychiatrists, psychologists, social workers, school psychologists, and advanced practice psychiatric nurses are found in the New England and Middle Atlantic States. These rates are at least 1.5 times the average for the United States. Thus, the recent average rates for psychiatrists, psychologists and social workers, school psychologists, and advanced practice psychiatric nurses for the United States are 13.5, 29.3, 30.7, 13.1, and 3.0 respectively. The corresponding rates in the New England and Middle Atlantic States are 27.2 and 21.8 for psychiatrists, 51.4 and 39.4 for psychologists, 83.4 and 64.3 for social workers, 22.7 and 19.9 for school psychologists, and 12.7 and 3.7 for advanced practice psychiatric nurses, respectively.

The regional distribution rates for counseling providers and marriage and family therapists are different than those of the other provider groups. Compared to the average rate for the United States (34.7 per 100,000 persons in the civilian population for counseling providers and 17.3 for marriage and family therapists), higher than average rates for counseling providers are found in the West South Central States (50.5 per 100,000), followed by New England (48.6) and the Mountain States (45.0), and higher than average rates for marriage and family therapists are found in the Pacific States (60.2).

In part, the availability of the different clinically active provider groups by region reflects availability within specific States. Illustratively, excluding the District of Colombia (the central city of a metropolitan area and not a State), the highest State rates for psychiatrists, social workers, and advanced practice psychiatric nurses are found in Massachusetts (32.3, 95.7, and 14.0 respectively), whereas for psychologists and counselors, the highest rates are in Vermont (72.7 and 83.0, respectively) and for school psychologists, the highest rate is in Connecticut (39.6). Unlike the other clinically active provider groups, the State with the highest rate for marriage and family therapists is not a New England State but California (76.0).

It should be noted that the State data in table 22.3 do not clearly identify that the rates for many types of clinically active provider groups are very likely to be highest in the central cities of the metropolitan areas within States. The current data provide only one example of this situation—the rates for the District of Colombia, the central city for the Washington metropolitan area. Its rates for psychiatrists, psychologists, counselors, and social workers (57.6, 167.8, 227.5, and 207.8, respectively) are at least four times the U.S. averages. It is interesting to note that similar patterns do not occur for marriage and family therapists, school psychologists, or advanced practice psychiatric nurses.

The lowest rates for clinically active provider groups, at least 75 percent of the U.S. average, are found in East South Central States for psychiatrists (8.2 per 100,000 in the civilian population compared to the U.S. average of 13.5), psychologists (15.1 compared to 29.3), social workers (17.1 compared to 30.7), counselors (25.3 compared to 34.7), marriage and family therapists (7.4 compared to 17.3), and school psychologists (6.2 compared to 13.1) and the West South Central States for psychiatrists (8.3 compared to 13.1), psychologists (13.9 compared to 29.3), social workers (19.0 compared to 30.7), advanced practice psychiatric nurses (1.1 compared to 3.0), and school psychologists (9.2 compared to 13.1).

Within regions, specific States tend to have the very low rates. In the East South Central States, Mississippi has rates that are at least 50 percent of the U.S. rates for psychiatrists, psychologists, social workers, and school psychologists, and Alabama for social workers, marriage and family therapists, and school psychologists. Rates that are at least 50 percent of the U.S. average can be found in the West South Central State of Arkansas for psychiatrists and social workers; Oklahoma for psychologists, social workers, advanced practice psychiatric nurses, and school psychologists; and Louisiana for psychologists and advanced practice psychiatric nurses.

Occasionally the lowest rates can be found outside the South Central region. Thus California, a Pacific State, has the lowest rate for advanced practice psychiatric nurses (1.0); Illinois and Ohio, East North Central States, have the lowest rate for marriage and family therapists (3.3), and Minnesota, a West North Central State, has the lowest rate for counselors (2.8).

Table 22.2 provides information about the gender, race/ethnicity, and age distributions of the clinically active providers in the participating professional groups. An examination of this table reveals the following patterns:

- Gender. Clinically active psychiatrists and pastoral counselors are predominately male

(72 and 68 percent, respectively), whereas the remaining clinically active providers, with the exception of psychologists, are predominately female. Approximately 70 percent of clinically active counselors and marriage and family therapists, 82 percent of social workers, and 95 percent of advanced practice psychiatric nurses are female. Slightly over one half (51 percent) of the clinically active psychologists are female.

- Race/ethnicity by gender. Across all reporting clinically active provider groups, both male and female, White non-Hispanics are the dominant race/ethnic category. With the exception of psychiatry, White non-Hispanics constitute 80 percent or more of each provider group. This holds for both males and females. Because a sizable percentage of psychiatrists are identified as Asian or Pacific Islanders (8.8 percent of the males and 13.2 percent of the females), the percentage of White non-Hispanic clinically active psychiatrists is about 5 or 6 percentage points below the other reporting provider groups (75.6 for males and 73.8 for females).

- Age by gender: Males. There are clear differences in the age structure of the provider groups by gender. Males in the clinically active provider groups that are predominately male (psychiatry and pastoral counseling) are older than males in the clinically active provider groups that are predominately female (nursing, counseling, marriage and family therapy, and school psychology). Thus, for the two predominately male provider groups, at least 28 percent of the males are 65 or older and less than 7.1 percent are under 40. A similar aging pattern is observed for psychologists (a provider group that is approximately evenly split between males and females). Thus, 22.2 percent of the male clinically active psychologists are 65 or older and 8.1 percent are under 40.

  Males in the predominately female provider groups are younger than male psychiatrists, pastoral counselors, or psychologists. Among the predominately female provider groups, clinically active male advanced practice nurses, social workers, and school psychologists tend to be slightly younger than clinically active counselors and marriage and family therapists. Thus, the percentage of males 65 or over among the predominately female provider groups ranges from highs of 13.5 percent for counselors and 10.3 percent for marriage and family therapists to lows of 3.3 percent for social workers, 2 percent for advanced practice psychiatric nurses, and 1.2 percent for school psychologists. The percentages under 40 range from 33 percent for school psychologists to between 12 and 15 percent for counselors, social workers, and marriage and family therapists to about 8 percent for advanced practice psychiatric nurses.

- Age by gender: Females. Overall, females in the clinically active provider groups, both predominately male and predominately female, tend to be younger than their male counterparts. Illustrating this, the percentage of clinically active females 65 or over in a reporting provider group never exceeds 13 percent of the females in the clinically active labor force. Specifically, the percentage of clinically active females 65 or over ranges from between 10.5 and 13 percent for psychiatrists, counselors, marriage and family therapists, and psychologists to 7.4 percent for pastoral counselors to under 5 percent for advanced practice psychiatric nurses, social workers, and school psychologists.

  For young clinically active females (under 40), only school psychology appears to be recruiting significant numbers. The percentage of women under 40 is approximately 40 percent for school psychology, whereas the percentages for women in the remaining clinically active provider groups range from about 22 percent for counseling, social work, and psychology to about 13 percent for marriage and family therapy to under 6.1 percent for advanced practice psychiatric nursing and pastoral counseling.

This examination of the distribution and demographic structure of the participating clinically active mental health service groups provides insights into the current and future availability of different types of mental health service providers. Some regions, specifically the New England and the Middle Atlantic States, clearly have higher rates of clinically active providers (psychiatrists, psychologists, social workers, school psychologists, and advanced practice psychiatric nurses) than others, such as the South Central region. To some extent this discrepancy represents the above-average availability of psychiatrists, psychologists, social workers, and advanced

practice psychiatric nurses in the older, larger cities of the Northeast (i.e., the large metropolitan aggregations going from Boston metropolitan area in the north to the Baltimore-Washington metropolitan area or even the Richmond metropolitan area in the south) and the absence of these and other provider groups from the more rural and often poor areas of the East and West South Central States.

The below-average concentrations of counselors in the Middle Atlantic States (particularly New York) and marriage and family therapists in parts of New England (outside of Connecticut) and the above-average concentrations of counselors in the West South Central States, particularly Oklahoma, and marriage and family therapists in the Pacific States, particularly California, illustrates the operation of distributional forces, such as recruitment programs, other than the attraction of providers to the metropolitans of the East Coast. Since definitive information about the availability of clinically active providers in local communities and the forces contributing to their locations is not identifiable from State data, policy makers cannot ascertain from the present data the information they need to determine the amount and kinds of service they must provide to consumers in local areas.

Like the distribution of clinically the active provider groups, clear difference exist in the demographic structure of clinically active provider groups. While both males and female providers are predominately White non-Hispanic, two clinically active provider groups (psychiatrists and pastoral counselors) are predominately male and the remainder, except for psychologists, are predominately female. The clinically active psychologists are approximately evenly split between males and females.

An examination of the age structure the provider groups revels that with the exception of male and female school psychologists and perhaps female counselors and social workers, the provider groups are not attracting the numbers of younger persons, male or female, need for replacement or growth. Equally important, not only do the late life cycle stages tend to dominate most the provider groups (persons over 50 to 59 constituting the largest 10-year age category for female clinically active psychologists, advanced practice psychiatric nurses, counselors, marriage and family therapists, and pastoral counselors and male clinically active psychiatrists, psychologists, counselors, marriage and family therapists, school psychologists, and pastoral counselors), but both males and females in the predominately male provider groups (psychiatrists and pastoral counselors) are clearly aging (with concentrations of persons 65 and over). It should be noted that even though the current data are the best available, there are many questions about the demographic structure of provider groups that the data do not answer, such as the age characteristics by race/ethnicity and gender of the clinically active provider groups in different parts of the country.

The data presented here indicate that if clinically active provider groups that are racially and ethnically diverse by gender are to be readily available in all parts of the country, policy makers must review and evaluate the uneven distribution of providers among the regions and their component States, the underrepresentation African-American, Hispanic, and Native American providers in all clinically active provider groups, and the failure of most provider groups to recruit and retain sufficient young people to replace providers who are approaching or have reached retirement age.

In addition to the limited information about the distribution of clinically active providers and their demographic structure, the data currently available do not address many other critical human resources issues. The data do not permit effective examination of the increasing demand for cost-effective service or provide information on characteristics of the providers, clientele treated, actual services delivered, sources of referrals, and relationships with other health and social service professionals. This information deficit plagues all mental health professions. Given the severe consequences of psychiatric disability, it is essential that relevant policy makers work together to improve the quality of information available on human resources in mental health.

REFERENCES

American Association of Colleges of Nursing. (2003). *Faculty shortages in baccalaureate and graduate nursing programs: Scope of the problem and strategies for expanding the supply.* Washington, DC: Author.

American Association of Pastoral Counselors. (2001). Certified pastoral counselors: *Professional mental health providers. A white paper.* Fairfax, VA: Author.

American Medical Association, Department of Physician Practice and Communication Information, Division of Survey and Data Resources. (2004). *Physician characteristics and distribution in the United States.* Chicago: Author.

American Nurses Credentialing Center. (2003). Credentialing exam data for the psychiatric nurse specialty. Washington, DC: Author.

American Psychiatric Association. *Census of residents, 1990–1991 academic year.* Unpublished findings. Arlington, VA: Author.

American Psychiatric Association. *Census of residents, 1994–1995 academic year.* Unpublished findings. Arlington, VA: Author.

American Psychiatric Association. *Census of residents, 1998–1999 academic year.* Unpublished findings. Arlington, VA: Author.

American Psychiatric Association. *Census of residents, 2000–2001 academic year.* Unpublished findings. Arlington, VA: Author.

American Psychiatric Association. *Census of residents, 2002–2003 academic year.* Unpublished findings. Arlington, VA: Author.

American Medical Association Graduate Medical Education Database. (2001).

American Psychological Association. (2002). *Graduate study in psychology.* Washington, DC: Author.

American Psychological Association. (2003). *Graduate study in psychology* (rev. ed.). Washington, DC: Author.

American Psychological Association. (2005). *Graduate study in psychology* (rev. ed.). Washington, DC: Author.

Barker, R. L. (1999). *The social work dictionary* (4th ed.). Washington, DC: NASW Press.

Beebe, L. H. (2001). Community nursing support for clients with schizophrenia. *Archives of Psychiatric Nursing, 15,* 214–222.

Berlin, L. E., Stennett, J.,& Bednash, G. D. (2004). *2003–2004 enrollment and graduations in baccalaureate and raduate programs in nursing.* Washington, DC: American Association of Colleges of Nursing.

Bingham, F. G., Jr. (1987, January). Research can help schools meet enrollment goals. *Marketing News, 2,* 5.

Blumer, H. (1969). *Symbolic interaction: Perspective and method.* Englewood Cliffs, NJ: Prentice-Hall.

Bjorklund, P. (2003). The certified psychiatric nurse practitioner: Advanced practice psychiatric nursing reclaimed. *Archives of Psychiatric Nursing, 17,* 77–87.

Brabant, S. (1996). *Mending the torn fabric: For those who grieve and those who want to help them.* Amityville, NY: Baywood Publishing Co.

Bryant, B. E. (1983, August). Universities conduct marketing research to raise funds, recruit students, improve image. *Marketing News, 1,* 18.

Burrelli, J. (2004). *Science and engineering doctorate awards: 2003.* (NSF 05-300). Division of Science Resources Statistics. Arlington, VA: National Science Foundation.

Charvat, J. L. (2004). *School psychologists in the U.S. in 2004: A survey of State associations.* Unpublished paper. Bethesda, MD: National Association of School Psychologists.

Clark, E. J. (1990). Contemporary clinical sociology: Definitions and directions. *Clinical Sociology Review, 8,* 100–115.

Clawson, T., Henderson, D., Schweiger, W. & Collins, D. (2004). *Counselor preparation 2002–2004: Programs, faculty, trends.* London: Brunner-Routledge.

Coyle, Susan L. (1986). *Doctorate recipients from United States universities. Summary report: 1985.* Washington, DC: National Academy Press.

Curtis, M. J., Chesno Grier, J. E., & Hunley, S. A. (2004). The changing face of school psychology: Trends in data and projections for the future. *School Psychology Review, 33*(1), 49–66.

Curtis, M. J., Chesno Grier, J. E., Walker Abshier, D., Sutton, N. T., & Hunley, S. (2002, June). School psychology: Turning the corner into the twenty-first century. *Communiqué, 30*(8), 1, 5–6.

DeLeon, P., Vanden Bos, G., & Kraut, A. (1984). Federal legislation recognizing psychology. *American Psychologist, 39,* 933–946.

Dial, T. H., Tebutt, R., Pion, G. M., Kohout, J., VandenBos, G., Johnson, M., et al. (1990). Human resources in mental health. In R. W. Manderscheid & M. A. Sonnenschein (Eds.), *Mental health, United States, 1990* (pp. 196–205). Washington, DC: U.S. Government Printing Office.

Doherty, W. J., & Simmons, D. S. (1995). Clinical practice patterns of marriage and family therapists: A national survey of therapists and clients. *Journal of Marital and Family Therapy, 21,* 9–25.

Erikson, K. T. (1957). Patient role and social uncertainty—A dilemma of the mentally ill. *Psychiatry 20,* 263–74.

Fagan, T., & Sachs-Wise, P. (1994). *School psychology: Past, present and future.* White Plains, NY: Longman.

Farling, W. H., & Hoedt, K. C. (1971). *National, regional, and state survey of school psychologists.* Bethesda, MD: National Association of School Psychologists. (ERIC Document Reproduction Service No. ED 061 553).

Fleischer, M. (1998). *The professionalization of sociological practice.* Dissertation. Loyola University, Chicago.

Fleischer, M. (1999). *Types and characteristics of postsecondary programs in sociological practice: A summary prepared for the Commission on Applied and Clinical Sociology.* Unpublished manuscript.

Fleming, P. L., & Frances, R. G. (1980). Pleasing some of the people some of the time: Alumni perspectives. *Teaching Sociology, 7,* 453–461.

Franklin, B. (1979). Clinical sociology: The sociologist as practitioner. *Psychology, A Quarterly Journal of Human Behavior, 16,* 51–56.

Friedman, N. L. (1987). Expansively doing sociology: Thoughts on the limits and linkages of sociological practice. *Footnotes, 15*(9), 11.

Garfinkel, H. (1967). *Studies in ethnomethodology.* Englewood Cliffs, NJ: Prentice-Hall.

Gibson, R. L., & Mitchell, M. H. (1995). *Introduction to counseling and guidance.* Englewood Cliffs, NJ: Prentice-Hall.

Gilford, D. (1976). *Doctorate recipients from United States universities. Summary report: 1975.* Washington, DC. National Academy of Sciences.

Geiger, T. J. (1969). *Theodor Geiger on social order and mass society: Selected papers.* Edited and with an introduction by Renate Mayntz. Chicago: University of Chicago Press.

Goffman, E. (1961). *Asylums.* New York: Doubleday-Anchor.

Graham, L. K. (1995). From relational humanness to relational justice: Reconceiving pastoral care and counsel-

ing. In P. D. Couture & R. J. Hunter (Eds.), *Pastoral care and social conflict.* Nashville, TN: Abingdon Press.

Gunderson, G. (2004). *Boundary leaders: Leadership skills for people of faith.* Minneapolis, MN: Fortress Press.

Haber, J., Hamera, E., Hillyer, D., Limandri, B., Pagel, S., Staten, R., et al. (2004). Advanced practice psychiatric nurses: 2003 legislative update. *Journal of the American Psychiatric Nurses Association, 9,* 205–216

Hanrahan, N. P., & Gerolamo, A. (2004). Profiling the hospital-based psychiatric registered nurse workforce. *Journal of the American Psychiatric Nurses Association, 10*(6).

Hanrahan, N. P., & Sullivan-Marx, E. (2005). Practice patterns and potential solutions to the shortage of providers of older adult mental health services. *Policy, Politics, & Nursing Practice* (in review).

Hartley, D., Hart, V., Hanrahan, N. P., & Lioux, S. (2004). *Are advanced practice psychiatric nurses a solution to rural mental health workforce shortages?* (Working Paper #31). Muskie School of Public Health, University of Southern Maine.

Henderson, P. H. (1996). *Prepublication tables, summary report 1995.* Washington, DC: National Research Council, Office of Scientific and Engineering Personnel.

Henderson, M. J., Minden, S. L., & Manderscheid, R. W. (2001). Decision Support 2000+: A new information system for mental health. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States 2000* (pp. 15–21). (DHHS Pub. No. (SMA) 01-3537). Washington, DC: U.S. Government Printing Office.

Hinkle, J. S. (1994). The DSM-IV: Prognosis and implications for mental health counselors. *Journal of Mental Health Counseling, 16,* 174–183.

Hinkle, J. S. (1998). Promoting optimum mental health through counseling: An overview. In J. S. Hinkle (Ed.), *Clinical mental health counseling* (pp. 1–8). Greensboro, NC: ERIC.

Hollingshead, A. B., & Redlich, F. C. (1958). *Social class and mental illness: A community study.* New York: John Wiley.

Huber, B. J. (1984). *Overview of Ph.D. certification program.* Unpublished paper.

Huber, B. J. (1986). Ph.D. certification program to begin. *ASA Footnotes, 15,* 1, 8.

Husserl, E. (1960). *Cartesian meditations: An introduction to phenomenology.* The Hague, Netherlands: M. Nijhoff.

Husserl, E. (1999). *The essential Husserl: Basic writings in transcendental phenomenology.* Bloomington, IN: Indiana University Press.

James, V., & Gabe, J. (Eds.). (1996). *Health and the sociology of emotions.* Cambridge, MA: Blackwell Publishers

Kemper, T. D. (Ed.). (1990). *Research agendas in the sociology of emotions.* Albany, NY: State University of New York Press.

Kimble, G. A., & Wertheimer, M. (1998). *Portraits of pioneers in psychology* (Vol. 3). Mahwah, NJ: Erlbaum.

Kockelmans, J. J. (1994). *Edmund Husserl's phenomenology.* West Lafayette, IN: Purdue University Press.

Koppel, R., & Dotzler, R. (1999, March). What sociologists do and where they do it—The NSF survey on sociologists' work activities and workplaces. *Sociological Practice, 1*(1), 17–83.

Kuklick, H. (1980). Boundary maintenance in American sociology: Limitations to academic professionalization. *Journal of the History of the Behavioral Sciences, 16,* 201–219.

Lemert, E. M. (1951). *Social pathology.* New York: McGraw-Hill.

Lennon, T. (2001). *Statistics on social work education in the United States: 1999.* Alexandria, VA: Council on Social Work Education.

Lund, A. R., & Reschly, D. J. (1998). School psychology personnel needs: Correlates of current patterns and historical trends. *School Psychology Review, 27,* 816–830.

Mannheim, K. (1936). *Ideology and utopia: An introduction to the sociology of knowledge.* New York: Harcourt, Brace.

Manderscheid, R. W., & Sonnenschein, M. A. (Eds.). (1990). *Mental health, United States, 1990* (ADM 90-1708). Washington, DC: U.S. Government Printing Office.

Manderscheid, R. W., & Sonnenschein, M. A. (Eds.). (1992). *Mental health, United States, 1992* (DHHS Pub. (SMA) 92-1942). Washington, DC: U.S. Government Printing Office.

Manderscheid, R. W., & Sonnenschein, M.A. (Eds.). (1996). *Mental Health, United States, 1996* (DHHS Pub. (SMA) 96-3098). Washington, DC: U.S. Government Printing Office.

Manderscheid, R. W., & Henderson, M. J. (Eds.). (1998). *Mental health, United States, 1998* (DHHS Pub. (SMA) 99-3285). Washington, DC: U.S. Government Printing Office.

Manderscheid, R. W., & Henderson, M. J. (Eds.). (2001). *Mental health, United States, 2000* (DHHS Pub. (SMA) 01-3537). Washington, DC: U.S. Government Printing Office.

Manderscheid, R. W., & Henderson, M. J. (Eds.). (2004). *Mental health, United States 2002* (DHHS Pub. (SMA) 01-3938). Washington, DC: U.S. Government Printing Office.

Mead, G. H. (1934). *Mind, self, and society.* Chicago: University of Chicago Press.

Mead, G. H. (1938). *The philosophy of the act.* Chicago: University of Chicago Press

Merton, R. (1957). *Social theory and social structure.* Chicago: Free Press of Glencoe.

Miller-McLemore, B. (1993). The human web: Reflections on the state of pastoral theology. *Christian Century,* April 7, 366–369.

Miller-McLemore, B. (1996). The living human web: Pastoral theology at the turn of the century. In J. Stevenson-Moessner (Ed.), *Through the eyes of women: Insights for pastoral care* (pp.9–26). Minneapolis, MN: Fortress Press.

Mills, C. W. 1959. *The sociological imagination.* New York: Oxford University Press.

National Association of School Psychologists. (1997). [Membership database]. Unpublished raw data. Bethesda, MD.

National Association of School Psychologists. (1998). [Membership database]. Unpublished raw data. Bethesda, MD.

National Association of School Psychologists. (1999). [Membership database]. Unpublished raw data. Bethesda, MD.

National Association of School Psychologists. (2000). [Membership database]. Unpublished raw data. Bethesda, MD.

National Association of School Psychologists (2004). [Membership database]. Unpublished raw data. Bethesda, MD.

National Association of School Psychologists (2000). *Professional conduct manual for school psychologists* (4th ed.). Bethesda, MD: Author.

National Association of Social Workers. (2000a). Code of ethics of the National Association of Social Workers. Washington, DC: Author.

National Association of Social Workers. (2000b). *Practice Research Network Project: Preliminary report.* Washington, DC: Author.

National Association of Social Workers. (2000c). *Practice Research Network (PRN) survey.* Washington, DC: Author.

National Association of Social Workers. (2001, October). California explores increasing workforce. *NASW News,* 4.

National Association of Social Workers. (2005). *Practice Research Network III: Final report.* Washington, DC: Author.

National Board for Certified Counselors, Inc. (1998). *Counseling Licensor Board Survey* (Table 1). Greensboro, NC: Author.

National Board for Certified Counselors, Inc. (2000). *National study of the professional counselors.* Greensboro, NC: Author.

National League for Nursing, Division of Research. (1994). *1994 nursing data review.* New York: National League for Nursing Press.

National Panel for Psychiatric Mental Health NP Competencies. (2003). *Psychiatric-mental health nurse practitioner competencies.* Washington, DC: National Organization of Nurse Practitioner Faculties.

National Science Foundation. (2004). *Survey of graduate students and postdoctorates in science and engineering.* Washington, DC: Author.

Nichols, W. C. (1992). *The AAMFT: Fifty years of marital and family therapy.* Washington, DC: American Association for Marriage and Family Therapy.

Northey, W. F., Jr. (2002). Characteristics and clinical practices of marriage and family therapists: A national survey. *Journal of Marital and Family Therapy, 28,* 487–494.

Northey, W. F., Jr., (2004). The clients of marriage and family therapists. *Family Therapy Magazine, 3*(6), 14–17.

Northey, W. F., Jr., & Harrington, M. (2004). *2004 AAMFT member survey of clinical practice and approaches to substance abuse.* Alexandria, VA. The American Association for Marriage and Family Therapy.

O'Brien, K. M. (1999). *The legacy of Parsons: Vocational psychologists as agents of social change.* Paper presented at a symposium of the American Psychological Association, Boston.

Olfson, M. O., & Pincus, H. A. (1996). Outpatient mental health care in nonhospital settings: Distribution of patients across provider groups. *American Journal of Psychiatry, 153,* 1353–1356.

Oliver, J. & Rivers, E. B. (2005). *Graduate students and postdoctorates in science and engineering: Fall 2002* (NSF 05-310). Arlington, VA: National Science Foundation.

Olsen, M. (1991). What is sociological practice? *Sociological Practice Letter: Newsletter of the Sociological Practice Section of the American Sociological Association* (Fall), 6.

Olzak, S. (1981). Bringing sociology back in—Conveying the sociological imagination in a changing undergraduate climate. *Teaching Sociology, 8,* 213–225.

Onnie, J. (1992). ASA State Licensing Monitor Program: An opportunity to Serve. *Footnotes, 19*(10), 3.

Parsons, T. (1959). Some problems confronting sociology as a profession. *American Sociological Review, 24,* 547–559.

Patterson, L. E., & Welfel, E. R. (1994). The counseling process (4th ed.). Pacific Grove, CA: Brooks/Cole.

Patton, J. (1993). *Pastoral care in context: An introduction to pastoral care.* Louisville, KY: Westminster/John Know Press.

Pincus, H. A., Zarin, D. A., Tanielian, T. L., Johnson, J. L., West, J. C., Pettit, A. R., et al. (1999). Psychiatric patients and treatments in 1997: Findings from the American Psychiatric Practice Research Network. *Archives of General Psychiatry, 56,* 441–449.

Pinsof, W. & Wynne, L. (1995). The effectiveness of marital and family therapy [Special issue]. *Journal of Marital and Family Therapy, 21,* 339–623.

Pion, G. M. (1991). Psychologists wanted: Employment trends over the last decade. In R. R. Kilburg (Ed.), *How to manage your career in psychology* (pp. 229–246). Washington, DC: American Psychological Association.

Pion, G. M., Mednick, M. T., Astin, H. S., Ljima Hall, C., Kenkel, M. B., Keeta, G. P., et al. (1996). The shifting gender composition of psychology: Trends and implications for the discipline. *American Psychologist, 51,* 509–528.

Popple, P. R. (1995). Social work profession: History. In R. L. Edwards (Ed.-in-chief), *Encyclopedia of social work* (19th ed., Vol. 3, pp. 2282–2292). Washington, DC: NASW Press.

Quam, J. K. (1995a). Addams, Jane (1860–1935). In R. L. Edwards (Ed.-in-chief), *Encyclopedia of social work* (19th ed., Vol. 3, pp. 2571–2572). Washington, DC: NASW Press.

Quam, J. K. (1995b). Perkins, Frances (1882–1965). In R. L. Edwards (Ed.-in-chief), *Encyclopedia of social work* (19th ed., Vol. 3, pp. 2603–2604). Washington, DC: NASW Press.

Ramsey, N. J. (Ed.). (2004). *Pastoral care and counseling: Redefining the paradigms.* Nashville, TN: Abingdon Press.

Riemersma, M. (2004). The typical California MFT: 2004 CAMFT member practice and demographic survey. *The California Therapist, 16*(4), 24–28.

Rogers, C. R. (1942). *Counseling and psychotherapy.* Boston: Houghton-Mifflin.

Ruggiero, J. A., & Weston, L. C. (1986). Marketing the B.A. sociologist: Implications from research on graduates, employers, and sociology departments. *Teaching Sociology, 14,* 224–233.

Scheff, T. J. (1966). *Being mentally ill: A sociological theory.* Chicago: Aldine Publishing Company.

Scheler, M. (1962). *Man's place in nature* (Hans Meyerhoff, Trans.). New York: The Noonday Press.

Schutz, A. (1962). *Collected papers, Vol. 1.* The Hague, Netherlands: M. Nijhoff.

Smith, H. B., & Robinson, G. P. (1995). Mental health counseling: Past, present and future. *Journal of Counseling and Development, 74,* 158–162.

Smith, L. R., & Cavusgil, S. T. (1984). Marketing planning for colleges and universities. *Long Range Planning, 17*(6), 104–117.

Stapp, J., Tucker, A. M., & VandenBos, G. R. (1985). Census of psychological personnel: 1983. *American Psychologist, 40,* 1317–1351.

Stark, W. (1958). *The sociology of knowledge.* Chicago: Free Press of Glencoe.

Strang, C. W. (1986). Research gives schools the competitive edge. *Marketing News, 12,* 30.

Syverson, Peter D. (1980). *Doctorate recipients from United States universities. Summary report: 1979.* Washington, DC. National Academy of Sciences.

Szasz, T. S. (1974). *The myth of mental illness: Foundations of a theory of personal conduct* (Rev. ed.). New York: Harper and Row.

The Registered Nurse Population: National Sample Survey of Registered Nurses - March 2000. (2001). Washington, DC: U.S. Department of Health and Human Services, Bureau of Health Professions, Division of Nursing.

Thomas, A. (1998). *Directory of school psychology training programs.* Bethesda, MD: National Association of School Psychologists.

Thomas, A. (2000). *Report to the National Association of School Psychologists' delegate assembly on the State demographic survey.* Bethesda, MD: National Association of School Psychologists.

Thurgood, D. H., & Weinman, J. M. (1990). *Doctorate recipients from United States universities. Summary report: 1989.* Washington, DC. National Academy Press.

Tucker, S., Brust, S. & Richardson, B. (2002). The effectiveness of the depression coping self-efficacy scale. *Archives of Psychiatric Nursing, 16,* 125–133.

U.S. Department of Education. (1997a). Nineteenth annual report to Congress on the Individuals with Disabilities Education Act. Washington, DC: U.S. Government Printing Office.

U.S. Department of Education. (1997b). *Digest of educational statistics.* Washington, DC: U.S. Government Printing Office.

U.S. Department of Education (1998). *Twentieth annual report to Congress on the Individuals with Disabilities Education Act.* Washington, DC: U.S. Government Printing Office.

U.S. Department of Education (1999). *Twentieth-first annual report to Congress on the Individuals with Disabilities Education Act.* Washington, DC: U.S. Government Printing Office.

U.S. Department of Education (2002). *Twentieth-fourth annual report to Congress on the Individuals with Disabilities Education Act.* Washington, DC: Author.

U.S. Department of Health and Human Services. (1999). *Mental health: A report of the surgeon general.* Retrieved on September 2005 from www.surgeongeneral.gov/library/mentalhealth/pdfs/c3.pdf.

West, J. C., Office of Research, Kohout, J., Pion, G. M., Wicherski, M. M., Vandivort-Warren, R. E., et al. (2001). Mental health practitioners and trainees. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States* (DHHS Pub. (SMA) 01-3537). Washington, DC: U.S. Government Printing Office.

Wheeler, K., & Haber, J. (2004). Development of psychiatric-mental health nurse practitioner competencies: Opportunities for the 21st century. *Journal of the American Psychiatric Nurses Association, 10,* 129–138.

Weinstein, F., & Platt, G. M. (1973). *Psychoanalytic sociology: An essay on the interpretation of historical data and the phenomena of collective behavior.* Baltimore, MD: The Johns Hopkins University Press.

Wilk, J., Duffy, F. F., West, J. C., Narrow, W. E., Hales, D., Thompson, J., et al. (2004). Perspectives on the future of the mental health disciplines. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States, 2002* (DHHS Pub. (SMA) 01-3537). Washington, DC: U.S. Government Printing Office.

Witkin, M. J., Atay, J. E., Manderscheid, R. W., & DeLozier, J. (1998). Highlights of organized mental health services in 1994 and major national and state trends. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States, 1998* (pp. 143–175). (DHHS Pub. No. (SMA) 99-3285). Washington, DC: U.S. Government Printing Office.

Zarin, D. A., Pincus, H. A., Peterson, B. D., West, J. C., Suarez, A. P., Marcus, S. C., et al. (1998). Characterizing psychiatry with finding from the 1996 national survey of psychiatric practice. *American Journal of Psychiatry, 155*(3), 397–404.

Appendix

Sources and Qualifications of Data for Mental Health Practitioners and Trainees

Psychiatry

Scope of Data. Data are derived from the American Medical Association's (AMA) Masterfile, which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA Physicians' Practice Arrangements (PPA) questionnaire, a rotating census that is sent to approximately one-third of all physicians each year. Data presented in the Physician Characteristics and Distribution in the U.S. are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to reflect clinically trained and clinically active psychiatrists more accurately.

Limitations. Because the AMA Masterfile includes physicians who are self-designated or self-identified as psychiatrists, the data may include some physicians with no specialty psychiatric training.

Scope of Data. The 2002 American Psychiatric Association (APA) membership estimates were taken from the December 2002 APA membership database. At that time, the total APA membership was approximately 37,839, which included 26,258 clinically trained psychiatrists believed to be actively practicing in the United States. The remaining APA members were disqualified as they fell into one of the following membership categories: psychiatric residents, medical students, corresponding members and fellows; inactive members, associates, fellows; honorary and distinguished fellows; and members not practicing psychiatry in the United States.

Limitations. The APA membership data are limited in that not all of the Nation's psychiatrists are members of the APA. However, unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

Scope of Survey. The 1988–89 APA PAS gathered data on both APA members and nonmembers who had identified themselves in the AMA Masterfile as primarily specializing in psychiatry. APA members and nonmembers were combined and cross-checked against the APA membership file to remove duplicate records, resulting in a residual list of 10,091 self-designated psychiatrists and 34,164 APA members.

Response Rate. Of the 34,164 APA members included in the study, 23,126 (67.7 percent) responded to the survey. The sample of 10,091 self-designated psychiatrists yielded a response rate of 28.9 percent, or 2,922 completed surveys. Of the 2,922 completed surveys, 341 respondents were found not to be psychiatrists and 125 psychiatrists were already members of the APA. The remaining total of 25,582 yielded 19,498 "active" psychiatrists (excludes psychiatrists who are residents or fellows, retired, or not primarily active in psychiatry), of whom 17,930 were APA members and 1,568 were nonmembers.

Data Limitations. In order to assess potential sources of survey nonresponse bias, an analysis was conducted in which demographic characteristics of respondents were compared with nonrespondents. Although this analysis revealed no major differences between the groups, other factors may have affected response. Other possible limitations may include self-reporting error of psychiatrists with respect to the recollection and estimation of weekly and monthly activities (Dorwart et al., 1992).

Scope of Survey. The APA National Survey of Psychiatric Practice (NSPP) is a biennial survey of 2,323 randomly selected self-identified psychiatrists from the AMA Masterfile of physicians. The primary purpose of the survey is to gather information at the physician level to assess the current status of psychiatric practice and to track trends in psychiatry.

Response Rate. Of the 2,323 members included in the study, 1,203 (52 percent) completed the 2002 NSPP and were considered active in psychiatry (excludes psychiatrists who are either retired or temporary not in psychiatric practice).

Data Limitations. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias. To reduce the impact of this bias, the data from respondents were weighted against the survey sampling frame (all psychiatrists believed to be active in psychiatry) using AMA Masterfile information (e.g., age, gender, race/ethnicity).

Psychology

Sources and Qualifications of the Data. The American Psychological Association Directory Survey is the source of the data. The preliminary

question to be answered was, Who is to be counted as a mental health services provider in psychology? Not all psychologists are trained for health service provider roles, and not all of those with the necessary training are actively engaged in providing these services. In order to estimate the number of psychologists who are qualified to function as health service providers and the number who actually deliver relevant services, it was necessary to consider the type and amount of training and the acquisition of the appropriate credentials for delivering those services. This required the examination of several variables.

Licensure as a Psychologist. In all 50 States and the District of Columbia, licensure as a psychologist by a State board of psychological examiners is required for the independent practice of psychology. As is the case with most professions, these licensing statutes are designed in part to protect the public by ensuring that minimum training and competency requirements have been met by practitioners.

Doctoral Degree in Psychology. A significant amount of advanced and highly specialized training is required to independently provide the full spectrum of mental health services. In psychology, the doctoral degree meets this requirement, and this definition has been incorporated into State licensing laws and criteria used by third-party payers to recognize psychologists as eligible for reimbursement for their services.

Training in Mental Health Services. Only some of the basic subfields in psychology deal directly with the provision of health and mental health services: clinical, counseling, and school psychology. Although these three fields constitute those for which graduate training programs are accredited, a host of other postgraduate specializations exist in which psychologists can earn additional credentials (e.g., forensic psychology, clinical neuropsychology, behavior therapy, family psychology, and clinical hypnosis). Both field of degree and current major field were considered in this analysis.

Reported counts or estimates of mental health service providers in psychology do vary as a result of the differential application of these criteria by the individual counters. Examples include the counts of licensed psychologists by State boards, which often fail to account for the fact that some individuals may be licensed in more than one State—a situation characteristic of large metropolitan areas such as Boston and New York, or areas that are densely populated and near State borders, such as the Baltimore-DC-Richmond metropolitan statistical area. Dual licensure will be more common in such areas due to the proximity of State borders and the density of population. In addition, early versions of State licensing laws did not specify degree level as a major criterion, with the result that individuals with less than a doctoral degree may have been "grandfathered" in when new statutes were established.

Another problem with relying on counts of licensed psychologists provided by the States is that certain States encourage individuals in other non-health-service psychological subfields (e.g., industrial/organizational and experimental) who provide other kinds of services (organizational consulting, research and statistical services) to get their licenses. These people should not be counted among the clinically trained.

The majority of data on psychologists was derived from the 2003 APA Directory Survey. The survey is no longer conducted every 4 years, but is sent out to members on a rolling basis as pieces of information change in their files (e.g., mailing address), with interim updates in intervening years when some piece of data changes in a record (such as the mailing address), or as new members join. It is intended to be a census of all APA members. Its purpose is twofold: to provide updated individual listings for publication in the employment and professional activities directory and to describe and monitor changes in the characteristics of APA members.

The survey asks for updated information including current address, e-mail, phone, and fax information, date of birth, field and year of highest degree, major field and specialty areas, position title, employer, and licensure status. Most of this information appears in the Directory listing. Section II asks for more detailed information on (1) the nature of the individual's employment, such as primary and secondary employment settings, and a ranking of the three top work activities that the person performed for each setting; (2) the individual's involvement as a psychologist in specific activities during the past 3 years; and (3) additional demographic information such as race, ethnicity, and receipt of professional degrees in areas other than psychology.

Procedures for Identifying Health Service Providers in Psychology. As previously mentioned, individuals who are trained or employed in psychology work in a wide range of subfields and career roles. Thus, the criteria for inclusion as an active health service provider in psychology were as follows: (1) the individual was currently a U.S. resident; (2) the individual had earned a doctoral degree; (3) the individual reported being licensed by one or more States for the independent practice of psychology; (4) the individual reported being employed in psychology;

and (5) the individual was involved in the provision of health and mental health services.

Those who are clinically trained constitute a slightly larger group, including all of the above, as well as those who (1) were licensed and trained in a health service provider subfield, but who reported no current involvement in direct services, or (2) were not licensed but stated that they had received their doctorate in a practice-related subfield.

Given these criteria and the information available on members, attempts were made to derive estimates of the population of both clinically active and clinically trained personnel in psychology, rather than to simply report figures pertaining only to the APA membership. First, estimates were made of the numbers in the APA membership who were clinically trained, and what percentage of this group was clinically active. Practice Directorate files of State applications for Committee for the Advancement of Private Practice (CAPP) grants in 2004 included counts of the numbers of licensed psychologists residing in each State making application. These numbers ostensibly represent unduplicated counts of doctoral-level psychologists for those States. These numbers were available for 29 of the 51 States (including the District of Columbia). Twenty-nine of the CAPP grant State counts were used in the accompanying tables.

The raw numbers of licensed psychologists reported by each State licensing board could not be relied upon exclusively this year for the remaining 22 States because the figures had not been updated since 2002. However, a combination of the ASPPB data and the APA data was used to estimate the numbers of clinically trained psychologists in the United States. The count for each State was reduced by 13.8 percent, which is the representation of multiple licensures (licensed in more than one State) found among APA members. Thus, the estimate of clinically trained psychologists used in this chapter is based on a deliberate blend of several databases.

Using only APA counts of clinically trained psychologists would have yielded an unreasonably low count, one that was less than the number reported 2 years ago in an earlier version of this chapter. This did not make sense. Using only State licensing board raw counts of licensed psychologists would have resulted in what appeared to be an uncomfortably inflated count. This also did not make sense. There was little chance that psychology could have reached the State numbers based on the numbers currently graduating with doctoral degrees in appropriate fields in psychology.

These numbers represent estimates of the total numbers of clinically trained and clinically active psychologists overall, in each of the regions and in each of the States. The percentages reported in the tables are based on the responses to the APA membership survey.

The number of clinically active psychologists in 2004 was derived by using the percentage of clinically trained APA members who were clinically active in 2003. The clinically active in 2004 were estimated at just under 76 percent of the clinically trained, or 51,354.

Qualifications of the Data. As previously mentioned, the information reported in the tables in this chapter was based on analyses of the APA membership coupled with State-by-State data on the population of licensed psychologists, including those who did not belong to the APA. This strategy assumes that those who are licensed but do not belong to the APA are similar to licensed psychologists who do belong to the APA. Previous research on both APA members and nonmembers members indicated that the APA membership has been quite representative of doctoral-level providers in psychology with respect to demographic characteristics, education, and employment (Howard et al., 1986; Stapp, Tucker, & VandenBos, 1985). Comparisons of member data with data from the National Science Foundation also revealed similarities for doctoral-level psychologists. See the National Science Foundation's biennial series of reports on the doctoral science and engineering population, Characteristics of Doctoral Scientists and Engineers in the United States (http://www.nsf.gov/sbe/srs/nsf03310_). The growth in the number of APA members who report being active direct service providers parallels the national data on growth in degree production in the relevant fields as well as growth in employment settings focusing on service provision.

The number of clinically trained doctoral-level psychologists who are members of the APA was at least 63,265 in 2003. This was 75 percent of the estimated 84,833 clinically trained psychologists identified nationally for this chapter.

Because not all members responded to the APA membership survey, the extent to which the results are affected by nonresponse bias is unclear. Earlier comparisons of basic biographical information for nonrespondents with the data for respondents did not indicate marked differences with respect to highest degree, sex, and age. But conclusions could not be developed for information on employment. Thus, for example, we cannot be sure whether psychologists

in certain types of employment settings were less likely to respond.

Psychological personnel at the master's, specialist, and baccalaureate levels also work in the general medical and mental health specialty areas. These individuals were not included in our analysis for two reasons: First, the data are based on APA membership, and this membership is not representative of those with less than a doctoral degree. Second, because the current licensing laws in most States require a doctorate in order to sit for licensure as a psychologist, this group is an increasingly small minority of psychologists qualified for the independent practice of psychology.

For additional information on the data presented in this chapter and on the characteristics of psychologists, please contact the Research Office, American Psychological Association, 750 First Street, NE, Washington, DC 20002, call (202) 336-5980, visit the Web site at http://research.apa.org, or e-mail _research@.apa.org.

Social Work

Data Collection for the National Association of Social Workers (NASW) The data for this report were drawn from membership information and informed by the two NASW PRN surveys (2000b; 2005). Conducted in 2000 and 2004, the NASW PRN surveys captured demographic and practice data from two random samples of 2,000 regular members each. On the basis of the sampling techniques and the high rate of responses (81 percent and 70 percent, respectively), which minimized potential for selectivity and nonresponse bias, these results are highly representative of the membership. Table 22.1 is based on NSW membership data on the numbers of regular MSW and DSWs, excluding retirees, in 2004 (103,128). Table 22.2 reflects NASW membership on the number of regular MSW and DSWs, excluding retirees in the fall of 2004 (103,128), although the specific categories are based on percentages obtained from the 2000 PRN study. NASW membership data are collected from new applications and membership renewals. Tables 22.2 through 22.7 are based on the NASW membership count of regular MSW and DSW members (103,128), excluding retirees, in 2004 and informed by the NASW PRN survey, 2004. Table 22.8 reflects data from the Council on social Work Education on the numbers of BSW, MSW, and DSW enrollees as well as degrees awarded from CSWE-accredited social work degree programs for the academic year 1998–99. The response rate for these data was 87.1 percent (Lennon, 2001).

It is important to note that the numbers reported represent NASW members and that the universe of social workers is three to four times larger. Based on data from the Bureau of Labor Statistics, NASW membership comprises approximately 25 percent of the total number of trained social workers. Therefore, the numbers in the tables significantly understate the total numbers of trained social workers.

Psychiatric Nursing

The Registered Nurse Population: National Sample Survey of Registered Nurses - March 2000 (2001) uses a subset of the 2000 National Sample Survey of Registered Nurses (NSS) data set to describe the psychiatric registered nurse workforce. The NSS is a survey of registered nurses administered every 4 years by the United States Health Resources and Services Administration, Division of Nursing. The survey provides essential data about registered nurse (RN) demographic characteristics, educational background, area of specialization, and employment characteristics, including salary and job changes. A full description of the sampling and methodology can be found at the Health Resource and Human Services Web site, http://www.hrsa.gov/default.htm. Psychiatric registered nurses were included in a the subset if the respondent marked "psychiatric mental health" as the best description of the setting of their principal nursing position on March 22, 2000. Descriptive statistics were used to determine central tendency and dispersion as well as summarize characteristics of psychiatric registered nurses.

Data derived from the American Nurses Credentialing Center (ANCC, 2003) file are used in the tables of this chapter. The data contain information for all clinical nurse specialists and nurse practitioners certified in child, family, or adult psychiatric mental health nursing as of October 31, 2003. APRNs are required to have the ANCC certification to receive reimbursement from Medicare and some other public and private payors. APRNs do not require certification in many clinical and education settings. Thus, the number of APRNs far exceeds those who are certified by ANCC. While the ANCC-certified APRNs are a limited sample of the over 20,000 APRNs in practice, the data on ANCC-certified APRNs is the only data available on this workforce.

Counseling

Counselors may be defined in a number of ways. The purpose of this report is to estimate the number of available counselors who have the training necessary to provide independent or team treatment of populations in need of therapeutic mental health intervention and prevention and who are credentialed to provide such treatment. Sources used in calculations are National Board for Certified Counselors (NBCC) *National Study of the Professional Counselor* (2000); NBCC *1998 State Counseling Licensure Board Survey;* United States Bureau of Census data (1999); American Counseling Association 2000 membership data; data base queries of NBCC; and *Counselor Preparation, 1999–2001: Programs, Faculty, Trends* (2000).

Most figures reflect a conservative estimate based on national certification, association membership, State licensure, and United States Bureau of Census data. These data inform the continued systematic collection of statistics about the counseling workforce. The collection of these data has reinforced the need for the counseling profession to collect systematic and equivalent data with other mental health professions.

Marriage and Family Therapy

Data Collection. The data for marriage and family therapy were collected from several sources: the American Association for Marriage and Family Therapy (AAMFT) Practice Research Network, Marriage and Family Therapist Practice Patterns Survey, the AAMFT Membership Database, the Annual Report for Accredited Programs submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), the California Association of Marriage and Family Therapists (CAMFT) Member Practice and Demographic Survey, and data collected by AAMFT from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists.

The count of MFTs for each State and the United States was derived from data collected by the AAMFT in 2004 and from State marriage and family therapy regulatory boards on the number of licensed or certified MFTs. For those States that did not regulate MFTs in 2004, the numbers were obtained from the count of clinical members from the AAMFT Membership Database.

The count for the U.S. total (50,158) from table 22.3 was used for tables 22.1, 22.2, and 22.4 through 22.6, with the data on the details of these tables coming from the AAMFT Practice Research Network Surveys conducted in 2000, 2002, and 2004 and reported by Northey and Harrington (2001; 2004) and Northey (2002; 2004a) and the CAMFT Member Practice and Demographic Survey reported by Riemersma (2004).

The data for table 22.7 were obtained from the 2004 national survey of clinical members of the AAMFT who reported on their primary and secondary job functions.

The data for table 22.8 come from a variety of sources, including the interns registered in the State of California; the Annual Report for Accredited Programs submitted to COAMFTE; a count of associate members (postdegree supervision students in other accredited programs) and student members (predegree students in other accredited programs) from the AAMFT Membership Database; and a survey of MFT graduate programs in the State of California.

The AAMFT Practice Research Network PRN Surveys. The AAMFT PRN surveys were conducted in 2000, 2002, and 2004. The surveys, funded by the Center for Substance Abuse Treatment, consisted questions and focused on clinical practices, work settings, education, and demographics. The surveys were conducted using a variety of methods, including paper-and-pencil surveys, telephone interviews, and online surveys. A total of 898 clinical members of the AAMFT participated in the survey, with an overall response rate of 60 percent

The CAMFT Member Practice and Demographic Survey. The CAMFT Member Practice and Demographic Survey was conducted in the spring of 2004. The survey was designed to assess the current clinical practice of MFTs in California; it was sent to 3,524 CAMFT members and yielded a 26 percent response rate. In addition to questions about demographics, clinical practice, works settings, and education, questions about funding sources and income were included.

The AAMFT Member Survey. The AAMFT Member Survey was conducted in September 2004 and sent to 11,617 Clinical Members of the AAMFT, with a response rate of 19 percent. Respondents provided demographic data, basic information about their practice setting, and information about their satisfaction with AAMFT products and performance.

The AAMFT Membership Database. Data for the AAMFT Membership Database are collected from both applications for new membership and annual membership renewal forms. As the data are collected, they are entered into the membership database on a continuous basis.

Members of AAMFT are coded in the membership database according to their category of membership:

- Clinical Members—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution and have 2 years of postdegree supervised clinical experience in marriage and family therapy.

- Associate Members—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution but have not yet completed 2 years of postdegree supervised clinical experience in marriage and family therapy. Associate membership is limited to 5 years, since it is anticipated that associate members will advance to clinical membership.

- Student Members—persons currently enrolled in a qualifying graduate program in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) in a regionally accredited educational institution or a COMAFTE-accredited graduate program or postdegree institute. Student membership is limited to 5 years, since it is anticipated that student members will advance to associate, then clinical membership.

- Affiliate Members—members of allied professions and other persons interested in marriage and family therapy. Affiliate members come from related fields such as family medicine, family mediation, family policy, and research. Affiliate membership is a noncredentialing, nonevaluative, and nonvoting membership category.

COAMFTE Annual Report for Accredited Programs. Annually, the programs accredited by COAMFTE submit standard written reports concerning compliance with the accreditation standards, including, among other data, a list of all students currently enrolled in the marriage and family therapy program. Data reported include the student's name, year in program, gender, ethnicity, and academic background. Data on the number of students in each program were collated for table 22.8 from the most recent annual report of the accredited programs, which was either 2003 or 2004.

School Psychology

Sources of Data. The 2004 data on the profession of school psychology were obtained from four main sources: national surveys of State school psychology associations (Charvat, 2004; Thomas, 2000), past surveys of NASP members (Curtis, Chesno Grier, Walker Abshier, Sutton, & Hunley, 2002; Thomas, 2000), a comprehensive analysis of the demographic trends within the profession (Curtis, Chesno Grier, & Hunley, 2004), and the NASP membership database (NASP, 2004).

The number of school psychologists was determined by surveying the elected officers of the State school psychology associations in the fall of 2004 (Charvat, 2004) and comparing these results with the previous survey in 1999 (Thomas, 2000). The 2004 survey employed stratified random sampling to select a representative sample of 10 States. Five elected officers from each of these States' school psychology associations were asked to provide data for their State, including the number of clinically trained school psychologists and the number providing school psychology services. The data were obtained from the State departments of education and the State psychology licensing boards or, if official statistics were not available, extrapolated from other available data (e.g., State association membership data, school district data). All 10 States responded to the request, and these responses were analyzed to determine the overall rate of change in the number of school psychologists in the country between 1999 and 2004. Based upon the calculated rate of change, estimates of 2004 figures were made for each of the remaining States. Elected officers from associations in the remaining States and the District of Columbia were provided with the estimates for their States and asked to either confirm their accuracy or provide their official State data or their own estimates. State association officers from 33 States and the District of Columbia provided either official data or their own estimates; office rs from the remaining 17 States accepted the study estimates for their States. These results appear in the text and in tables 22.1 and 22.3.

The demographic characteristics of school psychologists presented in tables 22.2, 22.4, and 22.8 were extrapolated from the results of NASP membership surveys (Curtis et al., 2002; 2004; Thomas, 2000) and from queries of the NASP membership

database (NASP, 2004). Both the membership surveys (which NASP conducts every 5 years) and the database queries were focused on "regular" members. A regular member must be either currently credentialed and working as a school psychologist, credentialed and working as a supervisor or consultant in school psychology, or primarily engaged in the training of school psychologists at a college or university. Regular members comprise 15,133 of the total NASP membership of 22,021 in 2004. No new data were available for tables 22.5, 22.6, and 22.7.

Limitations. The text and tables of this chapter present the best available data on school psychologists. However, some limitations are worth noting. With regard to the number of school psychologists, some survey respondents reported that their State agencies were unable to provide certification and licensing data. In these cases, data were extrapolated from other valid information available to the survey respondents. It is unknown how closely these estimates match the official data, though it is likely that the elected officers of State school psychology associations are in the best position to make accurate estimates.

With regard to the demographic characteristics of school psychologists, it is important to note that they are based on NASP membership surveys. Since a significant percentage of school psychologists are not NASP members, it is possible that the demographic characteristics of school psychologists who are not members of NASP differ from those presented. However, there is no evidence to support this assumption. Currently, extrapolations based on data from NASP membership surveys and the membership database are the only available method of obtaining such information.

A special caution is needed for table 22.3, as the school psychology data in that table could easily be misinterpreted. Although school psychologists generally do not provide services to adults, this table presents rates for school psychologists per 100,000 civilian population, which includes adults as well as children and adolescents. It would be erroneous to consider the entire State population as the potential service population for school psychologists. School psychologists generally serve children and adolescents aged 5 through 18 and a subset of those aged 0 through 21 who have, or are at risk of having, special learning or mental health needs. According to the U.S. Census Bureau (2004), there are about 53.3 million children aged 5 to 17 in the United States, representing about 18.4 percent of the 289.6 million total population in 2003. Thus, table 22.3 should only be used with this caveat in mind.

REFERENCES

American Nurses Credentialing Center (ANCC). (2003). *Credentialing exam data for the psychiatric nurse specialty.* Washington, DC: Author.

Charvat, J. L. (2004). *School psychologists in the U.S. in 2004: A survey of state associations.* Unpublished paper. Bethesda, MD: National Association of School Psychologists.

Curtis, M. J., Chesno Grier, J. E., & Hunley, S. A. (2004). The changing face of school psychology: Trends in data and projections for the future. *School Psychology Review, 33*(1), 49–66.

Curtis, M. J., Chesno Grier, J. E., Walker Abshier, D., Sutton, N. T., & Hunley, S. (2002, June). School psychology: Turning the corner into the twenty-first century. *Communiqué, 30*(8).

Doherty, W. J., & Simmons, D. S. (1995). *Marriage and family therapists practice patterns survey.* Washington, DC: American Association for Marriage and Family Therapy.

Doherty, W. J., & Simmons, D. S. (1996). Clinical practice patterns of marriage and family therapists: A national survey of therapists and their clients. *Journal of Marital and Family Therapy, 22,* 9–25.

Dorwart, R. A., Chartock, L. R., Dial, T. H., Fenton, W., Knesper, D., Koran, L. M., et al. (1992). A national study of psychiatrists' professional activities. *American Journal of Psychiatry, 149*(11), 1499–1505.

Hollis, J. W., & Watz, R. A. (1993). *Counselor preparation 1993–1955: Vol. II. Status, trends, and implications.* 8th Ed. Muncie, IN: Accelerated Development Press.

Howard, A., Pion, G. M., Gottfredson, G. D., Flattau, P. E., Oskamp, S., Pfaffln, S. M., et al. (1986). The changing face of American psychology: A report from the Committee on Employment and Human Resources. *American Psychologist, 41,* 1311–1327.

Lennon, T. (2001). *Statistics on Social Work Education in the United States: 1999,* Alexandria, VA: Council on Social Work Education.

National Association of School Psychologists. (2004). [Membership database]. Unpublished raw data. Bethesda, MD: Author.

Stapp, J., Tucker, A. M., & VandenBos, G. R. (1985). Census of psychological personnel: 1983. *American Psychologist, 40,* 1317–1351.

The Registered Nurse Population: National Sample Survey of Registered Nurses—March 2000 (2001). Washington, DC: U.S. Department of Health and Human Services, Bureau of Health Professions, Division of Nursing.

Thomas, A. (2000, April). *Report to the National Association of School Psychologists' delegate assembly on the state demographic survey.* Bethesda, MD: National Association of School Psychologists.

U.S. Census Bureau, Population Division (2004). Table ST-EST2003-01civ. Annual estimates of the civilian population by selected age groups for the United States and States: July 1, 2003 and April 1, 2000. Washington, DC: Author.

Wilkinson, R. K. (1997). *Characteristics of doctoral scientists and engineers in the United States, 1995.* Washington, DC: National Science Foundation, Division of Science Resources Studies.

Appendix A

Sources and Qualifications of Data from the Survey of Mental Health Organizations

The organizational data in chapter 18 were derived from a series of biennial inventories of special mental health organizations and non-Federal general hospitals with psychiatric services in the United States conducted by the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, with the cooperation and assistance of the State mental health agencies, the National Association of State Mental Health Program Directors, the American Hospital Association, and the National Association of Psychiatric Healthcare Systems. The data were imputed for missing organizations as well as for missing items among organizations that reported.

Prior to 1981–82, three inventories were conducted:

> Inventory of General Hospital Mental Health Services, which was used for non-Federal and Veterans Administration (VA) general hospitals identified as having separate psychiatric services.
>
> Inventory of Mental Health Organizations, which was used for organizations that were not covered in the other two inventories, including psychiatric hospitals (State, county, and private), VA neuropsychiatric hospitals and psychiatric outpatient clinics, psychiatric partial care organizations, and multiservice mental health organizations not elsewhere classified.
>
> Inventory of Comprehensive Federally Funded Community Mental Health Centers (CMHCs), which was used to monitor CMHCs fund under the CMHC Act of 1963 and pertinent amendments. This inventory was discontinued in 1981 when the definitions of organizations changed. All organizations surveyed in the CMHC Inventory were then subsumed under the other two inventories.

The 1986 Inventory of Mental Health Organizations and General Hospital Mental Health Services (IMHO/GHMHS) marked the beginning of a major evolution of the National Institute of Mental Health Inventory. For the prior 18 years, the biennial Inventory of Mental Health Organizations and the Inventory of General Hospital Mental Health Services functioned as companion, 100-percent enumeration surveys designed to collect information on specialty mental health organizations in the United States. They were carried out under separate contracts with separate forms, and in certain years, at different times of the year.

The 1986 IMHO/GHMHS was designed to simplify data collection procedures, reduce response burden, and alleviate many of the issues that had occurred prior to 1986. First, a single contract was awarded to conduct the IMHO/GHMHS. Second, since similarities existed between the questions asked in the previously conducted separate inventories, it was feasible to develop a common core form with three versions—one for specialty mental health organizations, one for general hospitals with separate psychiatric services, and a brief screener form for general hospitals with separate psychiatric services. Third, since the survey was carried out with a common core form, comparable information was obtained from general hospitals at the same time as from other specialty mental health organizations. The data collection protocol instituted in 1986 was also applied in 1988, 1990, 1992, and 1994.

In 1998, the IMHO/GHMHS was replaced by the Survey of Mental Health Organizations and General Hospital Mental Health Services, and Managed Behavioral Health Care Organizations (SMHO). The SMHO introduced several innovations: (1) the use of a brief 100-percent enumeration inventory (postcard form) that was sent to all specialty mental health organizations and non-Federal general hospitals with separate mental health services for the purpose of collecting core data and serving as a sampling frame for a more extensive sample survey; (2) the use of the sample survey form that was sent to a sample of specialty mental health organizations and general hospitals with separate mental health services; and (3) the use of a 100-percent enumeration inventory of managed behavioral health care organizations that provided minimal information on these entities for the first time and to serve as a sampling frame for sample surveys of these organizations in subsequent years.

The 1998 and 2000 data collections include two phases. The "Postcard inventory" uses the abbreviated version of past inventory forms that includes the types of organizations, ownership, the number of additions and resident patients at the end of the year, the number of episodes, and number of beds staffed during the reporting year. The second phase uses a sample survey form closely resembling the forms employed in previous inventories, but including more items addressed to managed behavioral health care.

Types of Information Collected

The inventories are typically mailed in January of even-numbered years to obtain information on the previous year. Organizations have the option of reporting on either a calendar or fiscal year basis.

For all years, the inventories include questions on types of services provided (e.g., inpatient, outpatient, and partial care); number of inpatient beds; number of inpatient, outpatient, and partial care additions; and end of year inpatient census, expenditures, and staffing by discipline. Revenues by source were collected only in 1983, 1986, 1988, 1990, 1992, and 1994 and in the sample survey for 1998 data.

Staffing information is collected as of a sample week at the time the inventory is mailed, and types of services and beds are collected as of the beginning of the next year. Thus, in tables where numbers of organizations and beds are shown, data are shown at a point in time, usually January of a particular year. For all other tables, the year refers to either the calendar year or a fiscal year. For all years, information is adjusted to include estimates for organizations that did not report.

Types of Services

Twenty-four-hour care refers to services provided in a 24-hour care setting in a hospital or 24-hour care in a residential treatment or supportive setting.

Less than 24-hour care refers to services provided in less than 24-hour care settings and not overnight.

Types of Organizations

Types of organizations included in this report are defined as follows:

An *outpatient mental health clinic* provides only ambulatory mental health services. A psychiatrist generally assumes the medical responsibility for all patients/clients and/or for direction of the mental health program. Beginning in 1986, the definition was changed so that for an organization to be classified as an outpatient clinic, it must provide only outpatient services. In 1994 and 1998, no differentiation was made between outpatient and partial care services. Any organization that was classified in previous years as either a freestanding psychiatric outpatient clinic, a freestanding partial care organization, or in some cases as a multiservice mental health organization with neither 24-hour inpatient nor residential services is now classified as an organization with less than 24-hour care services.

A *psychiatric hospital* (public or private) primarily provides 24-hour inpatient care to persons with mental illnesses in a hospital setting. It may also provide 24-hour residential care and less than 24-hour care, but these are not requirements. Included in this category would be hospitals under State, county, private for-profit, and private nonprofit auspices.

A *general hospital with separate psychiatric service(s)* is a licensed hospital under government or nongovernment auspices that has established organizationally separate psychiatric services with assigned staff for 24-hour inpatient care, 24-hour residential care, and/or less than 24-hour care (outpatient care or partial hospitalization) to provide diagnosis, evaluation, and/or treatment to persons admitted with a known or suspected psychiatric diagnosis. If 24-hour inpatient care is the separate psychiatric service, beds are set up and staffed specifically for psychiatric patients in a separate ward or unit. These beds may be located in a separate building, wing, ward, or floor, or they may be a specific group of beds physically separated from regular or surgical beds.

VA medical centers are hospitals operated by the Department of Veterans Affairs (formerly the Veterans Administration) and include VA general hospital psychiatric services (including large neuropsychiatric units) and VA psychiatric outpatient clinics.

Federally funded community mental health centers were funded under the Federal Community

Mental Health Centers Act of 1963 and the amendments thereto. In the early 1980s, when the Federal Government reverted to funding mental health services through block grants to the States rather than funding them directly, the Federal Government ceased to track these organizations. They are now subsumed in this report primarily under "all other mental health organizations."

A *residential treatment center (RTC) for emotionally disturbed children* must meet all of the following criteria:

- It must provide 24-hour residential services.
- It is an organization, not licensed as a psychiatric hospital, the primary purpose of which is the provision of individually planned programs of mental health treatment services in conjunction with residential care for its patients/clients.
- It has a clinical program within the organization that is directed by a psychiatrist, psychologist, social worker, or psychiatric nurse who has a master's or a doctorate degree.
- It serves children and youth primarily under the age of 18.
- The primary reason for the admission of 50 percent or more of the children and youth is mental illness that can be classified by DSM-IV/ICD-9-CM codes other than codes for mental retardation, drug-related disorders, or alcoholism.

All other mental health organizations includes freestanding psychiatric outpatient clinics, freestanding partial care organizations, and multiservice mental health organizations (i.e., organizations that provide services in both 24-hour and less than 24-hour settings and are not classifiable to other organizations such as psychiatric hospitals, general hospitals, or RTCs). In contrast to previous years, in 1994 and 1998 no distinction was made between outpatient and partial care on the inventory and the survey, and a category of "less than 24 hours and not overnight" was used.

Qualifications of the Data

Several factors affect the comparability of data. As a result of the 1981 shift in the funding of the CMHCs program from categorical to block grants, organizations that previously had been classified as CMHCs were reclassified as multiservice mental health organizations, freestanding psychiatric outpatient clinics, or separate psychiatric units of non-Federal general hospitals, depending on the types of services they directly operated and controlled.

Prior to 1983–84, any organization (1) not classified either as a psychiatric hospital, general hospital with separate psychiatric services, or residential treatment center for emotionally disturbed children and (2) that offered either inpatient care or residential treatment care and outpatient or partial care was classified as a multiservice mental health organization. In 1983–84, this definition was broadened to include organizations that offered any two different services and were not classifiable as any of the organizations noted (1) above. The provision of inpatient or residential treatment care was no longer a prerequisite. As a result, many organizations classified in 1981–82 and earlier with psychiatric outpatient clinics were classified in 1983–84 as multiservice mental health organizations. For partial care services, the definition was broadened to include rehabilitation, habitation, and education programs that had previously been excluded. This resulted in a sharp increase in the number and volume of partial care programs.

Other revisions occurred in the definition for psychiatric outpatient clinics. In 1983–84, an organization could be classified as a freestanding psychiatric outpatient clinic if partial care was provided as well as outpatient services. In 1986 through 1992, an organization had to provide outpatient services only to be so classified. In 1994 and 1998, both partial care and outpatient treatment were combined with multiservice to form the "other mental health organizations" category.

In summary, the net effect of the revisions has been to phase out CMHCs as a category after 1981–82; to increase the number of multiservice mental health organizations from 1981 to 1986; to increase the number of psychiatric outpatient clinics in 1981–82, but decrease the number in 1983–84, 1986, 1990, and 1992; and to increase the number of partial care services in 1983–84. These changes should be noted when interyear comparisons for the affected organizations and service types are made.

The increase in the number of general hospitals with separate psychiatric services was partially due to a more concerted effort to identify these organizations. Forms had been sent only to those hospitals previously identified as having a separate psychiatric service. Beginning in 1980–81, a screener form was sent to general hospitals not previously identi-

fied as providing a separate psychiatric service to determine if they had such a service.

The large increase in the number of RTCs between 1983 and 1998 was attributed to the identification of previously unknown RTCs from lists obtained in 1986.

Since 1981–82 data were not available for VA medical centers and non-Federal general hospitals, 1980–81 data were used where possible. For VA medical centers, 1980–81 data were available only on bed and patient movement variables for inpatient services. The effect on the comparability of the data resulting from the substitution of data for the previous year is unknown, but it is believed to be small. However, headnotes and footnotes indicate tables that have excluded VA data for all years and tables where data substitutions have been made.

Appendix B

Sources and Qualifications of the Data: *1997 Client/Patient Sample Survey*

Survey Design

Scope of the Survey

The survey was conducted during 1997 and included all types of specialty mental health care organizations located in the 50 States, the District of Columbia, and the Territories. The types of organizations included in the survey were State and county mental hospitals, private psychiatric hospitals, multiservice mental health organizations, Department of Veterans Affairs medical centers, non-Federal general hospitals with separate psychiatric services, residential treatment centers for emotionally disturbed children, freestanding outpatient mental health clinics, and freestanding partial care organizations. The survey covered the inpatient, residential, and less than 24-hour care programs operated by these types of organizations during a 1-month period in 1997.

The target population included two groups: (1) all persons newly admitted, readmitted, or transferred into the program during a specified survey month who were not already residents/on the rolls of the program on the first day of the survey month, referred to as the *admission population,* and (2) all persons who were admitted to the program before the first day of the specified survey month and who received service from the program during the survey month, referred to as the *under care population*. An oversample of children and youth under age 18 was included in the sample design so that reliable national estimates could be generated for this specific population subgroup. Separate survey questionnaires were designed to collect data from four groups—adult admissions, adults under care, child admissions, and children under care, from within the inpatient, residential, and less than 24-hour care programs of the mental health organizations identified above.

The survey was conducted by the Survey and Analysis Branch (SAB), Division of State and Community Systems Development (DSCSD), Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), in cooperation with State mental health agencies.

Sampling Frame

The sampling frame for the survey was the *1994 Inventory of Mental Health Organizations and General Hospital Mental Health Services (IMHO/GHMHS)*. Unique combinations of the eight organization types and three program types, identified earlier, defined the 14 first-stage primary sampling strata (table B1). The term "organization/program," used henceforth, refers to these combinations. The measure of size used to stratify the programs was the number of persons under care at the beginning of 1994 plus the number of admissions during 1994.

Sample Design: First-Stage Selection—Mental Health Organizations and Programs

The sample was based on a two-stage cluster design for all primary strata, with the exception of primary strata 2, 9, and 10 (see Table B1). For these strata, the sample design was a single-stage design with all programs selected with certainty. Actual sampling was carried out in several steps. First, to ensure geographic representation of the sample, programs were arranged separately by region, by State within region, and by city within State. A systematic sample of programs was then selected for each cell with a random start in the first sampling interval. This sampling procedure was carried out separately for organizations that operated one or two program types and those that operated three program types (i.e., inpatient, residential, and less than 24-hour). This was done to reduce the burden on organizations so that no more than two programs were selected from any given sampled organization.

For all primary strata, except Department of Veterans Affairs medical centers (strata 9 and 10), which are exclusively for adults, most organizations/programs treated both adults and children. A

Table B1. Number of organizations/programs in the 1997 CPSS by primary stratum

Stratum	Type of Organization	Program	Over-sampling factor	Number of programs sampled	Number of programs out-of-scope	Number of programs in scope	Number of program respon-dents
1	St/Co mental hospital	IP	3	158	10	148	130
2	St/Co mental hospital	OP	1	75	19	56	44
3	Priv. psych. hospital	IP	3	193	26	167	91
4	Priv. psych. hospital	OP	3	176	28	148	66
5	Res. treatment center	RC	1	159	8	151	86
6	Res. treatment center	OP	3	180	15	165	93
7	Non-Fed. general hospital	IP	3	166	7	159	97
8	Non-Fed. general hospital	OP	3	252	19	233	139
9	VA medical center	IP	NA	130	12	118	77
10	VA medical center	OP	NA	149	11	138	85
11	Hospital/Multiservice	RC	3	165	18	147	108
12	Freestanding outpatient clinics/ partial care org.	OP	3	420	29	391	232
13	Multiservice mental health organization	IP	1	22	3	19	13
14	Multiservice mental health organization	OP	3	492	23	469	338
Total				2,737	228	2,509	1,599

IP = Inpatient; RC = Residential; OP = Less than 24-hour
NA = not applicable

small number of organizations/programs either treated adults only or treated children only.

The total number of programs sampled was 2,737, of which 228 were not within the scope of the survey, that is, "out-of-scope" (e.g., program closed). The overall survey response rate was 64 percent of the target sample. The final column in table B1 presents the number of organizations/programs that responded to the survey by primary stratum.

Sample Design: Second-Stage Selection—Clients/Patients

For client/patient selection, separate listing booklets were used to establish the sampling frame for each of the four groups (adult admission, adult under care, child admission, and child under care) within each type of program (inpatient, residential, and less than 24-hour). Using separate booklets for adults and children under age 18, sample programs were asked to list the case numbers for all persons newly admitted, readmitted, or transferred into the program during the survey month who were not already resident/on the rolls of the program on the first day of the survey month. Sample programs were also asked to list in separate booklets for adults and children under age 18 the case numbers for all persons who were admitted to the program before the first day of the survey month and who received service from the program during the survey month. Programs were asked to list case numbers only once in the booklets, and to include all geographic locations of the program. Programs had the option of generating computerized client/patient listings in place of manually completing the listing booklets. Once the listings were completed, programs were asked to call a toll-free telephone number to speak with a survey specialist. Using a specially designed computer program to generate random numbers for the survey and using information obtained directly from the program, the specialist selected "online" random numbers that corresponded to completed line numbers in the program's listing booklets (or computer-generated listings). The specialist informed the program as to which line numbers were selected. The case numbers found on these line numbers identified for the program which persons were to be sampled.

To reduce the burden on an organization/program, the total number of questionnaires that were to be completed on persons sampled from all four groups was limited to a predetermined number based on the size of the program. Smaller programs were requested to complete a maximum of 8 ques-

Table B2. Number of clients/patients in the 1997 CPSS by primary stratum

Stratum	Number of clients/patients										
	Total Sampled	Out-of-scope	AA sampled	AU sampled	CA sampled	CU sampled	AA respondents	AU respondents	CA respondents	CU respondents	Total respondents
1	2,129	5	870	887	185	187	872	887	185	150	2,094
2	723	17	265	298	80	80	261	303	80	70	714
3	1,410	9	337	316	352	405	338	316	354	329	1,337
4	928	4	232	227	221	248	232	229	221	196	878
5	1,017	13	12	31	361	613	10	31	363	571	975
6	1,306	36	156	152	431	567	156	152	431	480	1,219
7	1,456	0	633	573	78	172	633	574	79	71	1,357
8	1,933	2	630	612	315	376	634	609	320	302	1,865
9	1,261	16	602	545	0	114	602	546	0	0	1,148
10	1,354	13	659	590	0	105	662	588	0	0	1,250
11	1,329	20	380	692	81	176	384	692	81	126	1,283
12	3,255	33	811	859	762	823	815	860	760	719	3,154
13	198	0	88	89	13	8	88	90	13	7	198
14	5,116	37	1,323	1,433	1,150	1,210	1,324	1,437	1,152	1,003	4,916
Total	23,415	205	6,998	7,304	4,029	5,084	7,011	7,314	4,039	4,024	22,388

AA = Adult admission; AU = Adult under care; CA = Child admission; CU = Child under care

tionnaires; larger programs a maximum of 16 questionnaires.

Table B2 presents the number of persons sampled and the number of respondents in each of the four groups by primary stratum.

For strata 1, 3, 4, 6, 7, 8, 11, 12, and 14, children were oversampled at a rate of three to one compared to adults. For strata 2, 5, and 13, children were sampled at the same rate as adults. For strata 9 and 10, which refer to the Department of Veterans Affairs medical centers, children were not sampled (i.e., not applicable).

Data Collection and Instruments

Data collection was accomplished primarily by mail, with telephone followup to participating programs. Initial letters were mailed to the administrators of sample organizations in March 1997 to inform them of the survey, its purpose, anticipated levels of effort that would be required, and the program(s) in their organization that had been selected for the survey. A followup call was made to the administrators to discuss the survey further, answer questions, and request participation. Numerous attempts were made by certified mail and telephone callbacks to elicit survey participation. Prior to the survey month, a packet of survey materials was sent to the designated person for each program that had agreed to participate. The packets included all necessary survey forms (color-coded listing booklets and corresponding questionnaires) and instructional material (detailed instructions for completing the survey forms, procedures for selecting the sample of persons, information on obtaining survey assistance, and instructions on returning the completed survey forms in the postage-paid return envelopes provided in each packet).

The data collection forms used for the survey focused on the sociodemographic, clinical, and service use characteristics of persons. Inpatient and residential sample programs used the same color-coded listing booklets and questionnaires. These forms were similar in content to the forms used for less than 24-hour care programs with slight variations in vocabulary to conform to different program usage. Different colored forms were used to differentiate among the four groups: adult admissions, adults under care, child admissions, and children under care, and between inpatient/residential and less than 24-hour care programs.

Estimation

The sample for this survey was weighted to produce unbiased national estimates about the number and characteristics of persons served in the inpatient, residential, and less than 24-hour care pro-

grams of specialty mental health organizations in the United States. Sample counts were inflated to national estimates in accord with each stage of the sample design and nonresponse patterns. Hence, estimates reported for admissions are weighted to 1-year totals; those for the under care population to 1-day totals.

Limitations of the Design

Nonresponse

For this survey, nonresponse errors could exist in three ways: (1) failure to obtain participation from some of the programs selected into the sample; (2) failure to obtain data for some of the persons selected into the sample; and (3) failure to obtain complete data for some sampled persons.

To minimize bias that might exist due to nonresponse, the information reported by responding organizations was adjusted to compensate for program and person nonresponse. The first-stage adjustment factor was the ratio of the number of sampled programs (after removing the out-of-scope programs) to the number of programs that responded. This adjustment factor was calculated and applied separately to each stratum for each organization by program type combination. The second-stage adjustment factor was the ratio of the number of sampled persons admitted or persons under care to the number of corresponding person respondents, calculated and applied separately for each of the four groups in each program respondent.

Missing items on the survey questionnaires were imputed using a sequential hot deck procedure, as follows: Records were sorted on core sets of variables, such as organization and program type, client/patient type, gender, age, diagnosis, and region, to determine the imputation classes. The value of the variable from the previous completed record in this ordered file was substituted for the unknown value. After the sequential hot deck procedure was performed on a given variable, a determination was made on how many times a given donor was used in the process. If any donor was used five or more times during imputation of a particular variable, a within-class random hot deck procedure was performed instead of a sequential hot deck procedure to impute that variable. That is, records were sorted on core sets of variables to determine the imputation classes. Then an observed value of the variable was selected at random within that imputation class to substitute for the unknown value.

Reliability of Estimates

Background

Because estimates presented in this report are based on sample data, they are likely to differ from figures that would have been obtained from a complete enumeration of the universe of specialty mental health organizations using the same instruments. Results are subject to both sampling and nonsampling errors. Nonsampling errors include biases due to inaccurate reporting, processing, and measurement, as well as errors due to nonresponse and incomplete reporting. These types of errors cannot be measured readily. However, to the extent feasible, each error has been minimized through the procedures used for data collection, editing, quality control, and nonresponse adjustment.

The sampling error (standard error) of a statistic is inversely proportional to the square root of the number of observations in the sample. Thus, as the sample size increases, the standard error decreases. The standard error measures the variability that occurs by chance, because only a sample rather than the entire universe is surveyed. The chances are about two out of three that an estimate from the sample differs by less than one standard error from the value that would be obtained from a complete enumeration. The chances are about 95 out of 100 that the difference is less than twice the standard error, and about 99 out of 100 that it is less than three times as large.

In this chapter, statistical inference is based on the construction of five-percent confidence intervals for estimates (0.05 level of significance). All statements of comparison in the text relating to differences such as “higher than” and “less than” indicate that the differences are statistically significant at the 0.05 level or better. Terms such as “similar to” or “no difference” mean that a statistical difference does not exist between the estimates being compared. Lack of comment on the difference between any two estimates does not imply that a test was completed and there was a finding of no significance.

Calculation of standard errors

Standard errors were calculated on a personal computer for a broad range of totals and subtotals within age, gender, and race subclasses through the use of SUDAAN Survey Data Analysis Software developed at the Research Triangle Institute by B.V. Shah. This procedure computes estimated standard errors through the use of Taylor series approximation. As applied to data from the present survey, variance estimates for totals and subtotals were calculated for each stratum and then summed across strata to derive standard errors for characteristics of interest. The variance estimate for each stratum includes both the between-program and the within-program components of variance, with corrections for finite populations applied at both sampling stages.

Relative Standard Errors of Totals and Subtotal Estimates, Percentages, and Rates

The relative standard error of a total or subtotal estimate, percentage, or rate for a characteristic of interest is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.

Relative Standard Errors of Differences Between Two Statistics

The standard error of a difference is approximately the square root of the sum of the squares of each standard error considered separately. The relative standard error of a difference is the standard error of a difference divided by the difference.

Relative Standard Errors of Statistical Sums

The standard error of a sum of a number of independent estimates is the square root of the sum of the squares of the standard errors of the separate estimates. The relative standard error of the sum is the standard error divided by the sum.

Table B3 presents standard errors and percent relative standard errors for the estimated numbers, percentages, and rates per 100,000 U.S. civilian population of selected major characteristics for persons under care and admitted to inpatient, residential, and less than 24-hour care programs, for each type of organization surveyed. The statistics presented in table B3 can be used to show the relative sizes of the characteristics detailed in tables 1 through 19 of Chapter 15. The reader is cautioned that if a relative standard error (i.e., the standard error of an estimate, percentage, or rate divided by the estimate, percentage, or rate itself, expressed as a percent) is 50 percent or higher, the estimate, percentage, or rate is not considered reliable and should not be used.

Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997

	Under Care						Admissions					
	Number		Percent		Rate		Number		Percent		Rate	
	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE
Inpatient Programs												
Total Inpatient	7,855	6.8	0.0	0.0	3.0	6.8	66,005	3.2	0.0	0.0	24.8	3.2
Male	5,448	7.6	1.6	2.5	4.2	7.6	49,354	4.5	1.4	2.5	37.3	4.4
Female	3,238	7.3	1.6	4.1	2.3	7.2	37,021	3.9	1.4	3.0	27.0	3.9
Black/African Am.	2,134	8.0	1.6	6.9	12.2	7.1	33,734	8.9	1.4	7.7	185.8	7.7
White	6,626	8.5	2.0	3.0	6.9	8.5	57,751	4.0	1.7	2.4	58.2	3.9
Hispanic/Latino	1,196	12.3	1.0	12.4	6.7	9.9	21,039	11.7	1.0	11.8	108.9	8.7
Under 18	1,776	14.3	1.2	10.9	2.3	13.1	27,273	9.5	1.3	9.4	25.5	6.2
25–44	3,301	6.7	1.9	4.4	3.8	6.3	46,120	4.8	1.6	3.3	51.8	4.5
45–64	2,439	7.8	1.3	4.7	4.2	7.3	22,421	5.7	1.0	5.5	32.3	4.6
Affective disorders	2,357	8.0	1.2	4.7	NA	NA	36,773	4.6	1.7	4.3	NA	NA
Schizophrenia	4,444	8.4	1.8	4.0	NA	NA	30,392	7.5	1.2	6.1	NA	NA
Atten/cond/develop	675	22.8	0.5	20.0	NA	NA	9,005	19.8	0.4	19.9	NA	NA
State/county	3,505	6.5	3.2	7.0	1.3	6.5	14,812	7.8	0.7	7.7	5.6	7.8
Male	2,866	7.6	2.1	3.0	2.2	7.6	10,223	8.9	1.8	3.0	7.9	8.9
Female	1,420	8.8	2.1	7.0	1.0	8.2	6,237	8.3	1.8	4.7	4.4	8.0
Black/African Am.	1,619	11.5	2.5	9.6	9.2	10.2	6,079	13.1	2.4	9.8	35.8	12.2
White	2,486	7.5	2.7	4.4	2.6	7.4	10,924	8.6	2.5	3.7	11.3	8.6
Hispanic/Latino	1,001	18.2	1.6	15.8	5.6	14.7	2,362	16.2	1.2	15.9	12.8	12.7
Under 18	487	18.3	1.0	20.3	0.5	13.3	3,275	16.4	1.6	15.6	3.3	11.4
25–44	2,295	9.1	2.1	4.4	2.6	8.6	10,232	9.4	2.1	3.6	11.9	9.1
45–64	1,649	9.8	2.2	7.0	2.8	9.1	4,068	10.7	1.6	8.0	6.7	9.8
Affective disorders	725	10.5	1.2	9.2	NA	NA	4,874	10.9	1.9	7.9	NA	NA
Schizophrenia	2,985	8.7	2.4	3.8	NA	NA	4,813	8.8	2.1	7.2	NA	NA
Atten/cond/develop	154	18.4	0.3	20.2	NA	NA	1,341	21.5	0.7	20.9	NA	NA
Private	1,734	9.9	1.6	10.7	0.7	9.9	22,289	4.5	1.1	4.6	8.4	4.5
Male	822	9.6	4.8	9.7	0.6	9.4	15,962	6.1	2.2	4.2	11.9	5.9
Female	1,500	16.9	4.8	9.4	1.1	16.8	15,237	6.4	2.2	4.6	11.0	6.3
Black/African Am.	509	16.0	3.0	16.2	2.7	13.3	11,414	14.2	2.2	13.4	59.5	11.8
White	1,646	13.2	3.9	5.5	1.6	12.8	21,327	6.4	3.3	4.9	20.6	5.9
Hispanic/Latino	383	24.8	2.3	25.7	2.2	20.5	14,592	19.2	2.8	18.2	84.5	16.1
Under 18	922	15.5	3.7	10.8	1.3	14.7	12,843	8.6	2.7	9.1	15.8	7.3
25–44	861	14.5	4.6	13.4	0.9	12.8	18,330	9.4	2.7	7.0	18.7	8.0
45–64	564	18.3	2.2	12.4	0.9	16.2	10,629	14.2	2.0	13.5	13.2	9.7
Affective disorders	977	13.6	3.3	8.0	NA	NA	14,785	6.2	2.3	4.9	NA	NA
Schizophrenia	732	22.2	4.0	21.1	NA	NA	9,798	15.5	1.8	14.0	NA	NA
Atten/cond/develop	547	37.5	2.6	31.2	NA	NA	4,291	21.1	0.9	21.1	NA	NA
Non-Fed General Hosp	2,319	8.0	2.2	8.8	0.9	8.0	43,298	4.2	1.6	3.2	16.3	4.2
Male	1,484	10.9	2.6	5.6	1.1	10.8	35,166	6.8	2.3	4.6	26.2	6.6
Female	1,262	8.2	2.6	5.0	0.9	8.0	28,418	5.5	2.3	4.5	20.8	5.5
Black/African Am.	961	15.4	2.7	12.6	5.2	13.2	22,528	12.4	2.1	12.0	112.6	9.8
White	1,706	8.3	3.1	4.3	1.7	8.1	44,850	5.9	2.6	3.6	45.0	5.8
Hispanic/Latino	486	26.1	1.5	22.8	2.6	20.2	12,279	18.7	1.2	18.7	55.7	12.3
Under 18	604	26.0	2.0	25.1	0.5	16.0	19,872	22.9	1.9	23.0	16.6	13.3
25–44	1,618	12.0	3.4	7.2	1.8	11.2	35,808	6.9	2.5	4.9	40.0	6.4
45–64	728	11.9	2.1	9.9	1.2	10.5	17,035	8.5	1.6	8.1	24.5	6.8
Affective disorders	1,092	9.6	3.0	7.7	NA	NA	32,463	7.1	2.8	6.5	NA	NA
Schizophrenia	1,258	14.7	3.0	10.1	NA	NA	23,973	10.7	2.1	9.5	NA	NA
Atten/cond/develop	115	43.4	0.4	41.9	NA	NA	7,280	49.4	0.7	49.4	NA	NA

Continued

Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997 (continued)

	Under Care						Admissions					
	Number		Percent		Rate		Number		Percent		Rate	
	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE
Impatient Programs (continued)												
VA Med Centers	1,146	17.2	1.0	17.6	0.4	17.2	8,078	7.9	0.4	8.2	3.0	7.9
Male	1,073	17.0	1.2	1.2	0.8	17.0	7,750	8.2	1.5	1.6	6.0	8.2
Female	108	31.3	1.2	22.9	0.1	27.3	1,599	23.4	1.5	22.3	0.9	17.2
Black/African Am.	468	21.6	4.0	12.4	3.0	20.7	4,924	14.5	3.6	10.8	30.1	13.5
White	720	18.0	3.9	6.5	0.8	17.8	5,322	8.7	3.4	5.7	5.6	8.6
Hispanic/Latino	131	31.6	1.6	25.5	0.8	27.1	1,510	25.5	1.4	23.6	8.2	20.0
Under 18	—	—	—	—	—	—	—	—	—	—	—	—
25–44	532	25.1	4.3	13.6	0.6	24.7	4,003	10.2	2.9	7.6	4.8	10.0
45–64	571	17.1	4.8	9.6	1.0	17.1	5,785	11.0	3.1	6.0	10.4	10.9
Affective disorders	259	18.9	2.1	10.0	NA	NA	2,154	12.6	2.0	12.2	NA	NA
Schizophrenia	649	24.3	4.6	11.5	NA	NA	3,430	13.8	2.5	10.1	NA	NA
Atten/cond/develop	—	—	—	—	—	—	—	—	—	—	—	—
Residential Programs												
Total Residential	8,066	9.7	0.0	0.0	3.0	9.7	20,615	12.0	0.0	0.0	7.7	12.0
Male	4,888	9.2	2.4	3.7	3.7	9.2	16,105	14.8	3.6	5.6	12.3	14.7
Female	4,015	13.4	2.4	6.6	2.9	13.1	8,009	12.8	3.6	9.7	5.5	12.0
Black/African Am.	3,176	14.7	2.6	9.8	18.4	13.4	5,427	16.1	2.5	12.9	29.6	13.8
White	5,175	10.0	3.0	4.9	5.3	9.9	16,622	14.1	3.4	5.0	17.0	13.9
Hispanic/Latino	1,610	20.7	1.5	16.0	9.8	18.1	3,239	19.8	1.7	17.8	17.3	15.3
Under 18	2,967	9.0	4.3	10.9	3.9	8.2	10,456	15.9	6.0	15.6	13.3	14.0
25–44	4,416	17.5	3.2	10.5	5.2	17.1	12,279	20.0	4.5	12.6	14.3	19.3
45–64	2,698	15.9	2.1	10.1	4.6	15.0	4,927	19.7	2.2	14.9	7.8	17.1
Affective disorders	2,389	16.0	2.2	12.3	NA	NA	5,880	14.2	2.9	11.9	NA	NA
Schizophrenia	4,256	14.6	3.5	10.1	NA	NA	4,154	13.8	2.7	15.4	NA	NA
Atten/cond/develop	1,444	10.6	2.0	12.4	NA	NA	2,900	14.6	1.9	16.5	NA	NA
RTCs	2,662	9.6	3.7	11.2	1.0	9.6	6,030	13.9	3.9	15.5	2.3	13.9
Male	1,998	10.2	3.2	4.5	1.5	9.7	4,598	16.5	4.8	7.4	3.5	16.1
Female	1,233	15.4	3.2	11.0	0.8	13.5	2,798	18.0	4.8	13.2	1.8	15.8
Black/African Am.	1,343	15.7	3.3	10.5	7.8	14.3	2,790	22.5	4.4	15.5	16.4	20.9
White	1,674	11.0	3.5	6.4	1.7	10.6	3,862	16.3	5.0	9.2	3.9	15.7
Hispanic/Latino	575	19.7	1.9	18.3	3.3	16.2	1,378	25.6	3.0	24.1	8.3	22.3
Under 18	2,378	9.0	2.5	2.6	3.4	9.0	5,920	14.1	2.7	2.8	8.5	14.0
25–44	210	58.9	0.7	55.8	0.2	37.4	395	92.9	0.9	91.2	0.4	85.4
45–64	69	73.7	0.2	74.8	0.1	56.8	—	—	—	—	—	—
Affective disorders	801	16.9	2.4	13.8	NA	NA	1,714	23.3	3.7	22.0	NA	NA
Schizophrenia	909	55.3	3.0	50.6	NA	NA	267	47.4	0.6	49.2	NA	NA
Atten/cond/develop	1,222	11.3	3.1	7.9	NA	NA	2,235	15.0	4.5	13.1	NA	NA
All Other Residential	7,614	13.8	3.7	5.6	2.9	13.8	19,713	15.4	3.9	5.2	7.4	15.4
Male	4,461	13.4	3.0	5.0	3.4	13.4	15,435	19.1	4.5	7.1	11.8	18.9
Female	3,821	17.4	3.0	7.6	2.8	17.2	7,505	15.9	4.5	12.2	5.2	15.1
Black/African Am.	2,879	22.2	3.5	14.9	16.6	20.2	4,655	21.8	2.9	17.4	24.6	18.1
White	4,896	13.4	4.3	6.5	5.1	13.3	16,167	17.2	4.0	5.5	16.6	17.0
Hispanic/Latino	1,504	30.8	2.1	23.3	9.2	27.3	2,931	26.6	2.0	23.6	15.2	20.0
Under 18	1,774	26.7	3.4	28.6	1.9	20.4	8,619	36.0	6.5	34.7	10.3	29.9
25–44	4,411	17.7	3.6	8.0	5.2	17.3	12,272	20.2	5.3	11.1	14.3	19.5
45–64	2,698	16.0	2.6	8.6	4.6	15.1	4,927	19.7	2.8	14.5	7.8	17.1
Affective disorders	2,251	22.0	3.1	16.8	NA	NA	5,624	16.5	3.7	14.0	NA	NA
Schizophrenia	4,158	15.1	5.2	10.4	NA	NA	4,145	14.1	4.0	17.3	NA	NA
Atten/cond/develop	769	28.0	1.5	29.7	NA	NA	1,848	36.9	1.5	37.4	NA	NA

Continued

Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997 (continued)

	Under Care						Admissions					
	Number		Percent		Rate		Number		Percent		Rate	
	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE
						Less Than 24-Hour Programs						
Total Less Than 24-Hour	62,504	2.9	0.0	0.0	23.5	2.9	105,956	3.2	0.0	0.0	39.8	3.2
Male	38,653	3.5	0.9	1.8	29.5	3.5	60,490	3.7	1.0	2.1	46.1	3.6
Female	35,662	3.4	0.9	1.9	25.6	3.3	65,174	3.9	1.0	2.0	47.1	3.8
Black/African Am.	26,059	6.2	1.0	5.4	141.6	5.4	39,802	7.1	1.0	6.2	220.2	6.2
White	48,330	3.3	1.3	1.9	48.2	3.2	83,563	3.6	1.3	1.8	83.4	3.5
Hispanic/Latino	20,493	8.7	0.9	8.0	124.9	7.7	28,965	8.6	0.8	7.9	173.9	7.5
Under 18	23,533	4.6	1.0	4.0	30.4	4.1	44,602	4.6	1.1	3.8	57.4	4.1
25–44	32,861	4.0	1.0	2.6	36.5	3.7	58,352	4.3	1.0	2.4	66.6	4.1
45–64	26,103	4.6	0.9	3.4	42.7	4.2	33,300	6.2	0.8	5.1	53.6	5.5
Affective disorders	29,540	4.3	1.0	3.0	NA	NA	40,256	4.4	0.9	3.2	NA	NA
Schizophrenia	25,648	5.5	1.0	4.5	NA	NA	29,443	9.2	0.8	8.4	NA	NA
Atten/cond/develop	13,325	5.9	0.6	5.5	NA	NA	20,741	6.0	0.6	5.4	NA	NA
State/country	9,910	23.7	0.5	23.4	3.7	23.7	7,587	22.1	0.2	22.1	2.9	22.1
Male	5,737	27.5	3.4	6.8	4.4	27.4	5,102	26.9	5.5	10.0	3.9	26.9
Female	4,490	21.4	3.4	6.8	3.2	21.1	3,339	21.7	5.5	12.3	2.4	21.0
Black/African Am.	5,733	49.4	10.6	38.4	35.5	48.5	2,822	38.9	6.8	32.2	17.0	37.0
White	3,834	21.3	11.2	26.0	3.8	20.7	5,590	26.3	8.0	12.9	5.7	25.9
Hispanic/Latino	6,600	55.1	11.7	40.8	44.7	53.9	1,123	27.0	3.1	25.3	6.9	24.0
Under 18	1,779	38.2	4.0	36.4	2.2	32.5	1,570	25.9	4.9	27.8	1.7	19.9
25–44	4,111	25.6	4.7	12.1	4.8	24.7	2,764	20.7	4.1	10.5	3.1	19.0
45–64	4,257	27.7	4.0	10.8	7.3	26.2	3,135	35.5	4.8	18.7	5.4	33.9
Affective disorders	3,445	25.8	3.7	11.6	NA	NA	2,057	21.9	4.5	16.5	NA	NA
Schizophrenia	5,410	32.3	6.6	16.4	NA	NA	1,457	21.2	3.9	19.2	NA	NA
Atten/cond/develop	749	37.5	1.6	34.2	NA	NA	710	27.8	2.2	29.6	NA	NA
Private	10,896	20.1	0.5	19.8	4.1	20.1	26,789	12.8	0.8	12.4	10.1	12.8
Male	5,799	22.2	3.9	8.1	4.4	22.0	12,849	13.7	3.5	7.9	9.9	13.6
Female	5,879	20.9	3.9	7.5	4.3	20.9	17,753	15.4	3.5	6.4	12.7	15.1
Black/African Am.	2,326	31.1	2.8	20.0	13.6	29.1	8,037	33.8	3.6	32.0	46.2	30.7
White	8,333	20.4	5.4	7.2	8.6	20.3	25,220	14.6	3.9	4.7	25.6	14.4
Hispanic/Latino	2,720	49.3	4.4	43.5	17.8	46.8	2,783	29.1	1.4	30.6	14.7	22.2
Under 18	4,770	29.3	6.2	20.6	6.7	28.5	13,554	17.6	4.2	11.4	18.4	16.6
25–44	3,944	21.9	4.6	13.9	4.6	21.1	12,898	16.1	3.1	8.0	14.4	14.9
45–64	3,704	28.2	4.2	17.4	6.3	26.4	5,125	17.7	2.4	17.3	7.2	13.8
Affective disorders	4,811	24.8	3.8	10.5	NA	NA	13,170	15.7	3.9	9.7	NA	NA
Schizophrenia	2,094	31.8	3.4	28.2	NA	NA	2,461	32.6	1.2	33.8	NA	NA
Atten/cond/develop	1,300	25.9	2.1	22.6	NA	NA	5,680	28.1	2.3	23.8	NA	NA
Non-Fed General Hosp	27,159	9.0	1.2	8.2	10.2	9.0	45,037	7.5	1.2	6.8	16.9	7.5
Male	14,324	11.0	2.4	5.5	10.7	10.6	22,570	8.6	2.0	4.6	16.9	8.3
Female	16,308	9.6	2.4	4.2	11.9	9.5	28,606	8.6	2.0	3.6	20.7	8.5
Black/African Am.	9,261	19.6	2.6	16.5	50.1	17.3	15,387	17.9	2.3	15.8	81.5	15.1
White	19,930	10.2	4.1	6.3	20.2	10.0	33,843	8.2	3.2	4.6	34.2	8.0
Hispanic/Latino	11,680	21.2	3.3	18.2	73.1	19.2	17,621	20.1	2.5	17.3	109.4	18.0
Under 18	11,185	14.9	3.2	12.6	13.9	12.9	26,464	16.1	3.5	12.6	33.4	14.1
25–44	11,878	11.9	2.6	7.9	13.7	11.4	22,636	9.9	2.4	6.3	25.6	9.3
45–64	10,698	13.7	2.4	9.3	18.0	12.6	13,538	13.0	1.9	11.0	21.6	11.4
Affective disorders	13,991	11.5	3.0	7.4	NA	NA	22,070	9.7	2.4	6.3	NA	NA
Schizophrenia	7,935	18.1	2.1	14.3	NA	NA	8,108	13.8	1.2	12.6	NA	NA
Atten/cond/develop	6,124	19.7	1.9	18.2	NA	NA	11,095	18.9	1.6	15.9	NA	NA

Continued

Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997 (continued)

	Under Care						Admissions					
	Number		Percent		Rate		Number		Percent		Rate	
	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE
Less Than 24-Hour Programs (continued)												
VA Med Centers	18,638	12.5	0.8	11.9	7.0	12.5	14,789	10.9	0.4	10.9	5.6	10.9
Male	17,450	12.5	1.2	1.3	13.5	12.5	14,222	11.4	1.6	1.7	11.0	11.4
Female	2,217	22.1	1.2	18.1	1.3	17.8	2,167	19.3	1.6	18.8	1.2	14.2
Black/African Am.	6,549	18.7	2.7	11.5	38.2	16.6	4,129	17.7	2.4	14.2	22.8	14.9
White	12,806	12.9	3.0	4.6	13.5	12.9	10,969	11.0	2.8	3.8	11.5	11.0
Hispanic/Latino	2,343	22.3	1.5	20.9	13.0	17.9	2,072	22.8	1.5	21.9	10.6	17.0
Under 18	—	—	—	—	—	—	—	—	—	—	—	—
25–44	5,919	15.6	2.6	10.4	6.7	14.7	5,357	11.7	2.6	7.7	6.2	11.2
45–64	10,248	12.9	3.3	6.2	18.6	12.9	9,220	14.5	3.9	8.3	16.3	14.1
Affective disorders	8,381	18.6	4.2	14.0	NA	NA	4,940	13.6	2.2	8.1	NA	NA
Schizophrenia	5,100	18.7	2.6	14.5	NA	NA	2,682	17.7	1.6	14.3	NA	NA
Atten/cond/develop	—	—	—	—	—	—	—	—	—	—	—	—
Multiservice	34,210	3.9	1.4	3.3	12.9	3.9	71,337	5.2	1.6	3.9	26.8	5.2
Male	20,276	4.9	1.4	3.0	15.4	4.8	41,708	6.3	1.8	3.8	31.9	6.2
Female	22,012	4.7	1.4	2.7	15.8	4.6	45,687	6.5	1.8	3.6	33.1	6.5
Black/African Am.	16,991	9.4	1.7	8.5	91.4	8.1	27,902	11.0	1.8	9.4	156.4	9.9
White	28,466	4.7	1.8	2.6	28.3	4.5	53,165	5.7	2.0	2.9	52.8	5.4
Hispanic/Latino	9,082	12.0	1.0	11.5	51.1	9.8	17,849	14.4	1.2	13.0	107.1	12.5
Under 18	12,822	6.3	1.2	5.1	16.4	5.6	24,020	6.3	1.5	5.4	31.4	5.7
25–44	20,354	5.4	1.5	3.5	22.8	5.0	39,427	6.6	1.4	3.3	46.1	6.4
45–64	13,678	6.4	1.3	5.2	21.5	5.5	24,839	12.4	1.5	10.1	41.1	11.3
Affective disorders	16,254	5.8	1.4	4.3	NA	NA	23,898	7.1	1.3	5.2	NA	NA
Schizophrenia	16,912	7.4	1.6	6.2	NA	NA	25,922	16.2	1.7	14.5	NA	NA
Atten/cond/develop	8,113	8.6	0.8	7.6	NA	NA	13,219	8.8	0.9	8.2	NA	NA
RTCs	12,088	15.2	0.6	14.9	4.5	15.2	13,306	13.6	0.4	13.6	5.0	13.6
Male	6,141	15.4	2.8	5.6	4.7	15.3	7,310	15.1	2.6	5.4	5.6	14.9
Female	6,742	16.9	2.8	5.6	4.9	16.6	6,967	14.1	2.6	5.2	5.0	13.9
Black/African Am.	3,387	24.0	3.3	18.8	19.6	21.9	3,710	18.4	2.7	13.1	20.1	16.0
White	9,580	17.0	4.3	6.1	9.8	16.8	10,812	15.9	3.8	5.6	11.0	15.7
Hispanic/Latino	2,009	23.9	2.2	20.9	12.1	20.7	2,372	27.3	2.4	27.5	14.1	23.4
Under 18	5,241	14.0	5.2	11.0	7.5	13.9	5,466	11.2	5.4	10.8	7.6	10.8
25–44	5,373	23.7	4.2	14.7	5.2	19.1	6,466	24.8	3.9	14.8	6.5	20.6
45–64	3,424	25.3	2.6	15.4	4.7	19.3	2,994	26.5	2.3	20.4	4.1	19.8
Affective disorders	4,753	24.8	3.8	15.7	NA	NA	4,955	20.5	3.3	13.3	NA	NA
Schizophrenia	2,449	27.4	2.4	21.9	NA	NA	631	53.5	0.6	53.4	NA	NA
Atten/cond/develop	2,628	16.5	3.1	15.3	NA	NA	2,638	14.6	2.5	13.3	NA	NA
Freestanding OP/PC	35,894	5.6	1.4	4.6	13.5	5.6	54,206	6.1	1.4	5.2	20.4	6.1
Male	21,657	6.8	1.7	3.5	16.6	6.8	31,036	7.2	1.7	3.5	23.6	7.1
Female	20,401	6.3	1.7	3.4	14.6	6.2	31,023	6.7	1.7	3.3	22.2	6.6
Black/African Am.	14,560	11.9	2.0	10.3	76.8	9.9	21,578	14.4	2.2	12.9	118.4	12.6
White	28,079	6.6	2.6	3.9	27.3	6.2	45,896	7.4	2.7	3.9	45.4	7.1
Hispanic/Latino	11,857	17.3	1.7	16.2	70.9	14.9	13,820	14.9	1.5	14.3	78.9	12.3
Under 18	14,523	8.0	2.1	7.3	18.8	7.2	22,269	7.7	2.1	6.4	28.2	6.8
25–44	20,691	8.4	2.0	5.3	22.5	7.6	33,070	9.2	2.2	5.4	36.7	8.4
45–64	15,207	10.2	1.8	7.6	24.0	8.9	13,363	11.2	1.2	9.4	18.9	8.8
Affective disorders	16,877	9.0	1.8	6.3	NA	NA	18,323	9.7	1.7	7.8	NA	NA
Schizophrenia	15,593	11.4	2.0	9.4	NA	NA	10,650	15.2	1.1	13.6	NA	NA
Atten/cond/develop	8,067	10.6	1.2	10.0	NA	NA	9,623	9.9	1.0	9.6	NA	NA

Appendix C

Sources and Qualifications of Data for Mental Health Consumer Organizations

The purposes of this technical appendix are to (1) describe the survey procedures used in the CMHS Survey and (2) describe the construction of the universe of consumer organizations from (1) above, which forms the basis for the analyses in this chapter.

The CMHS Survey

This was CMHS's first national survey of the mental health self-help sector. Results from the survey are reported elsewhere (Goldstrom et al., in press). In line with the commitment to include consumers and families in each stage of the survey research process—conceptualization, implementation, analysis, and reporting—more than 30 self-identified consumers and family members were employed as consultants for the survey to collaborate in the development of the survey methodology, design and review survey instruments, conduct the pretest, develop the universe, train telephone interviewers, and carry out data analysis. Data were collected under contract to CMHS by TNS, Horsham, Pennsylvania, which subcontracted to the National Mental Health Consumers' Self-Help Clearinghouse, Philadelphia, Pennsylvania, and Jean Campbell, Ph.D., Missouri Institute of Mental Health, University of Missouri, St. Louis, Missouri.

It was first necessary to define the mental health self-help sector universe. The initial step in the development of the universe was to determine the scope of organizational entities to be included. Determinations had to be made about the following:

- Whether to include entities that had any involvement of professional mental health providers
- Whether to include entities addressing substance use disorders
- Whether to focus solely on entities serving primary consumers or to include entities serving family members
- Whether to include entities serving only adult mental health consumers or to include entities that addressed the needs of children and adolescents
- Whether to include entities addressing *any* mental health condition, problem, or life situation, or to narrow the focus to entities addressing a more limited range of mental health problems

The following criteria were established:

- Entities organized and led by psychiatrists, therapists, and religious and spiritual leaders were excluded unless these people participated as peers and not in their professional roles.
- Based upon the above criterion, entities associated with lodges and clubhouses were excluded.
- Entities that addressed only mental health or mental health and substance use (co-occurring) conditions, problems, or life situations were included. Those that addressed substance use without addressing mental health conditions were excluded.
- Entities run by and for mental health consumers and/or their families were included.
- Entities addressing the needs of both adult mental health consumers and families of children and adolescents with serious emotional disturbances were included.
- Entities addressing life crises such as bereavement, transitions, victimization, family problems (Riessman & Carroll, 1995), addictions, anger management, developmental disabilities, and Alzheimer's disease were excluded.

In the most general sense, it is helpful to think of the universe as the groups, organizations, and services most likely to have as participants the 5.4 percent of adults with serious mental illnesses (U.S. Department of Health and Human Services, 1999b), their families, and the families of the 9 to 13 percent

of children and youth with serious emotional disturbances (U.S. Department of Health and Human Services, 1998).

Meaningful classification of the entities within the universe was also fraught with difficulties; however, there is relative consistency in the literature about the existence of and definitions for a number of types—mutual support groups, self-help organizations, and consumer-operated services. For the purpose of the initial analysis, we selected these three types and operationally defined them in the broadest sense possible. Groups, organizations, and services were included in the universe if the people within them, and/or their family members, self-identified as having received mental health services and met the operational definitions below.

- ***Mental health mutual support group:*** A group of people who get together regularly on the basis of a common experience or goal to help or support one another. Membership in a group must be voluntary and free (provided at no charge to the consumer). Groups organized and led by psychiatrists and therapists do not qualify unless these people are there as group members and not in their professional roles. The primary purpose of the group is to attend mutual support group meetings.

- ***Mental health self-help organization:*** An organization run by and for consumers and/or family members, which undertakes activities to educate them or their community about mental health issues and/or engages in or undertakes political or legal advocacy and/or provides services to consumers or family members. Some mental health self-help organizations sponsor and/or support mutual support groups.

- ***Mental health consumer-operated service:*** A program, business, or service controlled and operated by people who have received mental health services. With limited exceptions, staff also consists of people who have received mental health services.

The CMHS Survey was carried out in three phases: universe frame development, telephone screening, and a telephone survey.

Frame Development. Because the number of groups, organizations, and services was unknown, but was known to be too large to conduct a national census, a limited set of geographical areas was chosen. These geographical areas were the same as those covered by the National Comorbidity Survey, consisting of 172 counties in 34 States selected by the Survey Research Center at the University of Michigan with probability proportional to size (Kessler, 1994). Each of these counties was scoured for all potentially relevant groups, organizations, and services using key informants, existing lists from self-help clearinghouses, local public and private mental health agencies, hospitals, social service agencies, United Ways, and mental health associations; new lists were developed through Internet searches, local newspapers, and libraries. Snowball sampling (asking each contact for referrals to other groups, organizations, and services) was conducted. Contact information was obtained for 6,496 groups, organizations, and services. The first of several attempts to remove duplicates, out-of-scope, and nonexistent entities was undertaken, leaving a total of 3,403 eligible for telephone screening.

Telephone Screening. Of the 3,403 groups, organizations, and services, 2,128 were screened by telephone. Among the 1, 275 that were not screened, approximately 13.2 percent (n = 168) were refusals. The majority of those remaining (77.8 percent) could not be contacted after up to 20 attempts for such reasons as no answers, answering machines, and busy signals. During screening, snowballing was again conducted. After screening, 376 were found to be duplicates. Based on a specific set of criteria, each of the remaining 1,752 was classified as either a mental health mutual support group, self-help organization, or consumer-operated service; however, 431 did not fit the eligibility criteria for the main interview and were removed from consideration. It was finally determined that 1,321 respondent entities were eligible for the main interview.

Main Telephone Interview. Each of the 1,321 in-scope respondent entities received a letter explaining the purpose of the survey prior to telephone contact. The letter also contained a toll-free telephone number for respondents to call at any time, including nights and weekends, to conduct the interview. Computer-assisted telephone interviews were conducted using slightly different versions for mental health mutual support groups, self-help organizations, and consumer-operated services. The structured interview instrument was constructed by adapting Maton's work (1993), which identified variables for self-help group level analyses. Data were collected on more than 120 variables, including but not limited to questions about the history of the group, organization, or service; its governance; funding sources; demographic characteristics of participants; and activities undertaken. Of the 1,321 identified as in-scope, 954 main interviews were completed and 367 either could not be recontacted

or declined to take part in the main interview. Of the 954 completed interviews, 27 were found to be duplicates, resulting in a final sample of 927, consisting of 390 mental health mutual support groups, 413 mental health self-help organizations, and 124 consumer-operated services.

Weighting. Following cleaning and review of the final data, a nonresponse weight was calculated by region (Northeast, South, Midwest, West) and type (mutual support group, self-help organization, consumer-operated service) to produce estimated totals for the 172 counties sampled. Sampled counties were then combined into geographic clusters (Primary Sampling Units) and weighted to represent the entire United States using stage one weights originally developed for the National Comorbidity Survey.

Consumer Organizations

Table C1 provides a description of how the consumer organization category was derived from the CMHS Survey database.

As stated above, the CMHS Survey universe is composed of mutual support groups; mental health self-help organizations, and consumer operated services. For the present analyses, the following were eliminated from the database: mutual support groups, because they exist solely for the purpose of having support meetings and are not organizations per se; and organizations run by and for families.

The CMHS Survey database contains responses from 124 consumer-operated services and 413 self-help organizations. Possible responses to the survey question about who decides how the money is spent were as follows: (1) agreement of all or majority of staff; (2) a committee of staff members; (3) a single staff member, such as an executive director or financial officer; (4) the group or organization you are part of or affiliated with; and (5) a governing board or board of directors.

Respondents were considered to be consumer organizations if decisions about spending money were the following: (3) above, *if this person identifies as a mental health consumer;* and/or (5) above, *if the board is made up of 51 percent or more of mental health consumers.* Respondents who reported that a single nonconsumer staff member made decisions, or a board that was not at least 51 percent consumers, were excluded.

There were 124 consumer-operated services initially identified in the CMHS Survey. Because they were initially identified as such, if we did not know the composition of the board, or whether the single participant was a consumer, we considered them in-scope for the purposes of this chapter. Further, if the consumer-operated service was run without a budget, it was considered in-scope. Only eight of the respondents reporting they were consumer-operated services did not meet the consumer organization criteria, leading us to believe that our original definition of consumer-operated services maps closely with the more stringent criteria adopted for the present definition. A total of 116 consumer-operated services (93.5 percent) were included in the consumer organization category.

There were 413 self-help organizations initially identified in the CMHS Survey. In the database, self-help organizations were classified by whether they were operated by consumers, operated by families, or operated by both consumers and families. For the present chapter, self-help organizations run by and for families (n = 84) were excluded, leaving 329 self-help organizations. As was the case with the consumer-operated services, respondents identified as *consumer* self-help organizations that did not know the composition of the board, or whether the single participant was a consumer, were considered in-scope. Further, if a *consumer* self-help organization operated without a budget, it was considered in-scope. A total of 53 (74.7 percent) of the 71 *consumer* self-help organizations met the criteria to be consumer organizations. Of the 258 *consumer and family* self-help organizations, 54 (20.9 percent) met the consumer organizations criteria. For the present analyses, then, 107 self-help organizations fit the criteria as consumer organizations.

The new category, consumer organizations, is made up of the 116 consumer-operated services and 107 self-help organizations from the CMHS Survey. Together, these 223 represent businesses, services, and self-help organizations in which decisions about money are controlled by mental health consumers.

Table C1. Universe of mental health consumer organizations

	Original Database	Consumer Organizations		Consumer Supporter Organizations	
	Sample n	Sample n	Weighted n	Sample n	Weighted n
Consumer-operated services	124	116	1,089	8	43
Self-help organizations	329	107	1,009	222	1,407
TOTAL	453	223	2,098	230	1,450

Appendix D

Sources and Qualifications of Data for Mental Health Practitioners and Trainees

American Medical Association 2002–03 Physician Characteristics and Distribution in the United States

Scope of Data. Data are derived from the American Medical Association's (AMA) Masterfile, which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA Physicians' Practice Arrangements (PPA) questionnaire, a rotating census that is sent to approximately one-third of all physicians each year. Data presented in the Physician Characteristics and Distribution in the United States are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to reflect clinically trained and clinically active psychiatrists more accurately.

Limitations. Because the AMA Masterfile includes physicians who are self-designated or self-identified as a psychiatrists, the data may include some physicians with no specialty psychiatric training.

2000 American Psychiatric Association Membership Data

Scope of Data. The 2000 American Psychiatric Association (APA) Membership estimates were taken from the December 2000 APA membership database. At that time, the total APA membership was approximately 37,839, which included 26,258 clinically trained psychiatrists believed to be actively practicing in the United States. The remaining APA members were disqualified as they fell into one of the following membership categories: psychiatric resident, medical student, corresponding members and fellows; inactive members, associates, fellows; honorary and distinguished fellows, and members not practicing psychiatry in the United States.

Limitations. The APA membership data are limited in that not all of the nation's psychiatrists are members of the APA. However, unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

1988-89 American Psychiatric Association, Professional Activities Survey (PAS)

Scope of Survey. The 1988–89 APA PAS gathered data on both APA members and nonmembers who had identified themselves in the AMA Masterfile as primarily specializing in psychiatry. APA members and nonmembers were combined and cross-checked against the APA membership file in order to remove duplicate records, resulting in a residual list of 10,091 self-designated psychiatrists and 34,164 APA members.

Response Rate. Of the 34,164 APA members included in the study, 23,126, or 67.7 percent, responded to the survey. The sample of 10,091 self-designated psychiatrists yielded a response rate of 28.9 percent, or 2,922 completed surveys. Of the 2,922 completed surveys, 341 respondents were found not to be psychiatrists, and 125 psychiatrists were already members of the APA. The remaining total of 25,582 yielded 19,498 "active" psychiatrists (excludes psychiatrists who are residents or fellows, retired, or not primarily active in psychiatry), of whom 17,930 were APA members and 1,568 were nonmembers.

Data Limitations. In order to assess potential sources of survey nonresponse bias, an analysis was conducted in which demographic characteristics of respondents were compared with those of nonrespondents. Although this analysis revealed no major differences between the groups, other factors may have affected response. Other possible limitations may include self-reporting error of psychiatrists with respect to the recollection and estimation of weekly and monthly activities (Dorwart et al. 1992).

The 1998 National Survey of Psychiatric Practice

Scope of Survey. The APA National Survey of Psychiatric Practice (NSPP) is a biennial survey of 1,500 randomly selected APA members. The primary purpose of the survey is to gather information at the physician level to assess the current status of psychiatric practice and to track trends in psychiatry.

Response Rate. Of the 1,500 members included in the study, 1,076 (71.9 percent) completed the 1998 NSPP. Of those who completed the survey, 976 are considered active in psychiatry (excludes psychiatrists who are either retired or temporary not in psychiatric practice).

Data Limitations. Because this survey does not include responses from nonmembers of the APA, caution should be exercised when comparing these data with the 1988–89 APA PAS estimates. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias. To reduce the impact of this bias, the data from respondents were weighted against the survey sampling frame (all APA members believed to be active in psychiatry) using APA membership information (e.g., age, gender, race/ethnicity).

Psychology

The American Psychological Association Member Survey

Sources and Qualifications of the Data. Who is to be counted as a mental health services provider in psychology? Not all psychologists are trained for health service provider roles, and not all of those with the necessary training are actively engaged in providing these services. In order to estimate the number of psychologists who are qualified to function as health service providers and the number who actually deliver relevant services, it was necessary to consider the type and amount of training and the acquisition of the appropriate credentials for delivering those services. This required the examination of several variables.

- Licensure as a psychologist—In all 50 States and the District of Columbia, licensure as a psychologist by a State board of psychological examiners is required for the independent practice of psychology. As is the case with most professions, these licensing statutes are designed in part to protect the public by ensuring that minimum training and competency requirements have been met by practitioners.

- Doctoral degree in psychology—A significant amount of advanced and highly specialized training is required in order to independently provide the full spectrum of mental health services. In psychology, the doctoral degree meets this requirement, and this definition has been incorporated into State licensing laws and criteria used by third-party payers to recognize psychologists as eligible for reimbursement for their services.

- ·Training in mental health services—Only some of the basic subfields in psychology deal directly with the provision of health and mental health services. These are clinical, counseling, and school psychology. Although these three fields constitute those for which graduate training programs are accredited, a host of other postgraduate specializations exist in which psychologists can earn additional credentials (e.g., forensic psychology, clinical neuropsychology, behavior therapy, family psychology, and clinical hypnosis). Both field of degree and current major field were considered in this analysis.

Reported counts or estimates of mental health service providers in psychology do vary as a result of the differential application of these criteria by the individual counters. Examples include the counts of licensed psychologists by State boards, which often fail to account for the fact that some individuals may be licensed in more than one State--a situation characteristic of large metropolitan areas such as Boston and New York, or areas that are densely populated and near state borders, such as the Baltimore-DC-Richmond metropolitan statistical area. Dual licensure will be more common in such areas due to the proximity of State borders and the density of population. In addition, early versions of State licensing laws did not specify degree level as a major criterion, with the result that individuals with less than a doctoral degree may have been "grandfathered" in when new statutes were established.

Another problem with relying on counts of licensed psychologists provided by the States is that certain States do encourage individuals in other non-health-service psychological subfields (e.g., in-

dustrial/organizational and experimental) who provide other kinds of services (organizational consulting, research and statistical services) to get their licenses. These people should not be counted among the clinically trained.

The APA Member Survey. The majority of data on psychologists was derived from the 2000 Member Survey, with updates for 2002 as available. The survey is no longer conducted every four years, but is sent out to members on a rolling basis as pieces of information change in their files (e.g., mailing address) with interim updates in intervening years when some piece of data changes in a record (such as the mailing address), or as new members join. It is intended to be a census of all APA members. Its purpose is twofold: to provide updated individual listings for publication in the employment and professional activities directory and to describe and monitor changes in the characteristics of APA members.

The questionnaire asks for updated information including current address, e-mail, phone, and fax information, date of birth, field and year of highest degree, major field and specialty areas, position title, employer, and licensure status. Most of this information appears in the Directory listing. The majority of this information is published in the Directory listing. Section II asks for more detailed information on (1) the nature of the individual's employment, such as his or her primary and secondary employment settings, and a ranking of the three top work activities that the person performed for each setting; (2) the individual's involvement as a psychologist in specific activities during the past 3 years; and (3) additional demographic information such as race, ethnicity, and receipt of professional degrees in areas other than psychology.

Procedures for Identifying Health Service Providers in Psychology. As previously mentioned, individuals who are trained or employed in psychology work in a wide range of subfields and career roles. Thus, the criteria for inclusion as an active health service provider in psychology were as follows: (1) the individual was currently a U.S. resident; (2) the individual had earned a doctoral degree; (3) the individual indicated that he or she was licensed by one or more States for the independent practice of psychology; (4) the individual reported being employed in psychology; and (5) the individual was involved in the provision of health and mental health services.

Those who are clinically trained constitute a slightly larger group, including all of the above, as well as those who (1) were licensed and trained in a health service provider subfield, but who reported no current involvement in direct services, or (2) were not licensed but stated that they had received their doctorate in a practice-related subfield.

Given these criteria and the information available on members, attempts were made to derive estimates of the population of both clinically active and clinically trained personnel in psychology, rather than to simply report figures pertaining only to the APA membership. First, estimates were made of the numbers in the APA membership who were clinically trained, and what percentage of this group was clinically active. Practice Directorate files of State applications for Committee for the Advancement of Private Practice (CAPP) grants included counts of the numbers of licensed psychologists residing in each State making application. These numbers ostensibly represent unduplicated counts of doctoral-level psychologists for those States. These numbers were available for 38 of the 51 States (including the District of Columbia). Seventeen of the CAPP grant State counts were used in the accompanying tables.

The raw numbers of licensed psychologists reported by each State licensing board were used for the remaining 34 States. Each count was reduced by 13.8 percent, which is the representation of multiple licensures (licensed in more than one State) found among APA members. Thus, the estimate of clinically trained psychologists used in this chapter is based on a deliberate blend of several databases.

Using only APA counts of clinically trained psychologists would have yielded an unreasonably low count, one that was less than the number of clinically trained reported two years ago in an earlier version of this chapter. This did not make sense. Using only State licensing board raw counts of licensed psychologists would have resulted in what appeared to be an uncomfortably inflated count. This also did not make sense. There was little chance that psychology could have reached the State numbers based on the numbers currently graduating from the pipeline with doctoral degrees in appropriate fields in psychology.

These numbers represent estimates of the total numbers of clinically trained and clinically active psychologists overall, in each of the regions, and in each of the States. The percentages reported in the tables are based on the responses to the APA membership survey.

The number of clinically active psychologists in 1997 was derived by using the percentage of clinically trained APA members who were clinically active in 1995. This was done because the data and responses were noticeably more complete in 1995

than in 2002. The clinically active in 1997 were estimated at just under 76 percent of the clinically trained, or 55,493. In 2002, the clinically trained numbers were reduced by 25 percent to yield the clinically active estimates.

Qualifications of the Data As previously mentioned, the information reported in the tables in chapter 21 was based on analyses of the APA membership coupled with State-by-State data on the population of licensed psychologists, including those who did not belong to the APA. This strategy assumes that those who are licensed, but do not belong to the APA, are similar to licensed psychologists who do belong to the APA. Previous research on both APA and non-APA members indicated that the APA membership has been quite representative of doctoral-level providers in psychology with respect to demographic characteristics, education, and employment (Howard et al. 1986; Stapp, Tucker, and VandenBos 1985). Comparisons of member data with data from the National Science Foundation also revealed similarities for doctoral-level psychologists. See the National Science Foundation's biennial series of reports on the doctoral science and engineering population, Characteristics of Doctoral Scientists and Engineers in the United States (www.norc.uchicago.edu for the most recent years), for these national data. The growth in the membership of APA who report being active direct service providers parallels the national data on growth in degree production in the relevant fields as well as growth in employment settings focusing on service provision.

The number of clinically trained doctoral-level psychologists who are members of the APA was at least 61,304 in 2002. This was 69 percent of the estimated 88,491 clinically trained psychologists identified nationally for this chapter.

Because not all members responded to the APA membership survey, the extent to which the results are affected by nonresponse bias is unclear. Earlier comparisons of basic biographical information for nonrespondents with the data for respondents did not indicate marked differences with respect to highest degree, sex, and age. But conclusions could not be developed for information on employment. Thus, for example, we cannot be sure whether psychologists in certain types of employment settings were less likely to respond.

Psychological personnel at the master's, specialist, and baccalaureate levels also work in the general medical and mental health specialty areas. These individuals were not included in our analysis, first because the data are based on APA membership, and this membership is not representative of those with less than a doctoral degree. Second, because the current licensing laws in most States require a doctorate in order to sit for licensure as a psychologist, this group is an increasingly small minority of psychologists qualified for the independent practice of psychology.

For additional information on the data presented in chapter 21 and on the characteristics of psychologists, please contact the Research Office, American Psychological Association, 750 First Street, NE, Washington, DC 20002, or call (202) 336-5980, visit the Web site at http://research.apa.org, or e-mail at research@apa.org.

Social Work

Data Collection for the National Association of Social Workers (NASW)

The data for this report were drawn from membership information and informed by the NASW PRN survey, 2000. Conducted in the spring of 2000, the NASW PRN survey captured demographic and practice data from a random sample of 2,000 regular members. Based on the sampling techniques and the high rate of response (81 percent), which minimized potential for selectivity and nonresponse bias, these results are highly representative of the membership. Table 1 is based on NASW membership data on the numbers of regular MSW and DSWs, excluding retirees, in 2000 (97,290). Table 2 reflects NASW membership data on the number of regular MSW and DSWs, excluding retirees, in the spring of 2002 (99,341). NASW membership data are collected from new applications and membership renewals. Tables 2 through 7 are based on the NASW membership count of regular MSW and DSW members (97,290), excluding retirees, in 2000 and informed by the NASW PRN survey, 2000. Table 8 reflects data from the Council on Social Work Education on the numbers of BSW, MSW, and DSW enrollees as well as degrees awarded from CSWE-accredited social work degree programs for the academic year 1998–99. The response rate for these data was 87.1 percent (Lennon 2001).

It is important to note that the numbers reported represent NASW members and that the universe of social workers is two to three times larger. Based on Census Bureau data, NASW has between 30 to 50 percent of the total number of trained social

workers as its members. Therefore, the numbers in the tables significantly understate the total numbers of trained social workers.

Psychiatric Nursing

This study uses a subset of the 1996 Division of Nursing's (DON) National Sample Survey of Registered Nurses data set. The methodology of this study has been extensively documented (DON 1997). Briefly, a complex stratified sampling design is used to randomly sample the population of registered nurses licensed in the United States. States are sampled at different rates to allow for State-level estimates. The disproportional stratified sampling methodology requires accounting for the design effect in analyses.

This subsample was based on the 29,766 respondents living and working in the United States. Requirements for sample selection included formal education as a clinical nurse specialist or nurse practitioner in psychiatric mental health nursing, with highest education in nursing being at either the master's or doctoral level; 194 nurses met these criteria. Further review showed that the DON had not classified three as advanced practice nurses. As master's education did not focus on a clinical practice area, these nurses were deleted, resulting in a sample size of 191. This is the sample used to determine general estimates on clinically trained psychiatric nurses. Of these, 173 were employed. This group was used to generate estimates on the employed subset of clinically trained psychiatric nurses. All estimates are reported for clinically trained nurses. Due to the small sample size, it would be difficult to get reliable estimates on the subgroup of clinically active nurses. It is estimated that there are 17,318 trained and 15,330 employed psychiatric nurses.

Analyses were weighted to the population using a standard statistical program for generating means and frequencies. Standard error estimation was conducted using the SUDANN software package to account for the study's design effect for selected variables.

Limitations of the study relate mainly to the small sample size. In addition, the number of settings variable reflects the number of nursing positions nurses hold. There is no information on settings of non-nursing positions. Nor is there any information on positions that include work in more than one setting.

Counseling

Counselors may be defined in a number of ways. The purpose of this report is to estimate the number of available counselors who have the training necessary to provide independent or team treatment of populations in need of therapeutic mental health intervention and prevention and who are credentialed to provide such treatment. Sources used in calculations are National Board for Certified Counselors (NBCC) *National Study of the Professional Counselor* (2000); NBCC *1998 State Counseling Licensure Board Survey;* United States Bureau of Census data (1999); American Counseling Association 2000 membership data; data base queries of NBCC; and *Counselor Preparation, 1999–2001: .Programs, Faculty, Trends* 10th ed. (2000).

Most figures reflect a conservative estimate based on national certification, association membership, State licensure, and United States Bureau of Census data. These data inform the continued systematic collection of statistics about the counseling workforce. The collection of these data has reinforced the need for the counseling profession to collect systematic and equivalent data with other mental health professions.

Marriage and Family Therapy

Data Collection

The data for marriage and family therapy were collected from several sources: the American Association for Marriage and Family Therapy (AAMFT) Practice Research Network, Marriage and Family Therapist Practice Patterns Survey, the AAMFT Membership Database, the Annual Report for Accredited Programs submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), the California Association of Marriage and Family Therapists (CAMFT) Member Practice and Demographic Survey, and data collected by AAMFT from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists (MFTs).

The count of MFTs for each State and the United States was derived from data collected by the AAMFT in 2000 and from State marriage and family therapy regulatory boards on the number of licensed or certified MFTs. For those States that did not regulate MFTs in 2000, the numbers were ob-

tained from the count of clinical members from the AAMFT Membership Database.

The count for the U.S. total (47,111) from table 3 was used for tables 1, 2, 4, 5, and 6, with the data on the details of these tables coming from the AAMFT Practice Research Network Survey conducted in the fall of 2000 and reported by Northey and Harrington (2001) and Northey (2002) and the CAMFT Member Practice and Demographic Survey reported by Riemersma (2002).

The data for table 7 were obtained from the Marriage and Family Therapist Practice Patterns Survey conducted by William J. Doherty of the Family Social Science Department of the University of Minnesota in the summer and fall of 1994 and reported by Doherty and Simmons (1996).

The data for table 8 come from a variety of sources, including the interns registered in the State of California; the Annual Report for Accredited Programs submitted to COAMFTE; a count of associate members (postdegree supervision students in other accredited programs) and student members (predegree students in other accredited programs) from the AAMFT Membership Database; and a survey of MFT graduate programs in the State of California.

The AAMFT Practice Research Network PRN Survey

The AAMFT PRN survey was conducted in September 2000. The survey, funded by the Center for Substance Abuse Treatment, consisted of 102 questions and focused on clinical practices, work settings, education, and demographics. The survey was conducted via telephone with 292 randomly selected clinical members of the AAMFT. Eighty-two percent of the eligible respondents participated in the survey.

The CAMFT Member Practice and Demographic Survey

The CAMFT Member Practice and Demographic Survey was conducted by in the spring of 2002. The survey was designed to assess the current clinical practice of MFTs in California; it was sent to 3,900 CAMFT members and yielded a 27 percent response rate. In addition to questions about demographics, clinical practice, works settings, and education, questions about funding sources and income were included.

The Marriage and Family Therapist Practice Patterns Survey

The Marriage and Family Therapist Practice Patterns Survey was commissioned by the AAMFT Research and Education Foundation and built upon an investigation of the clinical practice patterns of MFTs in Minnesota by Doherty and Simmons (1995). The survey consisted of three parts: (1) demographic, educational background, and practice setting information; (2) detailed information on the therapist's three most recently completed cases; and (3) client satisfaction and outcome data from clients. A total of 536 AAMFT clinical members from 15 States participated in the study, yielding a 34.3 percent response rate.

The AAMFT Membership Database

Data for the AAMFT Membership Database are collected from both applications for new membership and annual membership renewal forms. As the data are collected, they are entered into the membership database on a continuous basis.

Members of AAMFT are coded in the membership database according to their category of membership:

- Clinical Membership—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution and have 2 years of postdegree supervised clinical experience in marriage and family therapy.

- Associate Members—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution but have not yet completed two years of postdegree supervised clinical experience in marriage and family therapy. Associate membership is limited to five years, since it is anticipated that associate members will advance to clinical membership.

- Student Membership—persons currently enrolled in a qualifying graduate program in marriage and family therapy (or in a related

mental health field and a substantially equivalent course of study) in a regionally accredited educational institution or a COMAFTE-accredited graduate program or postdegree institute. Student membership is limited to 5 years, since it is anticipated that student members will advance to associate, then clinical membership.

- Affiliate Membership—members of allied professions and other persons interested in marriage and family therapy. Affiliate members come from related fields such as family medicine, family mediation, family policy, and research. The Affiliate membership is a noncredentialing, nonevaluative, and nonvoting membership category.

COAMFTE Annual Report for Accredited Programs

Annually, the programs accredited by COAMFTE submit standard written reports concerning compliance with the accreditation standards, including, among other data, a list of all students currently enrolled in the marriage and family therapy program. Data reported include the student's name, year in program, gender, ethnicity, and academic background. Data on the number of students in each program were collated for table 8 from the most recent annual report of the accredited programs, which was either 2000 or 2001.

School Psychology

Who Is Counted as a School Psychologist?

In most States, professional school psychologists are certified to practice within school settings and nonschool settings by each State's department of education. Every State has a certification for school psychology; however, some States use more than one title for professionals qualified to be called school psychologists. State-by-State standards for certification and licensure are published by the National Association of School Psychologists (NASP) (1995). Forty-seven States (including the District of Columbia) require academic standards consistent with the Nationally Certified School Psychologist (NCSP) certification. One State, Hawaii, requires a doctorate to use the title. Three States require a master's degree with unspecified credit hours. All States require a supervised internship. Students graduating from NASP/National Council for Teacher Education-approved programs meet the NCSP credentialing standard and may receive the NCSP credential upon receiving a satisfactory score on the national examination. States that have upgraded their standards over the past 10 years have "grandparent" persons who do not meet the academic requirements of a 60-credit-hour master's or specialist degree, a 1,200-hour supervised internship, and other requirements noted in the body of the report.

Database

The data in this report are based on data gathered yearly by the U.S. Department of Education (USDOE) and found in its *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.* These data are required to be reported by each State education agency, which in turn has data reports from each local education agency. These data are required to be gathered to ensure that each school system is maintaining its effort to provide a "free and appropriate public education" to all children who are disabled and in need of special education and related services.

The data reported from each State education agency list as school psychologists only persons who are State certified or licensed. In fact, they consider persons provisionally providing school psychological services under the category of unfilled positions.

NASP Membership Data

NASP total membership was 20,902 as of June 1998. NASP has several membership categories, of which three are critical to this report: regular, student, and retired.

Regular members must be one of the following:

- Currently credentialed and working as a school psychologist.
- Certified and working as a supervisor or consultant in school psychology.
- Primarily engaged in the training of school psychologists at a college or university.

- Excluding international membership, NASP regular membership as of June 1998 was 15,008.

Student membership includes students enrolled halftime or more in programs leading to an advanced degree or postmaster's certificate in school psychology or doctorate, as verified by their program advisor. Student membership as of June 1998 was 4,656.

Retired membership requires the retired school psychologist to have been a member for five consecutive years and retired from remunerative professional activity. Retired membership as of June 1998 was 737. It is presumed that these retired members are not clinically active in the profession of school psychology.

All regular and student members and all those holding an NCSP certificate must agree to abide by the NASP professional standards and code of ethics. By 1991, nearly 15,000 school psychologists had received the NCSP credential.

There are approximately 3,000 school psychologists certified as NCSP who are not members of NASP. As noted above, most State certification systems require the equivalent academic requirements of NCSP. Several States will now accept NCSP as the necessary documentation for State certification.

Data Reported in Tables

Each year, NASP requests that membership respond to a set of computer-recorded demographic questions, including age, sex, ethnicity, position, employment setting, salary, student service ratio, and years of experience. There is no obligation to respond to these requests, and more than 10 percent ignore all requests. Each of the 13 items is responded to at different rates, and therefore the accuracy of the data is unknown.

For example, only 13,827 responded to "employment setting," and only 9,634 responded to "years of experience." However, when the responses are compared to mailed random surveys carried out over the years (Curtis et al. in press; Fagan 1988; Reschly and Wilson 1992), the patterns are quite similar, giving a degree of assurance that these data can be applied to the general population of certified, employed, clinically active school psychologists reported by the USDOE.

To determine the 1994 number of school psychologists reported in table 1, the authors used the ratio of NASP members who are certified, including those who are university trainers and administrators, to those who are not so specified. This produced a ratio of one clinically active to 1.11 clinically trained. The number reported by the USDOE was then multiplied by that radio to secure the total of 22,214. This correction factor, based on more accurate data (Lund and Reschly 1998), replaces the 1.07:1 ratio applied to calculate the numbers reported in 1992. This 1.07:1 ratio was applied to USDOE data from 1988 for table 1 to provide some longitudinal reference consistent with other professions.

The data in tables 2, 4, 6, and 7 are based on ratios and percentages reported by NASP members' responses to the membership questionnaire applied, when appropriate, to the USDOE adjusted number. The data in table 3 are the State-by-State data reported for 1998, which are the best data that exist for school psychologists who are clinically active at the present time. Table 5 is based on the assumption that most school psychologists are limited to a single employment setting. This is generally the case. Since about 10 percent of school psychologists are licensed to practice outside the school setting, there may be a second setting for these professionals. However, NASP does not request any data on this factor. Therefore, "NA" is noted both for "two or more settings" and the "part-time" category.

Table 8 represents the number of school psychology students in programs approved by NASP/NCATE as reported by the Director of Certification from the NASP data base.

Qualifications of the Data

The USDOE data are a record of State-certified or licensed school psychologists reported for 1994–95 who serve children with disabilities in schools or school-related settings. These data are based on full-time equivalents rather than individuals. Therefore, there may be more individuals certified than this number. Furthermore, the data do not exclude some contracted persons. The data also may exclude school psychologists who do not provide services to children with disabilities under the Individuals with Disabilities Education Act. For example, school psychologists are employed in Head Start programs, which may be administered by another State agency. School psychologists serving under Part H, the infant and toddlers disability program, may not be included in this USDOE count. Finally, may States have school psychologists employed un-

der State pupil services laws and under Title I of the Improving America's School Act of 1994.

Without referencing the USDOE data, Fagan and Sachs-Wise (1994) report a consensus figure of between 20,000 and 22,000 school psychologists for 1994. It may be that these numbers underrepresent the total clinically active (and, thus, clinically trained) population of school psychologists by as much as five to 10 percent. This underestimation is consistent with the findings of Lund and Reschly (1998).

Adjusting the USDOE data required application of membership percentages to those data and to data provided by Lund and Reschly (1998). Since the membership data are consistent with the data on a random sample of 6,470 school psychologists (Curtis et al. in press; Reschly and Wilson 1992), it may be assumed that the membership data can be generalized to the USDOE data without any known bias.

The growth in the USDOE numbers over the seven-year span of 1988 to 1995 is progressive, but not dramatic. The number of elementary and secondary students is growing, thus causing a shift in the ratio of professionals to population. Table 3 should be read with extreme caution. It is erroneous to perceive the State population as the potential service population for school psychologists. School psychologists serve children aged 5 through 18, in general, and a subset of children aged 0 through 21 who have, or are at risk of having, a disability. The *Digest of Educational Statistics* (U.S. Department of Education 1997) estimates that there are about 52.7 million children aged 6 to 17, or about 19. 6 percent of the 268.8 million total population in 1998 (Statistical *Abstract of the United States,* U.S. Bureau of the Census 1997).

References

Curtis, M. J., Hunley, S. A., Walker, K., & Baker, A. C. (in press). *Demographic characteristics and professional practices in school psychology: 1994–95.*

Doherty, W. J., & Simmons, D. S. (1995). Marriage and family therapists practice patterns survey. Washington, DC: American Association for Marriage and Family Therapy.

Doherty, W. J., & Simmons, D. S. (1996). Clinical practice patterns of marriage and family therapists: A national survey of therapists and their clients. *Journal of Marital and Family Therapy, 22,* 9–25.

Dorwart, R. A., Chartock, L. R., Dial, T. H., Fenton, W., Knesper, D., Koran, L. M., Leaf, P. J., Pincus, H. A., Smith, R., Weissman, S., & Winkelmeyer, R. (1992). A national study of psychiatrists' professional activities. *American Journal of Psychiatry, 149(11),* 1499–1505.

Fagan, T. K. (1988). The historical improvement of the school psychology service ratio: Implications for future employment. *School Psychology Review, 17,* 447–458.

Fagan, T., & Sachs-Wise, P. (1994). *School psychology: Past, present and future.* White Plains, NY: Longman.

Hollis, J. W., & Watz, R. A. (1993). *Counselor preparation 1993–1955: Vol. II. Status, trends, and implications.* 8th ed. Muncie, IN: Accelerated Development Press.

Howard, A., Pion, G. M., Gottfredson, G. D., Flattau, P. E., Oskamp, S., Pfaffln, S. M., Bary, D. W., & Burstein, A. G. (1986). The changing face of American psychology: A report from the Committee on Employment and Human Resources. *American Psychologist, 41,* 1311–1327.

Lennon, T. (2001), *Statistics on Social Work Education in the United States: 1999*, Alexandria, VA: Council on Social Work Education.

Lund, A. R., & Reschly, D. J. (1998). School psychology personnel needs: Correlates of current patterns and historical trends. *School Psychology Review, 27,* 816–830.

National Association of School Psychologists. (1995). Membership Database. Unpublished. Bethesda, MD.

Reschly, D. J., & Wilson, M. S. (1992). *School Psychology Faculty and Practitioners: 1986 to 1991. Trends in Demographic Characteristics, Roles, Satisfaction, and System Reform.* Paper presented to the NASP Delegate Assembly.

Stapp, J., Tucker, A. M., & VandenBos, G. R. (1985). Census of psychological personnel: 1983. *American Psychologist, 40,* 1317–1351.

U.S. Department of Education. (1997). *Digest of educational statistics.* Washington, DC.

Wilkinson, R. K. (1997). *Characteristics of doctoral scientists and engineers in the United States, 1995.* Washington, DC: National Science Foundation, Division of Science Resources Studies.

Zarin, D. A., Pincus, H. A., Peterson, B. D., West, J. C., Suarez, A. P., Marcus, S. C., & McIntyre, J. S. (1998). Characterizing psychiatry with findings from the 1996 National Survey of Psychiatric Practice. *American Journal of Psychiatry, 155,* 397–404.

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