

# Communicable Disease Summary 2014



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FAIRFAX COUNTY HEALTH DEPARTMENT  
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# Fairfax County Health Department 2014 Communicable Disease Summary



Dear Colleague:

This fifth edition of the Fairfax County Health Department’s Communicable Disease Summary highlights the reportable diseases that most impacted the Fairfax community in 2014. Each year, the Communicable Disease/Epidemiology Unit investigates thousands of reports of suspected communicable diseases, in partnership with local public health system partners such as the healthcare community, laboratories, public safety professionals, schools and institutions of higher education, the Virginia Department of Health, and other agencies to promptly identify, prevent, control and monitor diseases in the community. Our local response to the 2014 Ebola outbreak demonstrated how our local public health system operates. Together with our partners, we worked to limit the introduction and spread of disease through the monitoring of travelers from affected areas; timely and coordinated evaluation of persons under investigation; and the promotion of appropriate infection control practices within healthcare settings and the community.

Communicable disease surveillance, prevention, and control are core activities of the Fairfax County Health Department. As a critical partner and contributor to this core public health function, this report is intended to provide you and your clinical staff with information and practical guidance that we believe will help mitigate the potential impacts of ongoing and emerging communicable disease threats in our community.

The effectiveness of public health communicable disease investigations often depends on the timeliness of notification. Prompt reporting by clinicians can dramatically impact the course of these investigations and help to limit the spread of illness because Health Department staff are able to ensure the early implementation of appropriate infection control measures and facilitate laboratory testing. Staff are also able to conduct timely epidemiologic studies to determine the source of illness or perform contact tracing to identify exposed individuals when time-sensitive interventions such as antibiotic and vaccine prophylaxis are still indicated.

Fighting infectious diseases within our community requires a vigilant and strong local public health system. We thank you for your contributions and look forward to your continued partnership and support.

Sincerely,

Gloria Addo-Ayensu, MD, MPH  
Director of Health

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The mission of the Fairfax County Health Department is to protect, promote and improve health and quality of life for all in our community.

**Table 1. Reported cases of selected communicable diseases, Fairfax County 2005 - 2014\***

Disease	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	5 YR AVG ('10-'14)
AIDS	59	72	74	69	65	62	51	57	48	53	54.2
Amebiasis	12	10	9	17	7	5	4	12	9	4	6.8
Brucellosis	1	0	0	0	0	0	0	0	2	0	0.4
Botulism, infant	0	0	0	0	1	0	1	0	0	0	0.2
Campylobacteriosis	91	93	83	101	121	105	93	98	108	118	104.4
Chikungunya	0	0	0	0	0	1	0	0	2	17	4
Chlamydia trachomatis infection	1284	1272	1310	1577	1572	1590	1800	2167	2262	2429	2049.6
Cryptosporidiosis	4	7	5	13	19	17	24	26	33	29	25.8
Cyclosporiasis	0	0	0	0	0	0	0	0	0	2	0.4
Dengue fever	-	-	8	2	0	3	7	7	5	7	5.8
Escherichia coli infection, Shiga toxin-producing E	21	31	30	59	27	27	13	12	13	14	15.8
Ehrlichiosis/Anaplasmosis	2	2	2	11	1	7	17	6	11	5	9.2
Giardiasis	86	83	100	78	93	110	52	59	69	61	70.2
Gonorrhea	229	120	88	224	216	205	210	240	311	312	255.6
Haemophilus influenzae, invasive	4	3	2	6	9	8	13	8	11	8	9.6
Hansen's Disease (Leprosy)	0	1	0	0	0	1	1	0	0	0	0.4
Hepatitis A, acute	34	20	24	24	10	8	0	14	8	6	7.2
Hepatitis B, acute ±	6	6	8	10	5	1	4	1	4	1	2.2
HIV infection	125	149	121	126	105	113	108	123	127	127	119.6
Influenza-associated mortality (less than age 18)	0	0	0	0	1	0	1	0	0	1	0.4
Lead, elevated blood levels	28	41	16	26	33	31	21	18	19	26	23
Legionellosis	3	5	3	9	7	7	9	5	13	7	8.2
Listeriosis	3	3	2	2	0	0	4	5	7	3	3.8
Lyme disease	10	102	208	191	260	256	146	149	260	284	219
Malaria	7	17	21	13	16	19	29	28	16	29	24.2
Measles	0	0	0	0	0	0	0	0	0	1	0.2
Meningococcal disease (Neisseria meningitidis)	2	4	1	1	1	2	2	0	2	0	1.2
Mumps	0	6	5	2	0	3	0	2	0	2	1.4
Pertussis	41	40	13	39	31	33	55	55	33	46	44.4
Q fever	0	0	0	0	0	1	0	0	1	1	0.6
Rabies, human	0	0	0	0	1	0	0	0	0	0	0
Salmonellosis	173	152	187	165	111	147	123	106	127	152	131
Shigellosis	30	27	49	25	26	37	26	16	29	48	31.2
Spotted fever rickettsiosis	8	11	5	9	6	11	20	26	23	20	20
Staphylococcus aureus infection, invasive (MRSA)	-	-	12	97	52	51	91	96	96	74	81.6
Streptococcus disease, Group A, invasive	8	11	13	11	14	15	34	14	16	30	21.8
Streptococcus pneumoniae, invasive	4	8	1	6	3	8	5	6	6	3	5.6
Syphilis, early stage	31	36	33	34	37	39	34	60	64	42	47.8
Toxic Substances Investigation	1	6	10	17	21	26	20	19	24	24	22.6
Trichinellosis	0	0	0	0	0	0	0	2	0	1	0.6
Tuberculosis	93	120	108	98	86	87	82	92	59	61	76.2
Typhoid fever	10	7	10	8	2	6	4	2	6	4	4.4
Varicella (Chickenpox)	211	301	180	155	64	59	56	87	61	56	63.8
Vibrio infection (non-cholera)	3	4	5	4	0	5	6	5	3	7	5.2
West Nile infection	0	3	1	1	1	2	1	8	3	0	2.8
Yersiniosis	1	1	2	2	1	1	0	0	1	2	0.8
<b>Total</b>	<b>2625</b>	<b>2774</b>	<b>2749</b>	<b>3232</b>	<b>3025</b>	<b>3109</b>	<b>3167</b>	<b>3631</b>	<b>3892</b>	<b>4117</b>	<b>3583.2</b>

\* Unless otherwise indicated, all communicable disease data in this report are primary surveillance data from the Fairfax County Health Department and the Virginia Department of Health

† A more restrictive case definition for *Escherichia coli* infection, Shiga toxin-producing was implemented in 2011

± Includes three case of perinatal Hepatitis B (2009, 2011, and 2013)

- Not a reportable illness during the year listed

# Meningococcal Disease

## Background

Meningococcal disease is an acute, potentially severe illness caused by the aerobic, gram-negative diplococcus, bacterium *Neisseria meningitidis*. Since the introduction of the *Haemophilus Influenzae* type B and pneumococcal vaccine for infants, *Neisseria meningitidis* has been the leading cause of bacterial meningitis in children in the U.S and remains an important cause of septicemia.<sup>1,2</sup> Meningococcal conjugate vaccines are believed to give the best protection from disease and are more effective in young children. Although incidence of meningococcal disease is low in Fairfax County and the rest of Virginia, the severity and public health implications of the disease make it a high priority communicable disease investigation.

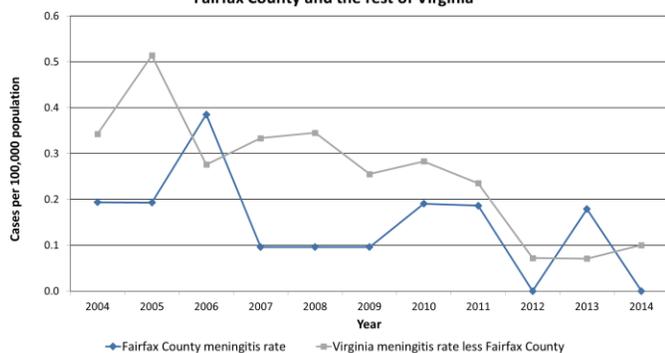
## Fairfax Data

- Over the past ten years, the incidence of reported meningococcal disease in Fairfax County has fluctuated but remained relatively consistent with the rest of Virginia (Figure 1). Over the past ten years, only 17 cases have been reported in Fairfax County. In 2014, ten cases were reported in Virginia.
- Meningococcal disease occurs throughout the year; however, the incidence is highest in the late winter and early spring. Since 2005, 60% of cases reported in Fairfax County have had disease onset in the five-month period from November-March.
- Between 2005 and 2014, 53% of all reported cases of meningococcal disease in Fairfax County were less than 25 years of age, with 27% falling between 18 and 24 years of age. Seven percent of cases were found among individuals less than 1 year of age, which is the age group considered as the highest risk for complications.<sup>2</sup>
- Outbreaks of meningococcal disease are rare in Fairfax County as well as Virginia. Over the last five years, only one outbreak has been reported in Virginia, a 2010 outbreak associated with a private group gathering.

## Clinician Pearls

- Immediately report all suspect cases of meningococcal disease cases (including all gram negative diplococci stains) to FCHD for public health action and for guidance regarding the need for chemoprophylaxis.
- Vaccines are now available that help protect against all three serogroups (B, C, and Y) of meningococcal disease that are commonly seen in the United States.<sup>3</sup>
- ACIP recommends meningococcal vaccination for the following groups (full recommendations can be found at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm>):<sup>4</sup>
  - Routine vaccination of adolescents aged 11 through 18 years
  - Routine vaccination of persons aged  $\geq 2$  months at increased risk for meningococcal disease
  - Persons aged  $\geq 2$  months with certain medical conditions such as anatomical or functional asplenia or complement component deficiency
  - Special populations such as unvaccinated or incompletely vaccinated first-year college students living in residence halls, military recruits, or microbiologists with occupational exposure
  - Persons aged  $\geq 9$  months who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic, particularly if contact with the local population will be prolonged.
  - Vaccination of persons in at-risk groups to control outbreaks.

Figure 1. Meningitis incidence rate by year, Fairfax County and the rest of Virginia



## Contacts Considered for Prophylaxis (ideally <24 hours after identification of the index patient) Reference-MMWR<sup>5</sup>

### Personal Contacts

- Household members
- Daycare center classmates
- Teachers who may have been exposed to vomitus or nasopharyngeal secretions
- Persons who had intimate contact with the patient's oral secretions through kissing or sharing of food, drink, utensils, cups/bottles, cigarettes, lip gloss/lip balm, etc.
- Sharing of toys among infants and toddlers, shared office space, car pools, and other shared, enclosed spaces may also need to be considered

### Healthcare Contacts

Prophylaxis is not routinely recommended for medical personnel attending a case except for those who had intimate exposure to the case (mouth-to-mouth resuscitation, intubation, or suctioning) prior to or less than 24 hours after the initiation of antibiotic prophylaxis.

Prophylaxis Recommendations can be found at:  
<http://www.cdc.gov/mmwr/PDF/rr/rr5407.pdf>

<sup>1</sup> Immunization Action Coalition. Meningococcal: Questions and Answers. Retrieved from <http://www.immunize.org/catg.d/p4210.pdf>.

<sup>2</sup> Red Book: 2015 Report of the Committee on Infectious Disease. (30<sup>th</sup> edition). American Academy of Pediatrics. 2015.

<sup>3</sup> CDC. (updated: 2015, June 11). Meningococcal Vaccination. Retrieved from <http://www.cdc.gov/meningococcal/vaccine-info.html>

<sup>4</sup> CDC. Prevention and Control of Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2013;62(RR-02):1-22.

<sup>5</sup> CDC. Prevention and Control of Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2005;54(RR-07):13-16.

# Pertussis

## Background

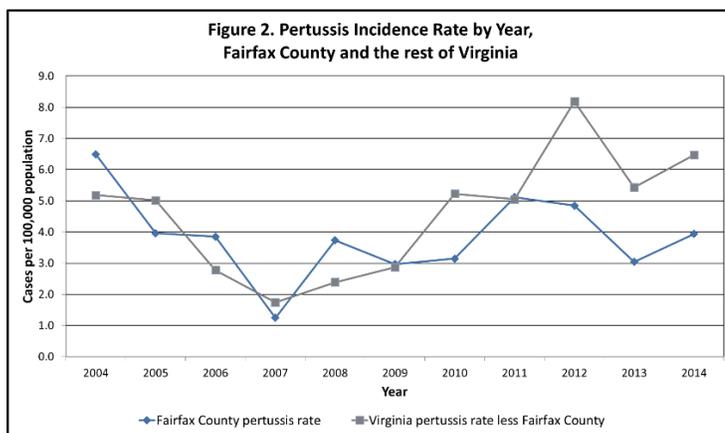
The incidence of pertussis in the United States is cyclical, with peaks every 3–5 years. A primary reason for the continued circulation of *Bordetella pertussis* is waning immunity after completion of the childhood vaccination series, which leaves adolescents and adults susceptible. Pertussis vaccine is effective; however age appropriate vaccine coverage may not preclude individuals from disease. As many as 80% of previously immunized household contacts of symptomatic cases are infected with pertussis because of waning vaccine-induced immunity. Symptoms in these contacts vary from asymptomatic infection to classic pertussis.<sup>6</sup> U.S. vaccination coverage rates have increased for the Tdap booster vaccine to 86.0% among adolescents (aged 13-17 years) and 17.2 % among adults (aged ≥19 years).<sup>7,8</sup>

## Fairfax Data

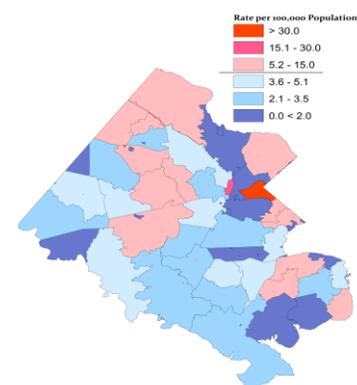
- In 2014, a total of 46 cases of pertussis were reported in Fairfax County, equivalent to an incidence rate of 3.9 cases per 100,000 population, which was less than the 6.5 cases per 100,000 seen throughout the rest of Virginia during the same year (Figure 2).
- Two outbreaks of pertussis were investigated in 2014; one in a daycare and one in a camp setting.
- Of the 2014 Fairfax County pertussis cases with known vaccine history, 66.7% were considered fully vaccinated, and 24.2% were considered partially vaccinated. Only 3 cases (9.09%) reported no vaccination history.
- Between 2009 and 2014, infants aged <1 year, who are at greatest risk for severe disease and death, accounted for 13.4% of all reported pertussis cases in Fairfax County. Children 1-10 years of age accounted for 28.1% of cases and ages 11-18 years accounted for 26.1% of cases. The remaining 32.4% of cases occurred among adults.

## Clinician Pearls

- Protection of susceptible infants is a primary objective of public health pertussis control interventions. To reduce pertussis infections, ACIP recommends a Tdap booster for the following:
  - Pregnant mothers should get a dose of Tdap during each pregnancy, preferably at 27 through 36 weeks gestation (third trimester). If not administered during pregnancy, Tdap should be given immediately postpartum. Close contacts to the infant are also recommended for immunization (e.g. siblings, grandparents, babysitters).
  - Children aged 7 through 10 years who are not fully vaccinated against pertussis should receive a single dose of Tdap. If additional doses of tetanus and diphtheria toxoid-containing vaccines are needed, vaccinate according to ACIP catch-up guidance, with Tdap given as the first dose.
  - Children 11-18 years of age should receive a single dose of vaccine, with preferred administration at 11 -12 years of age. Children 13-18 years of age who have not received Tdap should receive vaccine at the next patient encounter or sooner, if close contact with infants will occur.
  - Adults 19 years of age and older who have not received a dose of Tdap should receive vaccine as soon as feasible. Tdap can be administered regardless of the interval since the last Td booster.
  - Healthcare personnel who have not received Tdap as an adult should receive a single dose, regardless of the interval since the last Td dose.<sup>9</sup>
- Culture and/or PCR of nasopharyngeal specimens should be conducted for all suspected pertussis cases within 3 weeks of cough onset. Currently, serologic testing is of limited benefit for pertussis diagnosis and is not recommended.
- Promptly report suspected and confirmed pertussis cases to FCHD to enable rapid chemoprophylaxis of exposed contacts.



**Figure 3. Rate (per 100,000 population) of Reported Cases of Pertussis by zip code, Fairfax County 2010-2014**



<sup>6</sup> Red Book: 2015 Report of the Committee on Infectious Disease. (30th edition). American Academy of Pediatrics. 2015.

<sup>7</sup> CDC. National, Regional, State and Selected Local Area Vaccination Coverage Among Adolescents Aged 13-17 Years -- United States, 2013. MMWR 2014;63(29):625-633.

<sup>8</sup> CDC. Vaccination Coverage Among Adults, Excluding Influenza Vaccination -- United States, 2013. MMWR 2015;64(04):95-102.

<sup>9</sup> CDC. Updated recommendations for use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis (Tdap) vaccine from the Advisory Committee on Immunization Practices (ACIP), 2010. MMWR 2011;60:13-15.

# Hepatitis A

## Background

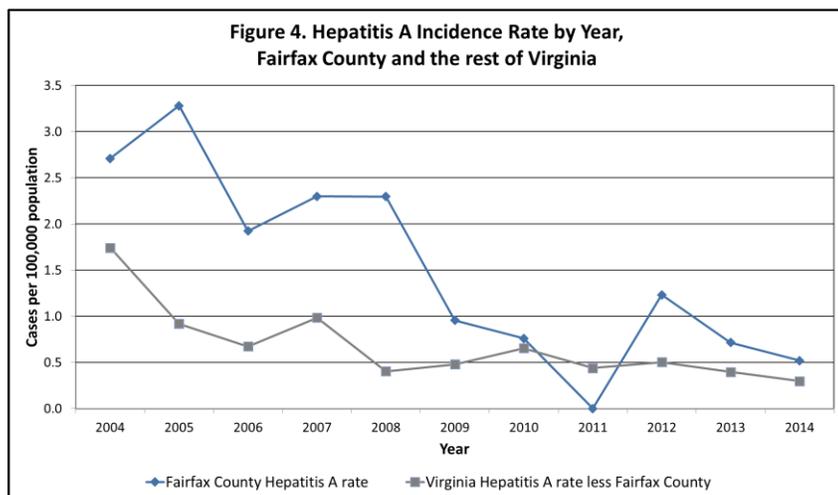
Historically, acute hepatitis A was one of the most frequently reported vaccine-preventable diseases in the pre-vaccine era. Since the licensure of the vaccine in 1995, rates of hepatitis A rates have declined significantly. In 2013, a total of 1,781 cases of hepatitis A were reported from 50 states to CDC, a 14% increase from 2012. This increase reflects cases discovered during a large hepatitis A outbreak from imported pomegranate arils, consumed by persons in several southwestern states and Hawaii. The overall incidence rate in 2013 was 0.6 cases per 100,000 population. The most common mode of transmission is person to person, resulting from fecal contamination and oral ingestion. In approximately two thirds of reported cases, the source cannot be determined.<sup>10,11,12</sup>

## Fairfax Data

- Hepatitis A rates in Fairfax County have been consistently higher than the rate seen across the rest of Virginia over the past ten years. In 2014, a total of 6 cases of hepatitis A were reported in Fairfax County, equivalent to an incidence rate of 0.5 cases per 100,000 population, compared to 0.3 cases per 100,000 seen throughout the rest of Virginia during the same year (Figure 4).
- Between 2010 and 2014, those 0-19 years of age accounted for 44.4% of all reported hepatitis A cases in Fairfax County. Adults 20-44 years of age accounted for an additional 41.7% of cases.
- The most commonly reported risk factor reported among Fairfax County cases between 2010-2014 was travel outside of the U.S. or Canada, which was reported in 65.6% of cases. This was significantly higher than what was seen across the U.S. (6.2% in 2013).<sup>11,12</sup> Person in household with travel outside the U.S or Canada (41.1%) and more than 1 sexual partner (31.6%) were two additional risk factors reported most commonly among cases.

## Clinician Pearls

- To improve the predictive value of a positive IgM anti-HAV test, clinicians should limit laboratory testing for acute HAV infection to persons with clinical findings typical of hepatitis A or to persons who have been exposed to settings where HAV transmission is suspected.
- ACIP recommends hepatitis A vaccination for the following groups (full recommendations can be found at <http://www.cdc.gov/mmwr/PDF/rr/rr5507.pdf>):
  - All children at age 1 year (i.e., 12–23 months).
  - Children and adolescents ages 2–18 who live in states or communities where routine Hepatitis A vaccination has been implemented because of high disease incidence.
  - Persons traveling to or working in countries that have high or intermediate rates of Hepatitis A.
  - Men who have sex with men.
  - Users of illegal injection and noninjection drugs.
  - Persons who have occupational risk for infection, chronic liver disease, or clotting-factor disorders.
  - Household members and other close personal contacts of adopted children newly arriving from countries with high or intermediate hepatitis A endemicity.<sup>13</sup>
- Promptly report suspected and confirmed hepatitis A cases to FCHD to enable the rapid chemoprophylaxis of exposed contacts.



**Table 2. Percent of Hepatitis A cases exhibiting clinically compatible symptoms, Fairfax County 2010-2014**

Symptom	% of Cases with Symptom
Diarrhea	82.7%
Arthritis	61.8%
Itching	57.3%
Light/clay-colored stools	52.8%
Sweats	56.4%
Vomiting	51.6%
Muscle aches	51.6%
Chills	55.6%
Weight loss	46.4%
Abdominal pain/cramps	33.3%
Jaundice	33.0%
Fever	35.8%
Dark-colored urine	26.5%

<sup>10</sup> Red Book: 2015 Report of the Committee on Infectious Disease. (30<sup>th</sup> edition). American Academy of Pediatrics. 2015.

<sup>11</sup> CDC. (updated: 2009, June 2). Guidelines for Viral Hepatitis Surveillance and Case Management. Retrieved from <http://www.cdc.gov/hepatitis/Statistics/SurveillanceGuidelines.htm#hepa>.

<sup>12</sup> CDC. (updated: 2015, October 19). Surveillance for Viral Hepatitis – United States, 2013. Retrieved from <http://www.cdc.gov/hepatitis/Statistics/2013Surveillance/Commentary.htm#hepa>.

<sup>13</sup> CDC. Prevention of hepatitis A through active or passive immunization. Recommendations of the ACIP. MMWR 2006;55(No. RR-7).

# Influenza

## Background

The 2014–15 influenza season in the United States increased through November and peaked in late December of 2014. The season was predominated by Influenza A (H3N2) viruses, and the prevalence of influenza B viruses increased late in the season. Similar to previous influenza A (H3N2) predominant seasons, the 2014-15 influenza season was moderately severe with overall high levels of outpatient illness and influenza-associated hospitalization, especially for adults aged  $\geq 65$  years. The majority of circulating influenza A (H3N2) viruses were different from the influenza A (H3N2) component of the 2014–15 Northern Hemisphere seasonal vaccines, and resulted in reduced vaccine effectiveness<sup>14,15</sup>

## Fairfax Data

- In Fairfax County and Virginia, influenza-like illness (ILI) activity is monitored weekly October through May. Multiple influenza surveillance approaches are utilized, including healthcare provider aggregate rapid influenza testing reports, emergency department syndromic surveillance, sentinel provider virologic surveillance, and pediatric death reporting. Local data indicate that influenza epidemiology in Fairfax County and Virginia during the 2014-2015 influenza season mirrored that seen at the national level in relation to timing and virologic types.
- Overall, influenza A (H3N2) viruses predominated nationally and locally, followed by influenza B viruses; influenza A (H1N1)pdm09 viruses were identified less frequently.
- Influenza A viruses were more commonly detected until late February 2015, after which there was substantial influenza B activity. Influenza B viruses predominated from the week ending February 28, 2015 (week 8) through the week ending May 23, 2015 (week 20).
- Emergency department utilization for influenza-like illness in Fairfax County remained high for much of the 2014-2015 influenza season, with activity peaking at 13.3% the week ending December 27, 2014, which was significantly greater than the national influenza baseline level of 2.4% (Figure 5).
- Eleven influenza-like illness (ILI) outbreaks were reported in Fairfax County during the 2014-2015 influenza season. Nine ILI outbreaks were associated with long-term care facilities and two ILI outbreaks were associated with schools.

## Clinician Pearls

- The Advisory Committee on Immunization Practices recommends routine influenza vaccination for all persons aged 6 months and older. Vaccination efforts should continue throughout the influenza season as the duration of the influenza season varies and disease activity might not peak until February or March.
- All healthcare facilities should have a comprehensive, up-to-date healthcare worker immunization policy for influenza and all other vaccine preventable diseases. This policy should encompass all employees and volunteers who are at risk of exposure to or possible transmission of vaccine preventable diseases. To assist in ensuring appropriate documentation of immunity, a one-page summary of the Advisory Committee on Immunization Practices recommendations for healthcare worker immunization is available at <http://www.immunize.org/catg.d/p2017.pdf>.
- There are new formulations available in the 2014-2015 season including quadrivalent injectable and nasal vaccines, egg-free vaccines, and vaccine delivery systems that use a micro-needle. All of these options are considered effective in providing influenza immunizations.
- FCHD provides free influenza vaccine to all Health Department clients through our five district offices. Vaccine is also available to the general public for a nominal fee. Clients may call 703-246-2411 to confirm service hours and locations.
- Influenza-associated deaths in children < 18 years of age and all suspected institutional outbreaks of influenza should be immediately reported to the FCHD.

Figure 5. Percentage of Visits for Influenza-like Illness (ILI) in emergency departments, Fairfax County, 2014-2015

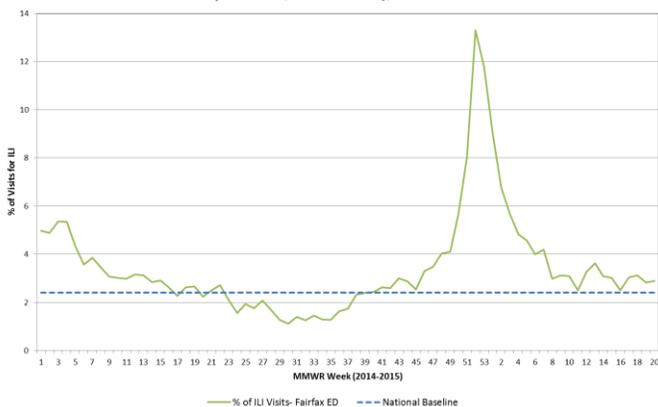
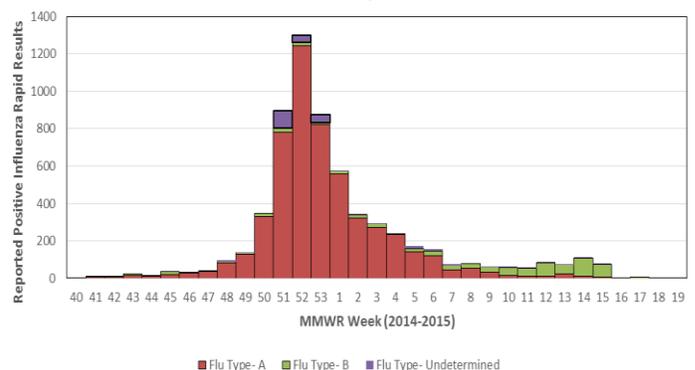


Figure 6. Positive rapid results reported to FCHD by influenza type, Fairfax County, 2014-2015



<sup>14</sup> CDC. (2014 February 21). Interim estimates of 2013-14 seasonal influenza vaccine effectiveness — United States, February 2014. MMWR 2014;63(No. RR-07):137-142.

<sup>15</sup> CDC. (2015 June 6). Influenza activity — United States, 2014-2015 season and composition of the 2014-2016 influenza vaccines. MMWR 2015;64(No. RR-21):583-590.

# Tuberculosis

## Background

In 2014, the reported incidence of TB in the U.S. was 3.0 cases per 100,000 population, representing a decrease of 2.2% from 2013. Since the 1992 TB resurgence peak in the U.S., the number of TB cases reported annually has decreased by 65%. This downward trend in TB incidence has been driven primarily by a decrease in cases among U.S.-born persons.<sup>16</sup> However, the global burden of TB disease remains enormous and the proportion of total cases occurring in foreign born individuals in the US has been increasing since 1993.<sup>17</sup>

## Fairfax Data

- In Fairfax County, the TB incidence rate has declined steadily over the last decade; however, it has been consistently higher than the incidence rate for the rest of Virginia. In 2014, the Fairfax County TB incidence rate was 5.3 cases per 100,000, nearly three times higher than the rate for the rest of Virginia (1.9 per 100,000), and almost double the U.S. rate (3.0 per 100,000).
- As seen in Table 3, the distribution of TB cases by country of origin reflects immigration patterns among people settling in Fairfax County. As in the U.S., there is a predominance of foreign-born individuals among TB cases in Fairfax County. Between 2010 and 2014, approximately 90% of incident TB cases identified in Fairfax County were among foreign-born persons. The most common countries of origin for foreign-born cases identified between 2010 and 2014 were Vietnam (13.9%) and India (12.6%). Among 2014 cases, 30% of infected individuals had resided in the U.S. for 5 years or less at the time of diagnosis.
- In 2014, two Fairfax County TB cases exhibited isoniazid resistance, and two exhibited multi-drug resistance (MDR) defined as no previous history of TB and resistance to at least isoniazid and rifampin. Between 2005 and 2014, a total of 12 cases of MDR TB were identified in Fairfax County. No cases of XDR-TB were reported in 2014 in Fairfax County.
- Six cases of TB/HIV co-infection were reported between 2013 and 2014 in Fairfax County.

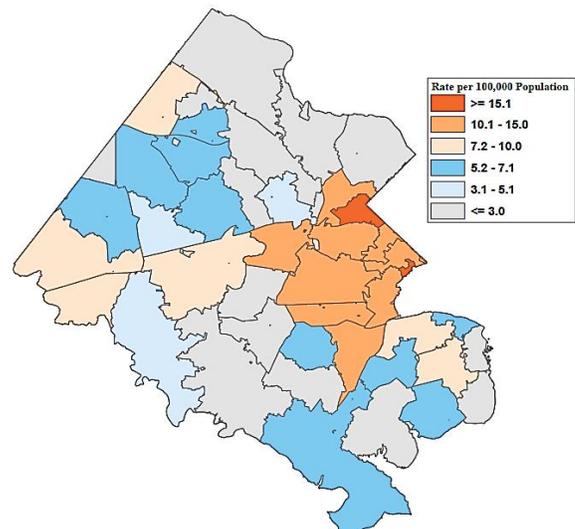
## Clinician Pearls

- Consider TB in the differential diagnosis for foreign-born individuals presenting with compatible signs and symptoms (e.g., cough, fever, night sweats, or weight loss).
- In addition to the Tuberculin Skin Test (TST), interferon-gamma release assays (IGRAs) are also available to aid in the diagnosis of TB:
  - Quantiferon TB Gold in Tube (QFT-GIT) is available through private laboratories and the Fairfax County Health Department.
  - T-Spot.TB is available through the manufacturer, Oxford Immunotec.
- When using IGRAs, remember the following:
  - A negative IGRA is similar to a negative TST, it does not rule out latent or active tuberculosis infection; and
  - TST is the test of choice for children less than 5 years of age as the IGRAs are not validated for this population.
- The new Core Curriculum on Tuberculosis: What the Clinician Should Know is available online from the CDC at <http://www.cdc.gov/tb/education/corecurr/index.htm>.
- Report all suspected tuberculosis cases to FCHD, regardless of location of infection or treatment status. FCHD will conduct contact investigations to identify exposed individuals and provide appropriate follow-up. Treatment for active tuberculosis is provided without cost to the client through the Health Department.

**Table 3. Tuberculosis cases by country of origin, Fairfax County 2010-2014**

Country	No. of cases	Percent
Vietnam	53	13.9%
India	48	12.6%
Ethiopia	35	9.2%
United States	33	8.7%
Republic of Korea	26	6.8%
Philippines	19	5.0%
Remaining 40 countries	167	43.8%

**Figure 7. Rate (per 100,000 population) of reported TB cases by zip code, Fairfax County 2010-2014**



<sup>16</sup> CDC. *Reported Tuberculosis in the United States, 2014*. Atlanta, GA: U.S. Department of Health and Human Services, CDC, October 2015.

<sup>17</sup> CDC. Trends in Tuberculosis -- United States, 2013. *MMWR* 2014;63(11): 229-33.

# HIV/AIDS

## Background

From 2010 through 2014, the annual estimated number and the rate of diagnoses of HIV infection in the United States remained stable. In 2014, the estimated rate was 13.8 per 100,000 population. However, as treatment modalities and access to services have improved, there has been an increase in the number of individuals living with HIV and AIDS. At the end of 2013, the estimated U.S. prevalence rate of diagnosed HIV infection was 297.4 per 100,000 population, a 2.1% increase compared to 2012. Specific demographic groups continue to be disproportionately affected by HIV and AIDS at the national level, with non-Hispanic blacks facing the highest burden of disease, followed by Hispanics. By risk group, men who have sex with men (MSM) are the most severely affected.<sup>18</sup>

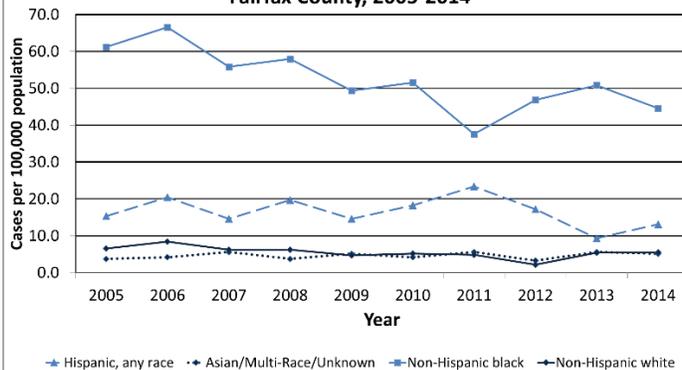
## Fairfax Data

- HIV incidence in Fairfax County increased during the middle of the last decade, peaking at 149 cases in 2006. Over the last five years, incidence remained consistent with approximately 120 cases per year. Approximately 80% of all incident Fairfax County HIV cases identified between 2011 and 2014 were male and the most common age at diagnosis was 25-34 years (32.4% of cases).
- In 2014, 127 newly-diagnosed HIV cases were identified in Fairfax County, equivalent to a rate of 11.2 per 100,000 population. This is comparable with the incidence rate for the rest of Virginia of 11.3 per 100,000 population.
- The 2014 Fairfax County HIV incidence rate for non-Hispanic blacks was nearly 9 times greater than among white residents. Hispanics were also disproportionately affected, with an incidence rate more than 2 times that seen among whites (Fig. 8).
- In 2014, over half (51.2%) of the new HIV diagnoses in Fairfax County were among men who have sex with men (MSM). Other high-risk groups included adults reporting heterosexual contact with a high-risk partner and intravenous drug users (Fig. 9).
- At the end of 2014, 2,715 Fairfax County residents were living with HIV or AIDS, equivalent to a prevalence rate of 238.7 per 100,000 population. This represents a 6.2% increase since 2013. It was lower than the 2014 prevalence rate for the rest of Virginia (275.9 per 100,000 population). Among the Fairfax residents living with HIV or AIDS at the end of 2014, 42.0% were non-Hispanic blacks, and nearly 15.8% were Hispanics. Non-Hispanic blacks and Hispanics account for 10.0% and 16.4% of the Fairfax County population, respectively.<sup>19</sup> Over half (51.7%) of all individuals living with HIV or AIDS were MSM. Over 1,348 met the surveillance criteria for AIDS.

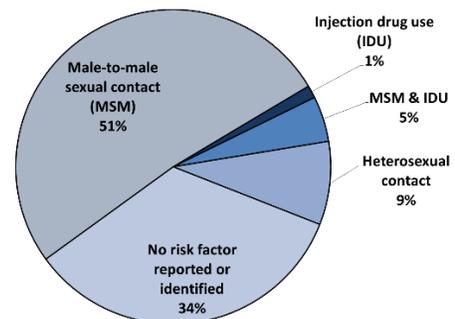
## Clinician Pearls

- The CDC recommends routine HIV screening for all patients aged 13-64 years in all health care settings. Screening should be performed regardless of whether the patient is known or suspected to have behavioral risks for infection.
- All pregnant women should be tested for HIV infection as early during pregnancy as possible. A second test during the third trimester, preferably at <36 weeks' gestation, should be considered for all pregnant women and is recommended for women known to be at high risk for acquiring HIV.<sup>20</sup>
- The CDC issued its new STD Guidelines in June 2015 and continues to recommend HIV, syphilis, gonorrhea, and chlamydia screening tests for sexually active MSM, including those with HIV infection (see specific screening guidelines at <http://www.cdc.gov/std/tg2015/>). All MSM should be tested for HBsAG to detect chronic Hepatitis B infection. Serological screening for Hepatitis C (HCV) is recommended at initial evaluation of persons with newly diagnosed HIV infection. MSM and HIV infection should be regularly screened at least yearly using HCV antibody assays followed by HCV RNA testing for those with a positive antibody result.
- Free, confidential HIV testing is available at each of the five FCHD district offices. Harm reduction counseling before and after testing is included. Clients may call 703-246-2411 to confirm service hours and locations.

**Figure 8. HIV incidence rates by race and ethnicity, Fairfax County, 2005-2014**



**Figure 9. Risk factors reported among newly diagnosed HIV cases, Fairfax County 2011-2014 (n=385)**



<sup>18</sup> Centers for Disease Control and Prevention. HIV Surveillance Report, 2014; vol. 26.

<http://www.cdc.gov/hiv/library/reports/surveillance/>. Published November 2015. Accessed 12/2/2015.

<sup>19</sup> U. S. Census Bureau. (2010). *American FactFinder: Fairfax County, VA*. Retrieved June 11, 2015 from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

<sup>20</sup> CDC. Sexually Transmitted Diseases Treatment Guidelines, 2015. MMWR 2015; 64 (No. RR-3).

# Sexually Transmitted Diseases

## Background

CDC's new estimates show that there are a total of 110 million sexually-transmitted infections in the United States with about 20 million new infections each year costing the American healthcare system nearly \$16 billion in direct medical costs alone. Young people (15-24) represent 50% of all new cases.<sup>21</sup> Each of these infections is a potential threat to an individual's immediate and long-term health especially if not diagnosed and treated early. The most commonly reported sexually transmitted diseases in the U.S. in 2014 were chlamydia (1,441,789) and gonorrhea (350,062). There were 19,999 new syphilis cases (primary and secondary) reported in 2014.<sup>21,22</sup>

## Fairfax Data

- In Fairfax County, the incidence rates for chlamydia, gonorrhea, and syphilis have increased in recent years, yet both are still below the incidence rate seen throughout the rest of the state of Virginia (see detailed information in Table 4 below).
- In 2014, 38 total early syphilis cases were identified in Fairfax County. Among Fairfax County early syphilis cases identified, 44.7% were co-infected with HIV.
- When examining the gender of Fairfax STD cases, significant differences were noted when comparing the diseases. In 2014, screening during pregnancy and gynecological exams attributed to the fact that females counted for almost twice as many chlamydia cases than males, while more than twice as many cases of gonorrhea were males than females. Reflecting national trends, the majority of syphilis cases (TES and latent) were males (85%), 84.2% of which reported to be men who have sex with men (2014 data).
- Over 85% of all combined Fairfax County chlamydia, gonorrhea, and syphilis cases in 2014 occurred among individuals 15 – 34 years of age. The most common age at diagnosis was 15 – 24 years (55.0% of cases).
- In 2014, the County incidence combined STD incidence rate for non-Hispanic blacks (379.3 per 100,000 population) was almost six times that seen among white residents (66.4 per 100,000). The incidence rate among Hispanics (155.1 per 100,000) was more than double that seen among whites.

## Clinician Pearls

The CDC updated STD Treatment Guidelines in June 2015 to assist healthcare providers in the appropriate management and treatment of sexually transmitted infections.

The full guidelines can be found at <http://www.cdc.gov/std/tg2015/default.htm>, however the highlights of new information are below:

- Antimicrobial resistance to gonorrhea has impacted current treatment and options are severely limited. The recommended treatment for urogenital gonorrhea is a single dose of 250 mg of intramuscular (IM) ceftriaxone in combination with 1 g of oral azithromycin. Dual treatment with a single dose of 320 mg of oral gemifloxacin plus 2 g of oral azithromycin, or dual treatment with a single dose of 240 mg of IM gentamicin plus 2 g of oral azithromycin, are alternative treatment options in the setting of a cephalosporin allergy.
- Nucleic acid amplification tests (NAATs) are highly sensitive and can detect more infections than wet-mount microscopy for the diagnosis of trichomoniasis.
- *Mycoplasma genitalium* is emerging with urethritis and cervicitis and should be considered in the context of recurring infections.
- Hepatitis C screening should be considered at least yearly and more frequently especially among persons with HIV infection, and particularly in men who have sex with men.
- Additional treatment options for genital warts include either imiquimod 3.75% or 5% cream. Podophyllin resin is no longer a recommended regimen because there are safe and effective alternative regimens.

**Table 4. Rates and percentages of cases of reportable sexually transmitted diseases, Fairfax County 2014**

	Rates per 100,000 population					Percentages								
	Jurisdiction		Rates in Fairfax County, by race			Gender		Age at Diagnosis						
	Fairfax County	Rest of VA	Non-Hispanic White	Non-Hispanic Black	Hispanic	Male	Female	<15	15 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65 +
<b>Chlamydia</b>	208.0	460.5	54.7	307.2	141.5	33.11 %	66.9%	0.5 %	57.1 %	30.6 %	8.1 %	2.4 %	1.2 %	0.2 %
<b>Gonorrhea</b>	26.9	108.8	8.8	65.0	12.0	69.9 %	30.1%	0%	44.4 %	33.3 %	13.4 %	7.5 %	1.3 %	0%
<b>TES</b>	3.3	7.1	2.9	7.1	1.6	100 %	0%	0%	13.2 %	28.9 %	18.4 %	34.2 %	15.8 %	0%

<sup>21</sup> CDC. Sexually Transmitted Disease Surveillance 2014. Atlanta: U.S. Department of Health and Human Services; 2014.

<sup>22</sup> CDC Fact Sheet. Reported STDs in the United States. 2014 National Data for Chlamydia, Gonorrhea, and Syphilis. 2014. Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/std/stats14/std-trends-508.pdf>.

<sup>23</sup> CDC. Sexually transmitted diseases treatment guidelines, 2015. MMWR 2015; 64 (1-137).

# Rabies

## Background

Over the last 100 years, rabies in the United States has changed dramatically. Before 1960, the majority of animal cases reported occurred in domestic animals whereas, currently more than 90% of all animal cases reported to the CDC occur in wildlife. The principal rabies hosts today are wild carnivores and bats.<sup>24</sup> Human rabies infection is now rare, with an average of only two to three U.S. cases identified each year.<sup>25</sup> Rabies prophylaxis is nearly 100% successful.<sup>26</sup> **Prophylaxis is indicated for any bite, scratch, or other situation where saliva or central nervous system tissue from a potentially rabid animal enters a fresh, open wound or contacts a mucous membrane by entering the eye, mouth, or nose.**

## Fairfax Data

- In 2014, the FCHD Public Health Laboratory conducted direct fluorescent antibody testing for rabies virus on 349 animals submitted by the Fairfax County Animal Control Services Division (ASD). Forty-six (13.1%) of the animals tested positive for rabies.
- Raccoons accounted for the majority of 2014 positive rabies test results (69.6%), followed by foxes (8.7%). These terrestrial carnivores along with skunks are considered to be the highest risk species for rabies in the County. Of the 115 bats tested in 2014, only two were positive for rabies virus. Approximately 75% of all confirmed rabid animals were located within 1000 feet of a body of water.
- Although rabies is less common among domestic animals, in 2014 three cats tested positive for rabies, resulting in post-exposure prophylaxis (PEP) for 27 individuals.
- No human rabies cases were identified in Fairfax County in 2014. The most recent human case, a fatal infection with internationally-acquired canine rabies, occurred in 2009.
- In 2014, 1,494 human exposures to animals (primarily bites) were reported to ASD. For more than 95% of these exposures, ASD and FCHD were able to locate the offending animal for quarantine or testing, eliminating the need for rabies PEP.
- Rabies PEP was initiated in a total of 205 Fairfax County residents in 2014. Ninety-seven (47.3%) of these patients did not have a rabies exposure history that met the Advisory Committee on Immunization Practices' criteria and should not have received PEP.

## Clinician Pearls

- Accurate rabies exposure assessment and correct administration of post-exposure prophylaxis (PEP) are critical for preventing disease and ensuring that vaccine remains available for truly exposed individuals.
  - FCHD rabies staff members are available for consultation regarding rabies exposure assessment and PEP administration at 703-246-2433 (business hours) or 571-274-2296 (evenings and weekends).
  - An online course is available to provide clinicians with further information about rabies exposure assessment and PEP administration at <http://ideha.dhmm.maryland.gov/training/SitePages/rabies.aspx>. CME credits are available.
- Only a small percentage of individuals exposed to a potentially rabid animal will require PEP. If the offending animal can be located, PEP administration should be delayed pending the outcome of confinement or testing.
- All exposures to potentially rabid animals must be reported immediately to the Fairfax County Animal Services Division (ASD) at 703-691-2131 (Fax: 703-830-7806). ASD staff can assist with locating the exposing animal.
- PEP administration must be reported to FCHD using a Virginia Department of Health Confidential Morbidity Report (Epi-1 form) or by calling 703-246-2433.

Figure 10. Types of Errors Made in PEP Administration, Fairfax County 2014 (n=96)

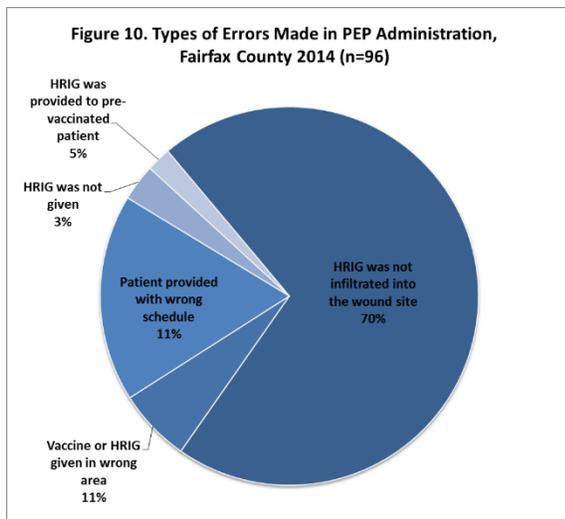


Figure 11. Confirmed Animal Rabies Cases by Location, Fairfax County 2014



<sup>24</sup> Dyer J, et al. (2013). Rabies surveillance in the United States during 2012. Journal of the American Veterinary Medical Association. 243(6): 805-815.

<sup>25</sup> CDC. (September 2015). Rabies Surveillance Data in the United States-2013. Retrieved December 21, 2015 from <http://www.cdc.gov/rabies/location/usa/surveillance/index.html>.

<sup>26</sup> CDC. Human Rabies Prevention - United States, 2008: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2008; 57(No. RR-3):1-27.

# Lyme and Other Tickborne Diseases

## Background

Over the last decade, the incidence of tick-borne diseases has increased steadily in the U.S. as people increasingly live, play, and work in formerly uninhabited wilderness areas where ticks and their animal hosts live. Tickborne pathogens infect tens of thousands of U.S. residents each year. The epidemiologies of specific tickborne diseases reflect the geographic distribution and seasonal activity of the transmitting tick species.<sup>27</sup> In Virginia, as well as the U.S., the most commonly reported tickborne illness is Lyme disease, followed distantly by spotted fever group rickettsiosis, ehrlichiosis, and anaplasmosis.

## Fairfax Data

- Tickborne disease cases are reported geographically throughout Fairfax County therefore all Fairfax County residents should be considered at risk of infection.
- After a nearly 13-fold increase in the number of reported cases of Lyme disease in Fairfax County in the early 2000s, the number of reported cases has fluctuated the last several years, with 284 cases reported in 2014.
- When examining the seasonality of Lyme disease, although reported throughout the year, the incidence is highest during the early summer months when the number and activity of nymphal *Ixodes scapularis* ticks, the primary vectors for human disease, is highest.
- The incidence of spotted-fever group rickettsiosis (including Rocky Mountain spotted fever) in Fairfax County has increased over the past decade, but has remained consistently lower than the rate for the rest of Virginia. In 2014, 20 cases of spotted fever group rickettsiosis were reported to FCHD.
- The incidence of ehrlichiosis and anaplasmosis in Fairfax County has fluctuated over the last decade but remained near or below the rate for the rest of Virginia. In 2014, a combined total of 5 cases of ehrlichiosis and anaplasmosis were reported to FCHD.

## Clinician Pearls

- Avoiding tick bites and promptly removing attached ticks remain the best disease prevention strategies. When prevention fails, early recognition and prompt treatment of patients with tickborne diseases can help avoid potentially severe complications. The CDC publishes the [Tickborne Diseases of the United States-A Reference Manual for Health Care Providers](#) which provides disease specifics with photos, identification of ticks with photos, lab and treatment information. It can be found online at <http://www.cdc.gov/lyme/resources/TickborneDiseases.pdf>.
- Maintain a high index of suspicion for Lyme and other tickborne diseases in all patients presenting with clinically compatible signs and symptoms. Note that some patients with Lyme disease never develop an erythema migrans rash.
- Laboratory testing can be an important aid in diagnosing a tickborne disease. However, Lyme disease patients tested within the first few weeks of illness may not have developed antibodies and may test negative.
- All suspected and confirmed Lyme disease cases should be reported to FCHD. For surveillance purposes, the CDC Lyme Disease case definition requires clinical and laboratory evidence of infection (i.e. 2-tier testing with EIA and Western Blot).
  - Necessary clinical evidence includes Lyme-associated signs and symptoms (e.g. erythema migrans rash, arthritis, or Bell's palsy).
  - Necessary laboratory evidence includes positive or equivocal results from ELISA (or IFA) serology and positive Western Blot IgM serology if the blood was drawn within 30 days of onset OR positive Western Blot IgG serology alone if blood was drawn more than 30 days after onset.
  - Note that the CDC case criteria are for surveillance purposes and not necessarily for clinical diagnosis.

**Table 5. Infection rate of select organisms\* among ticks collected by the Disease Carrying Insects Program, Fairfax County 2014**

Tick Species	Distribution of collected ticks by species (n=7,573)	# Submitted for Testing	% Infected	Corresponding Disease
Lone Star	43.3%	1,219	2.2% <i>E. chaffeensis</i>	Ehrlichiosis
			1.7% <i>E. ewingii</i>	Ehrlichiosis
American Dog	47.7%	3,543	0% <i>R. rickettsii</i>	Spotted-fever group rickettsiosis
Deer/Blacklegged	8.9%	311	14.8% <i>B. burgdorferi</i>	Lyme disease
Gulf Coast	0.1%	9	0% <i>R. parkeri</i>	Spotted-fever group rickettsiosis

\* Select organisms displayed are limited to only the bacteria that are associated with the corresponding tick species.

<sup>27</sup> CDC. Diagnosis and management of tickborne rickettsial diseases: Rocky Mountain spotted fever, ehrlichiosis, and anaplasmosis – United States. MMWR 2006;55(No. RR-04).

# West Nile Virus

## Background

West Nile virus (WNV) was first detected in New York City in 1999. At that time, the virus had already established itself across the eastern half of the country and produced the largest epidemic of arboviral encephalitis ever experienced in the United States. Since that time, WNV has expanded to the point that it can now be found in all 48 contiguous states and has produced two additional, large nationwide epidemics in 2003 and 2012.<sup>28</sup> From its initial appearance in 1999 to the end of 2014, there have been 41,762 cases of WNV human illnesses in the US reported to CDC, including 1,765 deaths. During this same period, Virginia has reported 134 human cases with 11 deaths.

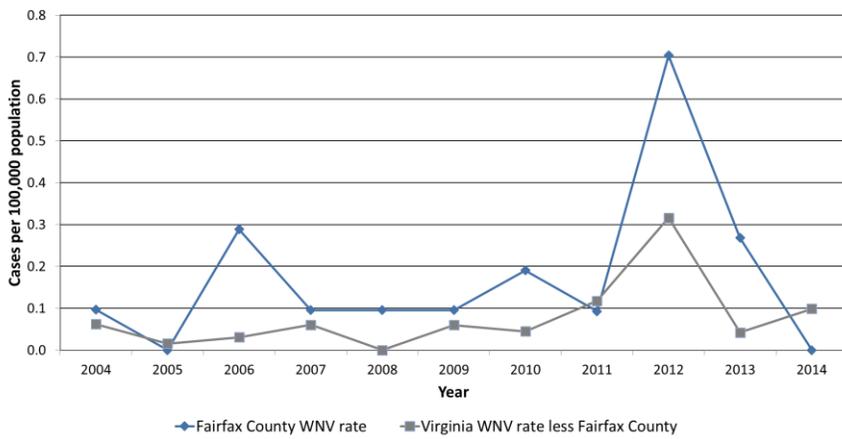
## Fairfax Data

- Between 2002-2014, 37 cases of WNV (including three fatalities) have been reported in Fairfax County.
- Zero cases of neuroinvasive WNV were reported in Fairfax County in 2014, which was a reduction in the number of WNV cases reported in the previous year (3 cases).
- The Health Department's Disease Carrying Insects Program (DCIP) routinely traps mosquitoes across the County from May through October. In 2014 routine mosquito season, 97,027 mosquitoes were tested in 3,623 pools. 220 pools were positive for WNV.
- The most abundant species in DCIP's surveillance collections were *Culex pipiens* and *Culex restuans* (greater than 82% of the total number of mosquitoes collected). Historically in Fairfax County, *Culex pipiens*, *Culex restuans*, *Culex erraticus*, *Aedes albopictus*, *Aedes vexans*, and *Anopheles punctipennis* are the species that have tested positive for WNV and are most likely to transmit WNV to humans.
- *Culex pipiens* and *Culex restuans* were the only species that tested positive for WNV in Fairfax County in 2014.

## Clinician Pearls

- West Nile virus (WNV) disease should be considered in any person with a febrile or acute neurologic illness who has had recent exposure to mosquitoes, blood transfusion, or organ transplantation, especially during the summer months in areas where virus activity has been reported. The diagnosis should also be considered in any infant born to a mother infected with WNV during pregnancy or while breastfeeding.
- Other arboviruses (e.g., La Crosse, St. Louis encephalitis, Eastern equine encephalitis, and Powassan viruses) should also be considered in the differential etiology of suspected WNV illness.
- All suspected and confirmed arboviral disease cases should be reported to FCHD.
- Although various drugs have been evaluated or empirically used for WNV disease, none have shown specific benefit to date. The National Institutes of Health maintains a registry of federally and privately supported clinical trials conducted in the United States and around the world. This registry is located at <http://clinicaltrials.gov/ct2/home>.
- The most effective way to avoid arboviral diseases is to prevent mosquito bites (mosquito repellent, long sleeves, etc.).

Figure 12. West Nile incidence rate by year, Fairfax County and the rest of Virginia



## FCHD's Disease Carrying Insects Program

- Performs vector-borne disease surveillance for West Nile virus, Lyme disease, and other diseases through routine monitoring of vector (mosquito and tick) populations.
- Mosquito control activities, which are primarily focused on larviciding, occur during the mosquito season (May through October).
- A strong outreach and education program is used to increase community awareness of vector-borne diseases. The educational efforts also introduce and reinforce personal protection and homeowner vector prevention and control messages.

<sup>28</sup> CDC. (updated: 2013, June 14). West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control. Retrieved from <http://www.cdc.gov/westnile/resources/pdfs/wnvguidelines.pdf>

# Outbreak Summary, 2014

## Background

Disease outbreaks are defined as clusters of an illness that occur in a similar time or place, with case numbers above expected for a specified population or location (e.g., school, hospital, business, or other facility) or in the community as a whole. Outbreaks are most often reported by institutions with the ability to recognize an unusual incidence of disease in groups of individuals and have a procedure in place to report to the health department. For rare diseases or diseases that require significant public health response (e.g., measles, anthrax, smallpox, or diphtheria), one case constitutes an outbreak and it may be an astute clinician that often identifies and reports a suspected outbreak. Outbreaks are not limited to diseases on the reportable disease list and suspected outbreaks of any disease should be reported to FCHD.

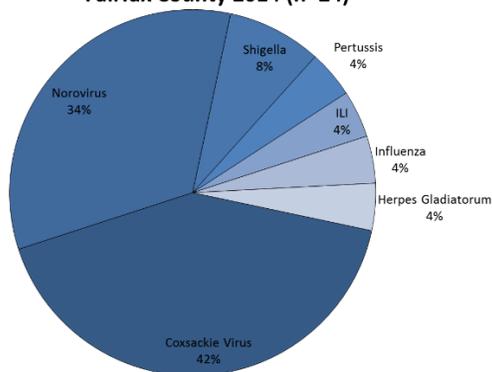
## Fairfax Data

- Suspected outbreaks of any disease should be immediately reported to FCHD. On report, the health department's CD/Epi Unit verifies the existence of the outbreak; conducts an investigation to determine the causative agent; facilitates specimen collection and laboratory testing; and recommends and/or implements appropriate infection control measures to limit the spread of disease. When necessary, enhanced or active surveillance methods are utilized.
- In 2014, FCHD investigated 43 outbreaks of illness that originated within Fairfax County and participated in numerous outbreak investigations that originated in nearby jurisdictions.
- 1112 individual cases of illness were attributed to the forty-three outbreaks reported in Fairfax County in 2014.
- Of the 43 outbreaks originating in Fairfax County in 2014; 47% were caused by norovirus and 19% caused by influenza like illness (ILI). For more information, see text box below.
- The most common outbreak investigation settings were long-term care facilities (30%) and daycares (25%).

## Clinician Pearls

- Immediately report suspected outbreaks of any disease to FCHD.
- To help limit the spread of norovirus, the agent most commonly associated with disease outbreaks in Fairfax County, clinicians should recommend the following for all patients:
  - Frequent and proper hand washing with soap and water. Alcohol-based hand sanitizers ( $\geq 62\%$  ethanol) may be helpful as an adjunct method of hand hygiene;
  - Avoidance of ill individuals and self-exclusion at home and away from others for at least 24 hours after the resolution of diarrhea and vomiting (48 hours for healthcare professionals);
  - Frequent and thorough cleaning using a chlorine bleach solution, or other commercial product registered with EPA as effective against norovirus, can also help interrupt the disease transmission cycle during norovirus outbreaks.
- FCHD has educational materials available on proper food handling and handwashing practices, which are keys to preventing communicable disease outbreaks, at <http://www.fairfaxcounty.gov/hd/food/foodtrain.htm>. Posters are also available as part of a broader handwashing campaign for posting in physician offices, restaurants, and public bathrooms at <http://www.fairfaxcounty.gov/hd/handwashing/>.

Figure 13. School/Daycare Outbreak etiology, Fairfax County 2014 (n=24)



## Infectious Disease Update: Coxsackievirus A6<sup>29</sup>

- Hand, foot, and mouth disease (HFMD) is a common viral illness caused by enteroviruses that predominantly affects children aged <5 years. The most common cause of HFMD in the United States has been enterovirus serotype coxsackievirus A16, which is typically attributed to mild illness.
- Since early 2012, CDC has identified Coxsackievirus A6 (CVA6) in multiple outbreaks.
- The age ranges of patients, severity of illness, seasonality of disease, and identification of CVA6 in these cases were unusual for HFMD in the United States.
- CVA6 has been associated with more severe and extensive rash than HFMD caused by other enteroviruses.

<sup>29</sup> CDC. Notes from the Field: Severe Hand, Foot, and Mouth Disease Associated with Coxsackievirus A6 – Alabama, Connecticut, California, and Nevada, November 2011 – February 2012. MMWR 2012;61(No. RR-12):213-14.



# Fairfax County Health Department Communicable Disease/Epidemiology Unit



## Contact Information

### Communicable Disease/Epidemiology Unit

*(for all communicable disease reports & guidance during business hours)*

703.246.2433 • TTY 711

FAX 703.653.1347

### Communicable Disease Hotline

*Health care providers should call 703-246-2433 to obtain the Communicable Disease Hotline number for reporting on weekends and evenings*

### Fairfax County Public Health Laboratory

703.246.3218 • TTY 711

FAX 703.653.9469

### Rabies Program

*(for all rabies reports & guidance during business hours)*

703.246.2433 • TTY 711

FAX 703.653.6648

### Rabies Hotline

*Health care providers should call 703-246-2433 to obtain the Rabies Hotline number for reporting on weekends and evenings*

## FCHD Communicable Disease Services

<p><b>Communicable Disease Surveillance and Investigation</b></p>	<ul style="list-style-type: none"> <li>FCHD conducts communicable disease surveillance and investigation with the goal of reducing morbidity and mortality within the community. When cases or outbreaks of disease are reported or identified, FCHD staff:               <ul style="list-style-type: none"> <li>Provide infection control guidance to clinicians, facilities, and infected individuals;</li> <li>Identify exposed individuals and provide guidance regarding disease prevention, including recommendations for the administration of prophylaxis (if appropriate).</li> </ul> </li> </ul>
<p><b>Rabies</b></p>	<ul style="list-style-type: none"> <li>Rabies program staff provides guidance regarding rabies exposure assessment and PEP administration 24 hours a day.</li> <li>FCHD Laboratory provides animal rabies testing for human or domestic animal exposures.</li> </ul>
<p><b>Tuberculosis</b></p>	<ul style="list-style-type: none"> <li>Tuberculosis program staff provides clinical guidance regarding TB diagnosis and treatment.</li> <li>Free laboratory testing, chest x-rays, medications, and case management services are provided for all Fairfax County residents.</li> </ul>
<p><b>HIV/AIDS</b></p>	<ul style="list-style-type: none"> <li>Free HIV testing (including anonymous option) and HIV harm-reduction counseling is available through FCHD walk-in clinics and STD clinics. Clients may visit <a href="http://www.fairfaxcounty.gov/hd/hiv-testing-aids/">http://www.fairfaxcounty.gov/hd/hiv-testing-aids/</a> or call 703-246-2411 for service hours.</li> <li>HIV/AIDS program staff coordinates HIV/AIDS treatment, including treatment obtained through the AIDS Drug Assistance Program.</li> </ul>
<p><b>STD</b></p>	<ul style="list-style-type: none"> <li>STD testing and treatment are available free of charge at each of the five FCHD district offices. Clients may visit <a href="http://www.fairfaxcounty.gov/hd/std-clinic-sched.htm">http://www.fairfaxcounty.gov/hd/std-clinic-sched.htm</a> or call 703-246-2411 to confirm service hours.</li> <li>STD program staff provides partner notification services for reported STD cases.</li> </ul>
<p><b>Laboratory</b></p>	<ul style="list-style-type: none"> <li>FCHD laboratory conducts testing in support of communicable disease investigations including testing for TB, HIV, STDs, enteric pathogens, and rabies virus.</li> </ul>
<p><b>Outreach</b></p>	<ul style="list-style-type: none"> <li>FCHD provides educational outreach regarding communicable disease prevention and control throughout the Fairfax Community.</li> </ul>

# Virginia Reportable Disease List

# Communicable Disease Reporting Guide for Clinicians

*Disease reporting requirements for clinicians practicing in the Commonwealth of Virginia.*

By law, Virginia clinicians must report diagnoses of the specified infections, diseases, and conditions listed on this poster. Both lab-confirmed and clinically suspect cases are reportable. The parallel system of lab reporting does not obviate the clinician's obligation to report. Some conditions (e.g., uncommon illness of public health significance, animal bites, HUS, pesticide poisoning, disease outbreaks) are rarely, if ever, identified by labs. We depend on clinicians to report.

Reports should be made to the patient's local health department (based on patient's home address) **and include at least the patient's name, home address, phone number, date of birth, gender, diagnosis, and date of symptom onset.** Most reports should be made within one working day of the diagnosis, but there are several important exceptions — please refer to the list on this poster.

Disease reporting enables appropriate public health follow up for your patients, helps identify outbreaks, provides a better understanding of morbidity patterns, and may even save lives. Remember that HIPAA does not prohibit you from reporting protected health information to public health authorities for the purpose of preventing or controlling diseases, including public health surveillance and investigations; see 45 CFR 164.512(b)(1)(i).3.

## COMPLIANCE

A civil penalty may be imposed against a person or entity for failing or neglecting to comply with reporting regulations as issued by the State Board of Health of the Commonwealth of Virginia. State Board issued regulations include the requirements to report the diseases listed on this poster, along with related data; and to cooperate with local and state public health authorities in their investigation and control of reportable diseases. (Regulations for Disease Reporting and Control § 32.1-27.)

## REPORT IMMEDIATELY\*

- |  |  |
|--|--|
| Anthrax  | Psittacosis  |
| Botulism   | Q Fever  |
| Brucellosis  | Rabies, Human and Animal                               |
| Cholera  | Rubella  |
| Diphtheria   | Severe Acute Respiratory Syndrome (SARS)               |
| <i>Haemophilus Influenzae</i> Infection, Invasive          | Smallpox (Variola)                                     |
| Hepatitis A,   | Syphilis (Primary and Secondary)                       |
| Influenza, Novel Virus                                     | Tuberculosis, active disease                           |
| Influenza –Associated Deaths in Children < 18 Years of Age | Tularemia  |
| Measles  | Typhoid/Paratyphoid fever                              |
| Meningococcal Disease                                      | Unusual occurrence of disease of public health concern |
| Monkeypox  | Vaccinia, disease or adverse event                     |
| Mycobacterial Diseases                                     | <i>Vibrio</i> infection                                |
| Outbreaks, All   | Viral hemorrhagic fever                                |
| Pertussis  | Yellow Fever   |
| Plague   |  |
| Poliovirus Infection                                       |  |

\*within 24 hours of diagnosis

## REPORT WITHIN THREE DAYS

- Acquired immunodeficiency syndrome (AIDS)
- Arboviral infections (e.g. dengue, EEE, LAC, SLE, WNV)
- Campylobacteriosis
- Chancroid
- Chickenpox (Varicella)
- *Chlamydia trachomatis* infection
- Creutzfeldt-Jakob disease if <55 years of age
- Cryptosporidiosis
- Cyclosporiasis
- Ehrlichiosis/Anaplasmosis
- *Escherichia coli* infection, Shiga toxin-producing
- Giardiasis
- Gonorrhea
- Granuloma inguinale
- Hantavirus pulmonary syndrome
- Hemolytic uremic syndrome (HUS)
- Hepatitis B (acute and chronic)
- Hepatitis C (acute and chronic)
- Hepatitis, other acute viral
- Human immunodeficiency virus (HIV) infection
- Influenza
- Lead, elevated blood levels
- Legionellosis
- Leprosy
- Lyme disease
- Lymphogranuloma venereum
- Malaria
- Mumps
- Ophthalmia neonatorum
- Rabies treatment, post-exposure
- Salmonellosis
- Shigellosis
- Spotted fever rickettsiosis
- *Staphylococcus aureus* infection, (invasive methicillin-resistant) and (vancomycin-intermediate or vancomycin-resistant)
- Streptococcal disease, Group A, invasive or toxic shock
- *Streptococcus pneumoniae* infection, invasive, in children <5 years of age
- Syphilis
- Tetanus
- Toxic substance-related illness
- Trichinosis (Trichinellosis)
- Tuberculosis infection in children <4 years of age
- Yersiniosis



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A Fairfax County, Va., publication. 03/2016.  
To request additional copies or request  
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