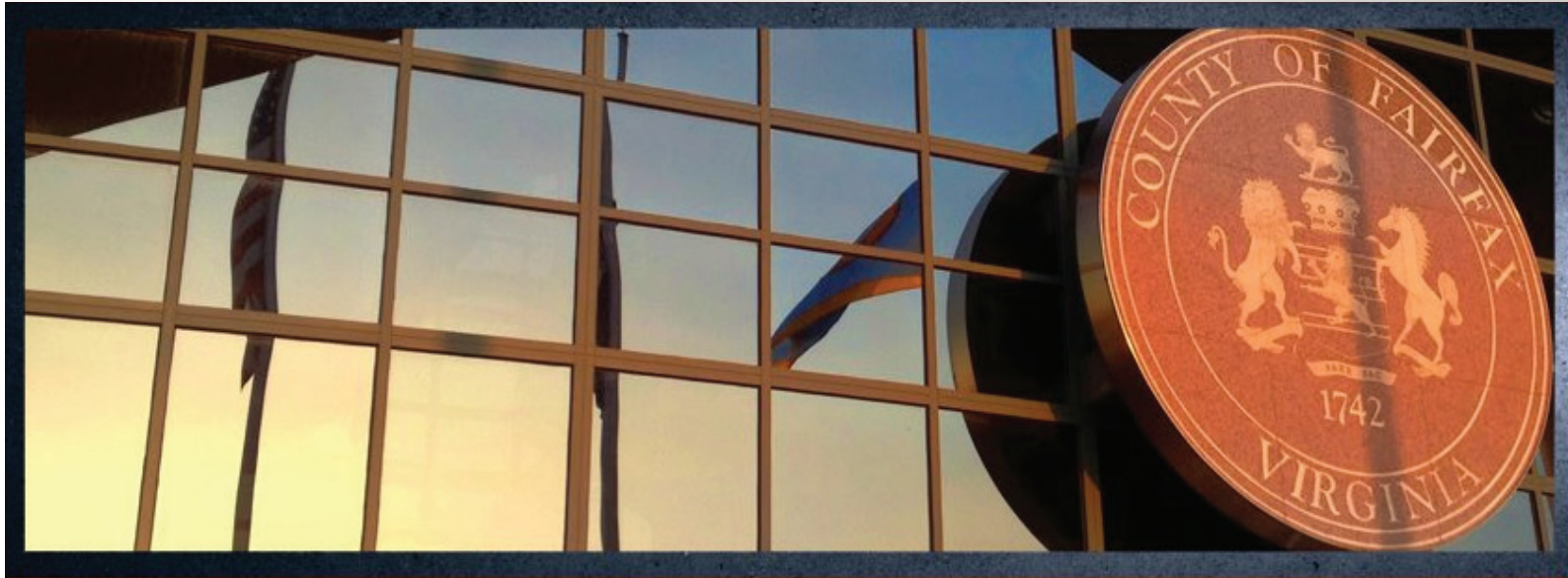


# Communicable Disease Summary 2015



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FAIRFAX COUNTY HEALTH DEPARTMENT  
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# Fairfax County Health Department 2015 Communicable Disease Summary



Dear Colleague:

This sixth edition of the Fairfax County Health Department’s Communicable Disease Summary highlights the reportable diseases that most impacted the Fairfax community in 2015. 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.

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 2006-2015\***

Disease	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5 year average (2011-2015)
AIDS <sup>^</sup>	72	74	69	65	62	51	57	48	53	34	49
Amebiasis	10	9	17	7	5	4	12	9	4	10	8
Brucellosis	0	0	0	0	0	0	0	2	0	1	1
Botulism, infant	0	0	0	1	0	1	0	0	0	0	<1
Campylobacteriosis	93	83	101	121	105	93	98	108	118	282	140
Chikungunya Fever	0	0	0	0	1	0	0	2	17	7	5
<i>Chlamydia trachomatis</i> infection <sup>^</sup>	1272	1310	1577	1572	1590	1800	2167	2262	2429	2642	2260
Cryptosporidiosis	7	5	13	19	17	24	26	33	29	48	32
Cyclosporiasis	0	0	0	0	0	0	0	0	2	0	<1
Dengue fever	-	8	2	0	3	7	7	5	7	8	7
<i>Escherichia coli</i> infection, Shiga toxin-producing <sup>£</sup>	31	30	59	27	27	13	12	13	14	8	12
Ehrlichiosis/Anaplasmosis	2	2	11	1	7	17	6	11	5	8	9
Giardiasis	83	100	78	93	110	52	59	69	61	54	59
Gonorrhea <sup>^</sup>	120	88	224	216	205	210	240	311	312	315	278
<i>Haemophilus influenzae</i> , invasive	3	2	6	9	8	13	8	11	8	13	11
Hansen's Disease (Leprosy)	1	0	0	0	1	1	0	0	0	0	<1
Hepatitis A, acute	20	24	24	10	8	0	14	8	6	12	8
Hepatitis B, acute	6	8	10	5±	1	4	1	4±	1	2	2
HIV infection <sup>^</sup>	149	121	126	105	113	108	123	127	127	110	119
Influenza-associated deaths (less than age 18)	0	0	0	1	0	1	0	0	1	0	<1
Lead, elevated blood levels	41	16	26	33	31	21	18	19	26	21	21
Legionellosis	5	3	9	7	7	9	5	13	7	15	10
Listeriosis	3	2	2	0	0	4	5	7	3	3	4.4
Lyme disease	102	208	191	260	256	146	149	260	284	202	208
Malaria	17	21	13	16	19	29	28	16	29	17	24
Measles	0	0	0	0	0	0	0	0	1	1	<1
Meningococcal disease ( <i>Neisseria meningitidis</i> )	4	1	1	1	2	2	0	2	0	0	1
Mumps	6	5	2	0	3	0	2	0	2	4	2
Pertussis	40	13	39	31	33	55	55	33	46	25	43
Q fever	0	0	0	0	1	0	0	1	1	0	<1
Rabies, human	0	0	0	1	0	0	0	0	0	0	0
Salmonellosis	152	187	165	111	147	123	106	127	152	150	132
Shigellosis	27	49	25	26	37	26	16	29	48	33	30
Spotted fever rickettsiosis	11	5	9	6	11	20	26	23	20	14	21
<i>Staphylococcus aureus</i> infection, invasive (MRSA)	-	12	97	52	51	91	96	96	74	105	92
Streptococcal disease, Group A, invasive	11	13	11	14	15	34	14	16	30	25	24
<i>Streptococcus pneumoniae</i> , invasive (less than age 5)	8	1	6	3	8	5	6	6	3	3	5
Syphilis, early stage <sup>^</sup>	36	33	34	37	39	34	60	64	42	42	48
Toxic Substances Investigation <sup>α</sup>	6	10	17	21	26	20	19	24	24	27	23
Trichinellosis	0	0	0	0	0	0	2	0	1	0	1
Tuberculosis	120	108	98	86	87	82	92	59	61	66	72
Typhoid fever	7	10	8	2	6	4	2	6	4	4	4
Varicella (Chickenpox)	301	180	155	64	59	56	87	61	56	49	62
Vibrio infection (non-cholera)	4	5	4	0	5	6	5	3	7	3	5
West Nile Virus infection	3	1	1	1	2	1	8	3	0	8	4
Yersiniosis	1	2	2	1	1	0	0	1	2	3	1
<b>Total</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>4374</b>	<b>3836</b>

<sup>^</sup> Surveillance data are updated retrospectively as reports are received by FCHD and VDH. FCHD only updates the previous three years for case counts in this table.  
<sup>\*</sup> 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.  
<sup>£</sup> A more restrictive case definition for *Escherichia coli* infection, Shiga toxin-producing was implemented in 2011.  
<sup>±</sup> Includes two case of perinatal Hepatitis B (2009, 2011, and 2013).  
<sup>α</sup> Toxic substances investigations includes arsenic, asbestos, elevated levels of cadmium, elevated levels of carbon monoxide, elevated levels of mercury, and pesticide poisoning.  
- Not a reportable illness during the year listed.

# Ebola virus disease

## Background

From 2014-2016 West Africa experienced the largest outbreak of Ebola in history, with multiple countries affected. The World Health Organization (WHO) reports that from 03/25/2014 through 04/13/2016 there were 28,616 cases and 11,310 deaths associated with this outbreak.<sup>1</sup> Symptoms of Ebola include fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal pain and unexplained hemorrhage. Symptoms may occur from 2 to 21 days after exposure to virus. The virus primarily is spread through direct contact with blood or body fluids of an infected person or with contaminated objects. During the outbreak, four cases occurred in the U.S. among people with exposure in West Africa and two cases were locally acquired following patient contact. Travelers from affected West African countries were screened on arrival and monitored by local health departments to ensure detection and appropriate management of potential cases. Hospitals improved infection control practices developed Ebola-specific protocols and trained staff to prepare for a potential case.

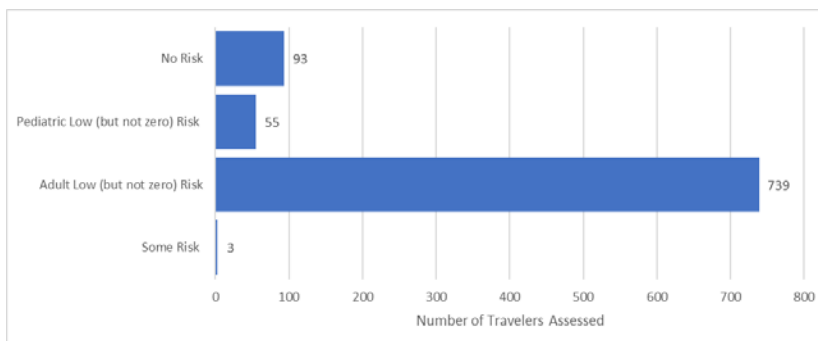
## Fairfax Data

- Virginia established Unified Command in response to the Ebola virus disease (EVD) threat. Virginia Department of Health was the Lead State Agency.
- Active monitoring of travelers from Ebola-affected areas was conducted from 10/27/2014 through 12/29/2015. Active monitoring was defined as public health actively monitored the health of a traveler as opposed to relying on the person to self-monitor and report symptoms if they develop. Monitoring included twice daily temperature checks and review for EVD-consistent symptoms for 21 days after the last potential exposure in an at risk area.<sup>2</sup>
- During Virginia's active monitoring program (10/27/2014 through 12/29/2015), FCHD monitored 890 travelers (40% of the Virginia total). Most were categorized as being at "low but not zero" risk (Figure 1). Three persons were categorized in the "some risk" group and [were placed in home quarantine during their risk period]. [None of the persons being monitored developed fever or symptoms consistent with EVD that would have led to further assessment at a Fairfax County Hospital.]
- Virginia established two Ebola Virus Disease treatment centers and eight assessment centers including XX and YY in Fairfax County.
- No cases of EVD occurred in Virginia.

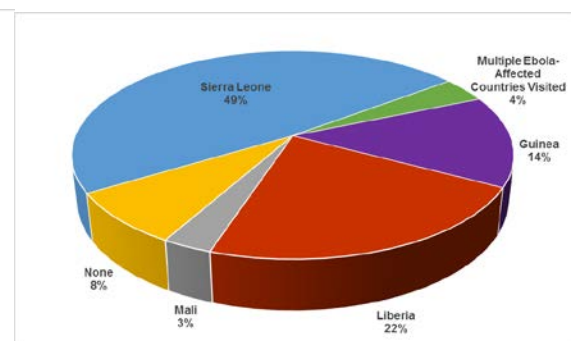
## Clinician Pearls

- The Ebola outbreak serves as a stark reminder of the threat that may be posed by travel-associated illness. Healthcare providers should continue to obtain a travel history (including location and dates of travel) and consider illness acquired during travel for patients with symptoms and signs of infection. Infection control precautions and patient placement should be consistent with the risk of travel-associated infection.
- Facilities and providers should stay up-to-date on active travel notices by consulting CDC's [Travelers' Health website](http://www.cdc.gov/travel).<sup>3</sup>
- Acutely ill patients who have been in Guinea, Liberia, or Sierra Leone during the previous 21 days should be assessed for Ebola virus exposure and other conditions listed on the CDC Traveler's Health website for West Africa (e.g., Lassa fever, yellow fever, other illnesses), and specifically for malaria, which is the most likely diagnosis in a febrile traveler returning from Guinea, Sierra Leone or Liberia.
  - Important risks for exposures to Ebola virus include: contact with blood or bodily fluids of acutely ill persons with suspected or confirmed Ebola virus disease, such as providing care in a home or healthcare setting; participation in funeral rituals, including preparation of bodies for burial or touching a corpse at a traditional burial ceremony; working in a laboratory where human specimens are handled; handling wild animals or carcasses that may be infected with Ebola virus (primates, fruit bats, duikers); and sexual history, specifically if the patient has had contact with the semen from a man who has recovered from Ebola virus disease (for example, oral, vaginal, or anal sex).<sup>1</sup>

**Figure 1: Ebola Traveler Monitoring by Exposure Risk Category, Fairfax County 2015**



**Figure 2: Ebola Traveler Monitoring by Exposure Risk Category, Fairfax County 2015**



<sup>1</sup> Centers for Disease Control and Prevention (CDC): Ebola (Ebola Virus Disease) (October 21, 2016): <https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html>

<sup>2</sup>CDC. Epidemiologic Risk Factors to Consider when Evaluating a Person for Exposure to Ebola Virus (August 28, 2015) <https://www.cdc.gov/vhf/ebola/exposure/risk-factors-when-evaluating-person-for-exposure.html>

<sup>3</sup>CDC. Travelers' Health (March 19, 2018) <https://wwwnc.cdc.gov/travel/>

# Influenza

## Background

The 2015-16 influenza season in the United States started later than the previous three flu seasons and peaked in early March, one of the later season peaks on record. Overall, influenza A (H3N2) viruses predominated nationally and locally early in the season, followed by influenza A (H1N1) viruses later in the season; Influenza B viruses were identified less frequently. The 2015-16 influenza season was moderate with a lower percentage of outpatient visits for influenza-like illness, lower hospitalization rates, and a lower percentage of deaths attributed to pneumonia and influenza compared with the 2014-15 season. The overall vaccine effectiveness for the 2015-16 season for influenza A and B for all ages was 47%. This is consistent with vaccine effectiveness of previous seasons with similar viruses.<sup>4</sup>

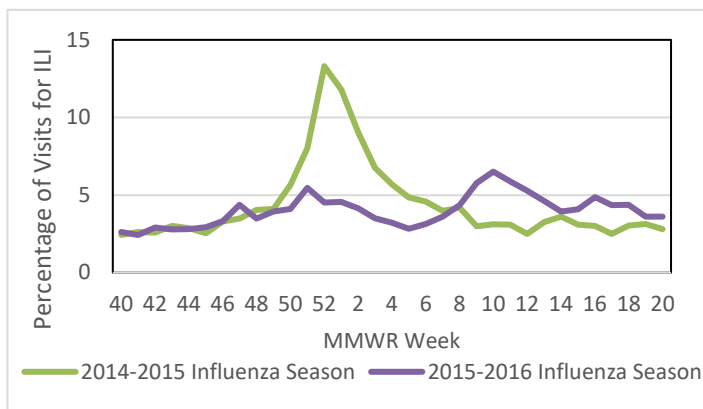
## Fairfax Data

- 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 indicated that influenza epidemiology in Fairfax County and Virginia during the 2015-16 influenza season mirrored that seen at the national level in relation to timing and viral types.
- FCHD monitoring of emergency department and urgent care center visits related to ILI activity showed a peak at MMWR week 10 (week ending March 12, 2016) at 6.5% which was much lower than the ILI activity peak during the previous flu season at MMWR week 52 (week ending December 27, 2014) at 13.3% (Figure 4).
  - Since the early 2000's, only three flu seasons have peaked in March (2015-2016, 2011-2012 and 2005-2006).<sup>5</sup>
- Five influenza-like illness (ILI) outbreaks were reported in Fairfax County during the 2015-16 influenza season. Two confirmed influenza outbreaks occurred at long-term care facilities, two ILI outbreaks occurred at schools and one ILI outbreak occurred at a child care center.

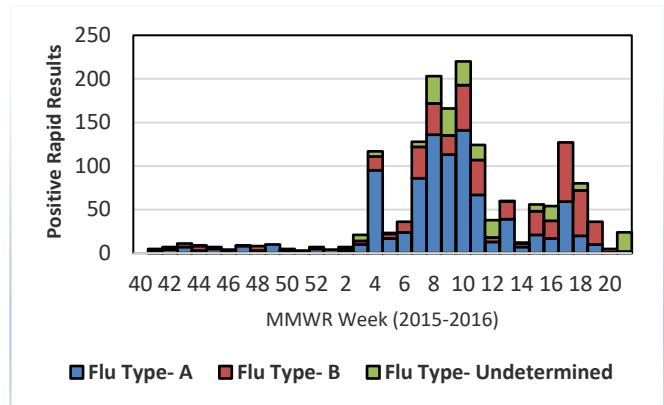
## Clinician Pearls

- 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, evidence-based healthcare worker immunization policy for influenza. This policy should include all employees and volunteers who may come into contact (within 6 feet) with patients. Any unvaccinated personnel should take measures to reduce the risk of transmitting influenza to a patient such as wearing a facemask throughout the influenza season. 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>.
- The 2015-16 influenza vaccine contained two new strains that were not present in the 2014-15 vaccine. The 2014-15 vaccine had reduced vaccine effectiveness, due to the virus's genetic material slightly mutating.
- Influenza-associated deaths in children < 18 years of age and all suspected institutional outbreaks of influenza should be immediately reported to the FCHD.

**Figure 3: Percentage of Visits for Influenza-like Illness (ILI) Reported by Fairfax Emergency Departments, By Influenza Seasons 2014-2015 and 2015-2016**



**Figure 4: Positive Rapid Results Reported to FCHD by Influenza type, Fairfax County, 2015-2016**



<sup>4</sup> CDC. (2016 June 10). Influenza activity — United States, 2015-16 season and composition of the 2016-17 influenza vaccines. MMWR 2016;65(22):567-575.

<sup>5</sup> CDC. (2016 September 29). Summary of the 2016-2016 Influenza Season (<https://www.cdc.gov/flu/about/season/flu-season-2015-2016.htm#flu-season>).

# Tuberculosis

## Background

In 2015, the number of reported U.S. tuberculosis (TB) cases increased by 1.6% (from 9,406 to 9,557), marking the first increase since 1992. Despite this slight rise in case number, the U.S. TB incidence rate has remained relatively stable, at 3.0 cases per 100,000 persons, since 2013. As in previous years, the majority (66.4%) of U.S. TB cases continued to be among foreign-born persons. Overall, more than 85% of TB cases in the U.S. were associated with untreated latent TB infection that progressed to disease after many years.<sup>6</sup>

## Fairfax Data

- In 2015, the TB incidence in the Fairfax Health District was 5.7 cases per 100,000 persons, nearly three times higher than the rate for the rest of Virginia (2.0 per 100,000), and almost double the U.S. rate (3.0 per 100,000).
- As is observed for the U.S., foreign-born individuals comprise the majority of local TB cases. Approximately 90% of incident TB cases identified in the Fairfax Health District between 2011 and 2015 were among foreign-born persons. The most common countries of birth, for foreign-born TB cases reported during this 5-year period, were Vietnam (13.3%), India (11.4%), Ethiopia (8.1%), Republic of Korea (8.1%), and Philippines (6.1%) (Table 2).
- Of the foreign-born TB cases reported by the Fairfax Health District in 2015, 50% occurred among individuals residing in the U.S. for 10 or more years, and 28% were among individuals residing in the U.S. for 20 or more years.
- In 2015, no Fairfax Health District TB cases exhibited multi-drug resistance (MDR), defined as no previous history of TB and resistance to at least isoniazid and rifampin. During 2006 – 2015, a total of 12 MDR-TB cases were identified in the Health District. No extensively drug-resistant (XDR) TB cases were reported by the Fairfax Health District in 2015.
- Three cases of TB/HIV co-infection were reported between 2014 and 2015 in the Fairfax Health District.

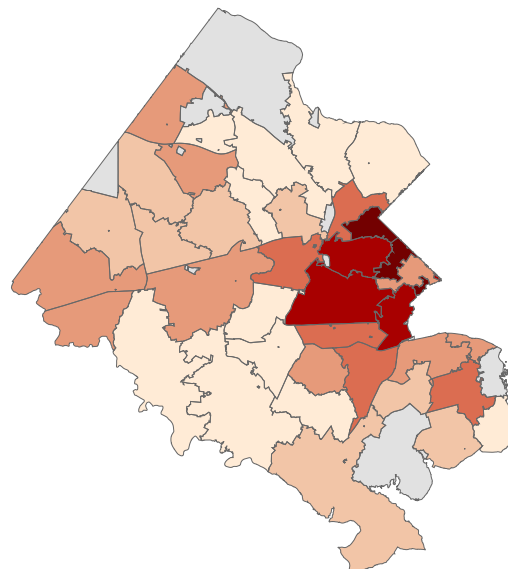
## Clinician Pearls

- FCHD now offers the QuantiFERON®-TB Gold In-Tube (QFT-GIT) blood test to individuals aged 5 years and older. The QFT-GIT test is not influenced by prior BCG vaccination.
- Active TB disease should be excluded prior to starting treatment for latent TB infection.
- 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).
- Suspect TB cases can be referred to the Fairfax County Health Department (FCHD) for evaluation to determine if they have active TB disease. **Report all suspect TB cases to FCHD by calling 703-246-2433.**
- Treatment for active TB is provided through FCHD without cost to Fairfax Health District residents. For residents with latent TB infection who meet treatment criteria, FCHD has available the 12-dose treatment regimen, which consists of isoniazid (INH) and rifapentine (RPT) administered weekly for 12 weeks. This combined INH-RPT regimen must be provided under directly observed therapy.

**Table 2. Tuberculosis cases by country of birth, Fairfax Health District 2011-2015**

Country	No. of cases	Percent
Vietnam	48	13.3%
India	41	11.4%
Ethiopia	29	8.1%
Republic of Korea	29	8.1%
United States	26	7.2%
Philippines	22	6.1%
Remaining 42 countries	165	45.8%

**Figure 5. Rate (per 100,000 population) of reported TB cases by zip code, Fairfax Health District 2011-2015**



<sup>6</sup> CDC. *Reported Tuberculosis in the United States, 2015*. Atlanta, GA: US Department of Health and Human Services, CDC; 2016.

# Human Immunodeficiency Virus

## Background

- In the United States from 2011 to 2015, the annual estimated number of Human Immunodeficiency Virus (HIV) infections decreased. In 2015, the estimated rate of newly diagnosed HIV infections was 12.3 per 100,000 population. Specific demographic groups continue to be disproportionately affected by HIV and AIDS at the national level, with persons identifying as black, non-Hispanic facing the highest burden of disease, followed by Hispanics. By risk group, men who have sex with men (MSM) are the most severely affected. As treatment and healthcare access has improved, an increase in the number of individuals living with HIV has been observed. In 2015, HIV infections progressing to AIDS was 5.7 per 100,000 population. At the end of 2014, the estimated national prevalence rate of diagnosed HIV infection was 299.5 per 100,000 population.<sup>7</sup>

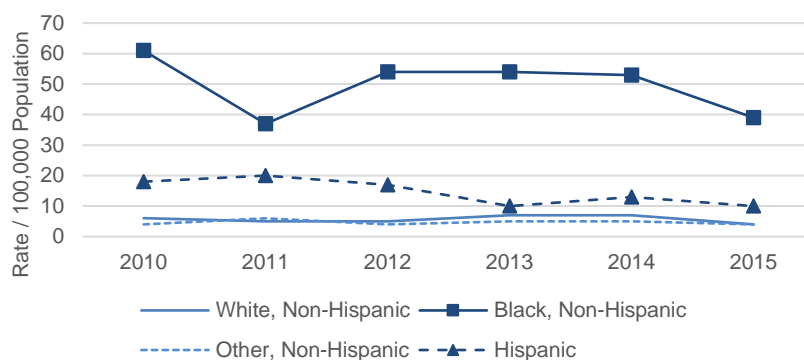
## Fairfax Data

- In Fairfax County from 2002 through 2010, the annual number of newly diagnosed HIV cases increased from 78 to 130. In 2011, this number decreased to 108 cases, but then gradually increased to approach the previous high at 129 cases in 2014.
- In 2015, 88 newly-diagnosed HIV cases were identified in Fairfax County, equivalent to a rate of 7.8 per 100,000 population. This was less than the 2015 annual Virginia statewide incidence rate of 12.8 per 100,000 population.<sup>8</sup>
- The 2015 Fairfax County HIV incidence rate for persons identifying as black, non-Hispanic was 11 times greater than that seen among residents identifying as white, non-Hispanic. Hispanic residents were also disproportionately affected, with an incidence rate more than 2.5 times that seen among white, non-Hispanic residents (Figure 6).
- In 2015, the most commonly reported risk group among newly identified HIV cases in Fairfax County was men who have sex with men (MSM) (48%) (Figure 7).
- At the end of 2015, 2,703 Fairfax County residents were living with HIV or AIDS, equivalent to a prevalence rate of 240 per 100,000 population; a 2% rate increase from 2014.
  - Among the Fairfax residents living with HIV at the end of 2015, 43% were black non-Hispanic, 33% were white non-Hispanic, and 16% were Hispanic. The most frequently identified transmission risk among individuals living with HIV was MSM (51%).
  - Among persons living with HIV, 49% had been diagnosed with AIDS by the end of 2015.

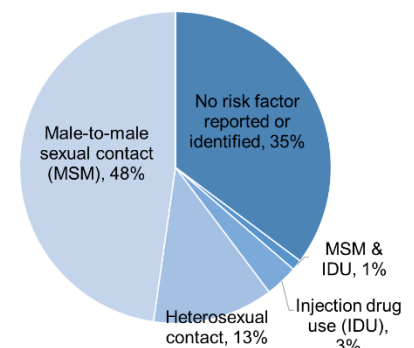
## Clinician Pearls

- The Centers for Disease Control and Prevention (CDC) recommends a onetime opt-out approach HIV screening for all patients aged 13-64 years regardless of risks for infection. Additional risk based screenings are recommended.
- 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>9</sup>
- The CDC issued 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/>). To detect chronic Hepatitis B infection, all MSM should be tested for HBsAg. Serological screening for Hepatitis C (HCV) is recommended at initial evaluation of persons with newly diagnosed HIV infection. MSM with HIV infection should be screened at least yearly using HCV antibody assays followed by HCV RNA testing for those with a positive antibody result.
- Confidential HIV testing is available at each of the five Fairfax County Health Department District Offices. Harm reduction counseling before and after testing is included. Appointments can be made by calling 703-246-2411.

**Figure 6. HIV incidence rates, by race/ethnicity, 2010-2015**



**Figure 7. Risk groups reported among newly diagnosed HIV cases, 2015 (n=88).**



<sup>7</sup> CDC. HIV Surveillance Report, 2015; vol. 27. <http://www.cdc.gov/hiv/pdf/library/surveillance/cdc-hiv-surveillance-report-2015-vol-27.pdf>. Published November 2016.

<sup>8</sup> VDH. Reportable Disease Surveillance, 2015. <http://www.vdh.virginia.gov/content/uploads/sites/13/2016/03/FullText2015numbered.pdf>.

<sup>9</sup> CDC. Sexually Transmitted Diseases Treatment Guidelines, 2015. MMWR 2015; 64 (No. RR-3).

# Sexually Transmitted Infections

## Background

The Centers for Disease Control and Prevention (CDC) estimates that at any time a total of 110 million sexually transmitted infections (STI) are present in the United States. This estimate includes 20 million new STIs each year that cost the healthcare system nearly \$16 billion in direct medical costs alone. Persons aged 15-24 years represent 50% of all new cases. Each infection 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 2015 were chlamydia with 1,526,658 cases and gonorrhea with 395,216 cases. There were 23,872 early syphilis cases reported in 2015.<sup>10</sup>

## Fairfax Data

- The 5-year incidence rate trend has been increasing for chlamydia, gonorrhea, and early syphilis across Virginia.<sup>11</sup>
- In Fairfax County, the rates of STIs have been increasing, but are below the overall rates for Virginia (Table 3).
- In 2015, 2,535 cases of chlamydia were identified in Fairfax County; a 17% increase from 2014. Chlamydia cases in Fairfax County follow statewide and national demographic trends with most persons for whom data were reported being of younger age (88% of cases aged 15-35 years) and female (64%). Individual chlamydia cases are not investigated in Virginia.
- In 2015, 326 cases of gonorrhea were identified in Fairfax County; a 21% increase from 2014. Among persons for whom demographic data were reported, gonorrhea cases are more frequently identified among persons aged 15-35 years (78%) and among males (74%). Only high priority (minor, pregnant, repeat infections, or co-infection with human immunodeficiency virus or early syphilis) gonorrhea cases are investigated in Virginia.
- In 2015, 44 cases of early syphilis were identified in Fairfax County; a 16% increase from 2014. All early syphilis infections are investigated in Virginia. In Fairfax County, identified early syphilis infections are almost exclusively among males (98%). Unlike chlamydia and gonorrhea infections, early syphilis cases are identified more frequently in older adults; however, in the past year the largest percentage increase in case counts was among the 15 to 24 year age group (100%). While the majority of early syphilis cases identified as non-Hispanic white in 2014 (58%), disparities by racial/ethnic group were more equally dispersed in 2015 with less than a 16 percent difference between groups. In 2015, 80% of early syphilis cases identified as being among the men who have sex with men (MSM) risk group.

## Clinician Pearls

In June 2015, the CDC updated Sexual Transmitted Diseases Treatment Guidelines<sup>12</sup> 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 limited the availability of effective treatment options. 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 among patients 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.
- Treatment options for genital warts include imiquimod 3.75% or 5% cream. Podophyllin resin is no longer a recommended regimen because there are other readily available safe and effective alternative regimens.

**Table 3. Rate per 100,000 population and percentage of cases of reportable sexually transmitted diseases, Fairfax County, 2015**

	Rate per 100,000 population		Percentage in Fairfax County												
			Race/Ethnicity				Gender		Age at Diagnosis (years)						
	Virginia	Fairfax County	Non-Hispanic White	Non-Hispanic Black	Hispanic	Other / Unknown	Male	Female	<15	15-24	25-34	35-44	45-54	55-64	65+
Chlamydia	435.4	217.3	19	13	14	54	36	64	0	58	30	7	2	1	0
Gonorrhea	102.5	27.9	22	23	12	44	74	26	0	43	35	14	7	2	0
E. Syphilis	10.2	3.8	36	27	20	16	98	2	0	23	36	20	14	5	2

<sup>10</sup> CDC. Sexually Transmitted Disease Surveillance 2015. Atlanta: U.S. Department of Health and Human Services; 2015. Retrieved from <https://www.cdc.gov/std/stats15/default.htm>.

<sup>11</sup> VDH. STD Annual Reports, 2015. Richmond: Virginia Department of Health; 2015. Retrieved from <http://www.vdh.virginia.gov/disease-prevention/std-annual-reports/>.

<sup>12</sup> CDC. Sexually transmitted diseases treatment guidelines, 2015. MMWR 2015; 64 (1-137). Retrieved from <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6403a1.htm>.



# Rabies

## Background

As a result of improved canine vaccination programs and stray animal control, a marked decrease in domestic animal rabies cases in the United States occurred after World War II. An estimated 16,000–39,000 persons are exposed to a potentially rabid animal and receive rabies virus post-exposure prophylaxis (PEP) each year in the United States. Administration of rabies PEP is a medical urgency, not a medical emergency, but decisions must not be delayed.<sup>13</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.

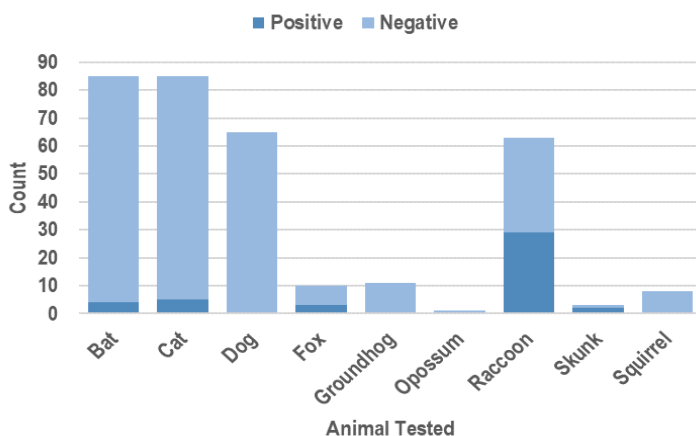
## Fairfax Data

- Rabies is endemic in Fairfax County's wildlife.
- In 2015, the Fairfax County Health Department (FCHD) Public Health Laboratory conducted direct fluorescent antibody testing for rabies virus on 331 animals of which 43 (13%) tested positive for rabies (Figure 8).
  - Among wild animals testing positive for rabies the most common species were raccoons (67%), bats (9%), foxes (7%), and skunks (5%). Among the 85 bats tested for rabies, only 4 (5%) were positive for rabies.
  - In 2015, while no dogs tested positive for rabies, three feral cats did test positive.
- In 2015, 2,238 human exposures to animals were reported to the Fairfax County Animal Protection Police (APP).
  - For more than 95% of these exposures, APP or FCHD were able to locate the offending animal for confinement or testing, generally eliminating the need for rabies PEP for the exposed individuals.
- Rabies PEP was initiated in a total of 225 Fairfax County residents in 2015.
  - Among these patients, 82 (36%) did not have an exposure history that met the Advisory Committee on Immunization Practices' criteria and should not have received rabies PEP.
- No human rabies cases were identified in Fairfax County in 2015. The most recent human case of rabies in Fairfax County was a fatal internationally-acquired canine rabies infection that occurred in 2009.

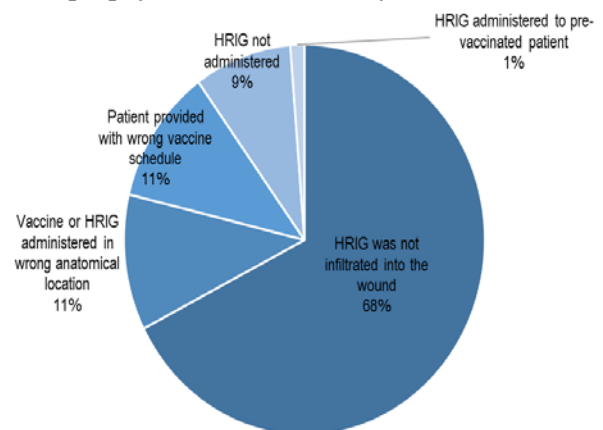
## Clinician Pearls

- All exposures to a potentially rabid animal must be reported immediately to the Fairfax County Animal Protection Police (APP) at 703-691-2131 (Fax: 703-830-7806). APP staff can assist with locating the exposing animal.
- 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.
- 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.
- FCHD rabies staff are available for consultation regarding rabies exposure assessment and PEP administration at 703-246-2433 (business hours) or 571-274-2296 (evenings, weekends, and holidays).
- FCHD investigations identified and corrected 80 errors in rabies PEP administration in 2015 (Figure 9). An online course with CME credits is available to provide further information about rabies exposure assessment and PEP administration at <https://phpa.health.maryland.gov/training/SitePages/rabies.aspx>.
- 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 8. Rabies animal testing results, Fairfax County, 2015 (n=331).**



**Figure 9. Errors made in rabies post-expose prophylaxis, Fairfax County, 2015 (n= 80).**



<sup>13</sup> Centers for Disease Control and Prevention. Human Rabies Prevention- United States, 2008. Recommendations of the Advisory Committee on Immunization Practices. Retrieved from <https://www.cdc.gov/mmwr/pdf/rr/rr57e507.pdf>

# Tickborne Diseases

## Background

Over the last two decades in the United States, the incidence of tickborne diseases has steadily increased due to geographical range expansion and population increase of ticks, improved diagnostics and clinical recognition of infections, and lack of effective prevention strategies. The epidemiology of specific tickborne diseases reflect the geographic distribution and seasonal activity of the transmitting tick species.<sup>14</sup> Therefore, tickborne disease risk is highly localized to the point that neighboring jurisdictions can experience substantial differences in disease burden. In Virginia, as well as the United States, the most commonly reported tickborne illness is Lyme disease, followed distantly by spotted fever group rickettsiosis, ehrlichiosis, and anaplasmosis. In 2015, over 35,000 people were diagnosed with Lyme disease in the United States.<sup>15</sup> From 2008 to 2015, the incidence of Lyme disease has increased from 12.1 to 18.5 cases per 100,000 population in Virginia.

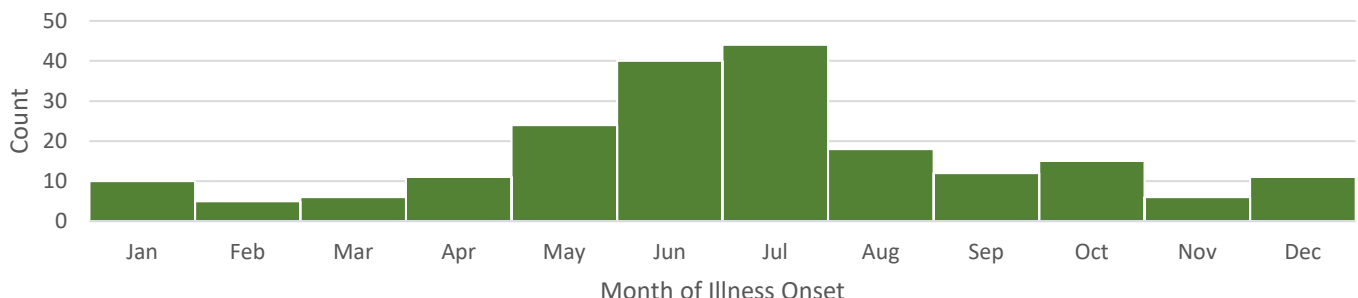
## Fairfax Data

- Tickborne disease cases are reported geographically throughout Fairfax County; therefore, all Fairfax County residents should be considered at risk of infection.
- In 2015, 202 cases of Lyme disease were reported in Fairfax County, a 29% decrease from 2014. Lyme disease cases ranged in age from 1 to 81 years with a median of 42 years and 55% were male. Cases of Lyme disease most frequently reported onset of illness in July and August (42%) (Figure 10).
- 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 2015, 14 cases of Spotted Fever Rickettsiosis were reported in Fairfax County, a decrease from the 20 cases reported in 2014. Cases ranged in age from 31 to 80 years with a median of 41 years and 64% were male.
- 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 2015, 8 cases of Ehrlichiosis/Anaplasma were reported in Fairfax County, compared with 3 cases in 2014. Cases ranged in age from 42 to 71 years with a median of 58 years and 75% were male.
- The Fairfax County Health Department – Disease Carrying Insects Program captures ticks for surveillance purposes. In 2015, 2,907 were captured, including species of Lone Star (60%), Blacklegged/Deer (20%), American Dog (19%), and Gulf Coast (<1%). Among the 217 Blacklegged/Deer ticks submitted for testing, 24 (11%) tested positive for the bacterium *B. burgdorferi*, the causative pathogen for Lyme disease.

## 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 Centers for Disease Control and Prevention (CDC) provides guidance for clinicians in [Tickborne Diseases of the United States-A Reference Manual for Health Care Providers](#).
- Maintain a high index of suspicion for Lyme and other tickborne diseases in all patients presenting with clinically compatible signs and symptoms. Approximately 70 to 80 percent of Lyme disease infected persons will present with an erythema migrans rash.
- Laboratory testing is an important component 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 the Fairfax County Health Department.
- For surveillance purposes, the Lyme Disease case definition requires clinical and laboratory evidence of infection.
  - Clinical evidence includes signs and symptoms of erythema migrans rash, arthritis, or Bell's palsy.
  - 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 illness onset OR positive Western Blot IgG serology alone if blood was drawn more than 30 days after illness onset.

**Figure 10. Cases of Lyme disease by month of illness onset, Fairfax County, 2015 (n=202).**



<sup>14</sup> CDC. Diagnosis and management of tickborne rickettsial diseases: Rocky Mountain spotted fever, ehrlichiosis, and anaplasmosis – United States. MMWR 2006;55(No. RR-04).

<sup>15</sup> CDC. Lyme Disease. Retrieved on February 10, 2018 from <https://www.cdc.gov/lyme/index.html>.

# Outbreak Summary, 2015

## 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.<sup>16</sup>

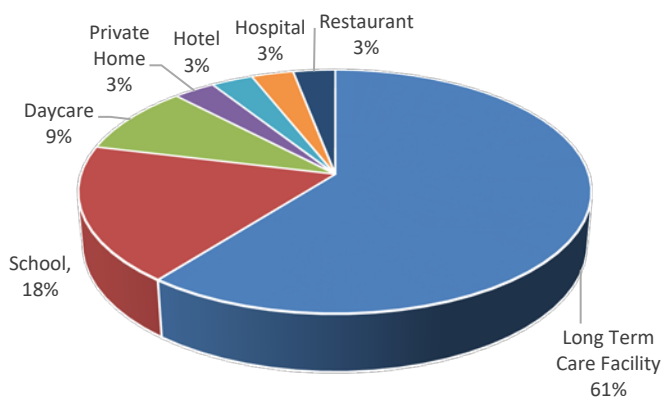
## Fairfax Data

- Suspected outbreaks of any disease should be immediately reported to FCHD. On report, the health department's Communicable Disease/Epidemiology Unit verifies the existence of the outbreak; investigates 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 2015, FCHD investigated 33 outbreaks of illness; the most common outbreak investigation settings were long term care facilities (61%) and schools (18%) (Figure 11).
- Of the 33 outbreaks originating in Fairfax County in 2015 by type of illness; 64% were gastrointestinal illness, 21% were respiratory illness and 12% rash illness.
- Statewide, 419 outbreaks were investigated with 49% suspected or confirmed norovirus, 19% suspected or confirmed influenza and 32% other conditions including pertussis, group A streptococcus, shigellosis, and campylobacteriosis.
- Reports of outbreak typically correspond with winter months and the seasonal transmission of norovirus and influenza. In 2015, January and February were the most common month (17 outbreaks reports) (Figure 12).

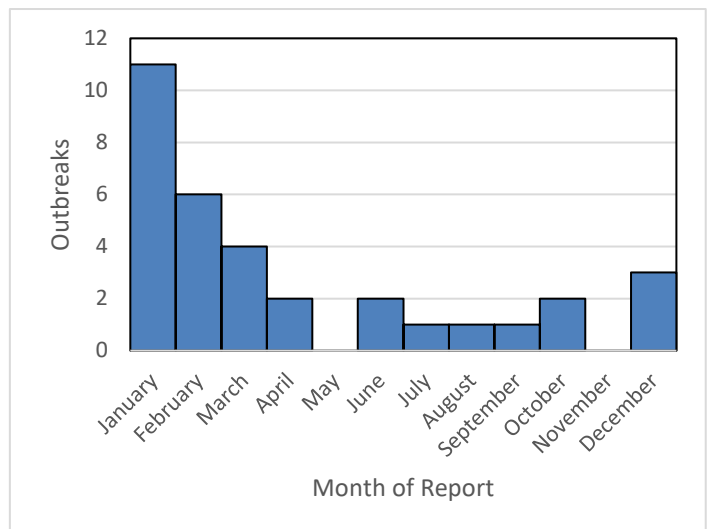
## Clinician Pearls

- Immediately report suspected outbreaks of any disease to FCHD.
- An unusual level of activity of any illness that may be spread from one person to another or that may be caused by a common exposure should be reported. The diseases that most commonly cause outbreaks in group settings are respiratory illnesses such as influenza, gastrointestinal illnesses that cause vomiting and/or diarrhea, and rash illnesses such as chickenpox or scabies. Other conditions, such as acute environmental exposures (e.g., carbon monoxide poisoning, pesticide intoxication) may also cause outbreaks. The local health department should be notified when an outbreak is suspected, even if no specific disease has yet been diagnosed.
- To help limit the spread of norovirus, the agent most commonly associated with disease outbreaks in Fairfax County, clinicians, particularly those at long-term care facilities and in childcare/school settings, should recommend the following:
  - 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 help interrupt disease transmission during norovirus outbreaks.

**Figure 11. FCHD Outbreaks by Facility Type, 2015 (n=33)**



**Figure 12. FCHD Outbreaks by Month of Report, 2015**



<sup>16</sup> Commonwealth of Virginia Regulations for Disease Reporting ([http://www.vdh.virginia.gov/content/uploads/sites/13/2016/03/Fact\\_Sheet\\_on\\_Outbreak\\_Reporting\\_Requirements\\_10262016.pdf](http://www.vdh.virginia.gov/content/uploads/sites/13/2016/03/Fact_Sheet_on_Outbreak_Reporting_Requirements_10262016.pdf))

# 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                                     | Vaccinia, disease or adverse event                     |
| Outbreaks, All   | <i>Vibrio</i> infection                                |
| Pertussis  | Viral hemorrhagic fever                                |
| Plague   | Yellow Fever   |
| 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





# Fairfax County Health Department

## Communicable Disease/Epidemiology Program



### Contact Information

#### Communicable Disease/Epidemiology Program

*(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

<b>Communicable Disease Surveillance and Investigation</b>	<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>
<b>Rabies</b>	<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>
<b>Tuberculosis</b>	<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>
<b>HIV/AIDS</b>	<ul style="list-style-type: none"> <li>HIV testing and HIV harm-reduction counseling is available through FCHD clinics. Clients may visit <a href="https://www.fairfaxcounty.gov/health/hiv-aids">https://www.fairfaxcounty.gov/health/hiv-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>
<b>STI</b>	<ul style="list-style-type: none"> <li>STI testing and treatment are available at each of the five FCHD district offices on a sliding scale fee. Clients may visit <a href="https://www.fairfaxcounty.gov/health/sexually-transmitted-infections">https://www.fairfaxcounty.gov/health/sexually-transmitted-infections</a> or call 703-246-2411 to confirm service hours.</li> <li>STI program staff provides partner notification services for reported STI cases.</li> </ul>
<b>Laboratory</b>	<ul style="list-style-type: none"> <li>FCHD laboratory conducts testing in support of communicable disease investigations including testing for TB, HIV, STIs, enteric pathogens, and rabies virus.</li> </ul>
<b>Outreach</b>	<ul style="list-style-type: none"> <li>FCHD provides educational outreach regarding communicable disease prevention and control throughout the Fairfax Community.</li> </ul>

Fairfax County Health Department  
Communicable Disease/Epidemiology Unit  
10777 Main Street, Suite 211  
Fairfax, VA 22030

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## Fairfax County Health Department 2015 Communicable Disease Summary

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To request additional copies or request  
information in an alternate format, call the  
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