Human Immunodeficiency Virus (HIV) Disease and Acquired Immunodeficiency Syndrome (AIDS)

Agent: Human Immunodeficiency Virus (retrovirus)
Mode of transmission: Person-to-person via unprotected sexual intercourse, use of contaminated needles, blood transfusions and transplants with organs from infected donors, from mother-to-child before or during birth or through breastfeeding, or contact of cut or abraded skin with body secretions carrying the virus.
Signs/Symptoms: Initial infection with HIV can cause an acute illness or fever, muscle pain, enlarged lymph nodes, and/or a rash which occurs approximately 2-4 weeks post-exposure; however, a person can be asymptomatic for several years. When the immune system is affected, the infection develops into AIDS.
Prevention: Preventive measures include safe sexual practices; screening of blood and plasma; and among infected mothers, antiretroviral prophylaxis, cesarean delivery before labor, and avoidance of breastfeeding.
Other Important Information: Data analysis methods for HIV/AIDS were changed in 2009. Statistics are now presented for HIV disease rather than HIV and AIDS as separate conditions, as explained below. Additional information regarding the changes in analytical methods is available on the following web address: http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/DAta/documents/Technical%20Notes%20and%20Glossary%20of%20Terms_Revised_04-2010.pdf. More detailed epidemiologic analyses of HIV/AIDS, as well as other sexually transmitted infections, is located at http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/DAta/. Rapid tests (which provide results within 30 minutes) are becoming more widely available and are used at various testing sites in Virginia. For more information, call your local health department, or contact the Virginia Department of Health HIV/STD/Viral Hepatitis Hotline at 1-800-533-4148.

HIV Disease: 2015 Data Summary	
Number of Cases:	1,062
5-Year Average Number of Cases:	1,125.0
% Change from 5-Year Average:	-6%
Incidence Rate per 100,000:	12.8

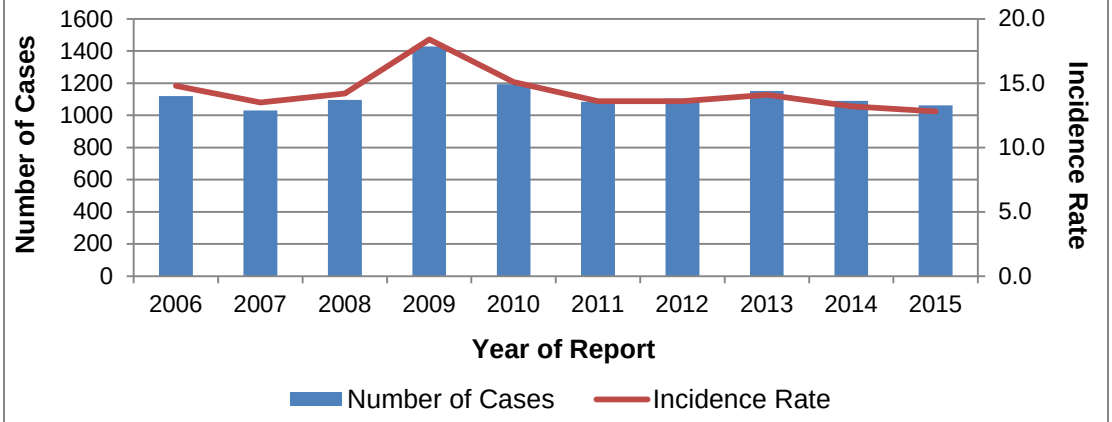
Change in Epidemiologic Analyses of HIV Disease

Beginning in 2009, VDH reassessed the way HIV and AIDS surveillance data were reported in order to better illustrate the epidemic in Virginia. Instead of approaching HIV and AIDS as two separate conditions of the same disease, it was found to be more helpful for epidemiologic and community planning purposes to evaluate all HIV and AIDS cases as one encompassing group: persons diagnosed or living with **HIV disease**. Before 2009, cases that were reported as having an AIDS-defining condition were excluded from the count of newly diagnosed HIV infections. Due to this change in methodology from previous years, those calculations pre-2009 are not comparable to calculations from 2009 and later, where HIV and AIDS are treated as one disease without considering disease

progression. Currently, any case that presents as having HIV or an AIDS-defining condition at the time of diagnosis is considered a newly diagnosed HIV disease case. It is not considered an incident case, however, as the person may have had HIV for a significant time prior to diagnosis. HIV incidence is measured through a separate surveillance process, which provides estimates for the state. The Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS) method in combination with HIV testing and antiretroviral use history data are used to estimate HIV incidence. The STARHS method uses a laboratory test to classify newly diagnosed HIV cases as either recent (occurring approximately within the last five months) or long-standing HIV cases.

Figure 29 below displays the trend in new HIV diagnoses when the current methodology is applied to the entire 2006-2015 period. For a more thorough discussion of the changes in the analysis of HIV and AIDS surveillance data, please refer to the web site address listed in the "Other Important Information" section above.

Figure 29. HIV Disease: Ten-Year Trend for Number of Cases and Incidence Rate, Virginia, 2006-2015



HIV Disease

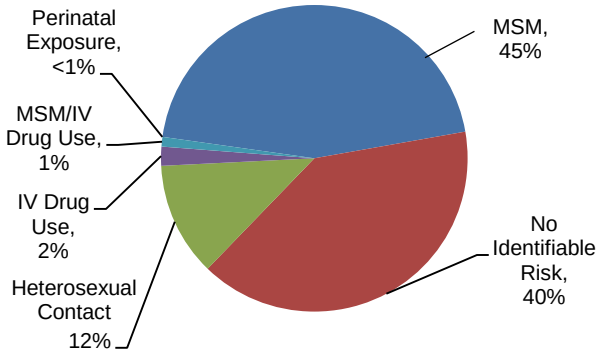
In 2015, 1,062 cases of HIV disease were reported in Virginia, as illustrated in Figure 29. Although this represents a slight decrease from the 1,090 reported cases in 2014, the number of cases reflects the stability of new HIV disease diagnoses over the last several years. The statewide incidence rate of new HIV diagnoses was 12.8 per 100,000 in 2015.

The highest HIV incidence rates in 2015 occurred in the 20-29 year age group (32.9 per 100,000), followed by the 30-39 year age groups (24.5 per 100,000). The 20-29 year age group has consistently experienced the highest incidence rate of new diagnoses since 2007 and represented 37% of all new diagnoses reported in 2015. Approximately 63% of all new HIV diagnoses in 2015 were among persons ages 20-39. Incidence rates among black, non-Hispanics and Hispanics were higher than their white, non-Hispanic counterparts in 2015. The black, non-Hispanic and Hispanic populations were eight and three times more likely than the white, non-Hispanic populations to be newly diagnosed with HIV in 2015. Overall, HIV incidence rates by race/ethnicity have remained

relatively stable over the past few years. Males have consistently shown higher incidence rates of HIV disease compared to females over time, and were over four times as likely as females to be diagnosed with HIV disease in 2015 (21.2 and 4.7 per 100,000, respectively).

Among the five health regions in Virginia, the highest incidence rate was observed in the central region, with 19.2 per 100,000, followed by the eastern region at 18.7 per 100,000. The region with the lowest HIV incidence rate was the southwest region with 5.3 per 100,000 population. Incidence by locality can be seen in the map below.

Figure 30. HIV Disease: Mode of Transmission, Virginia, 2015

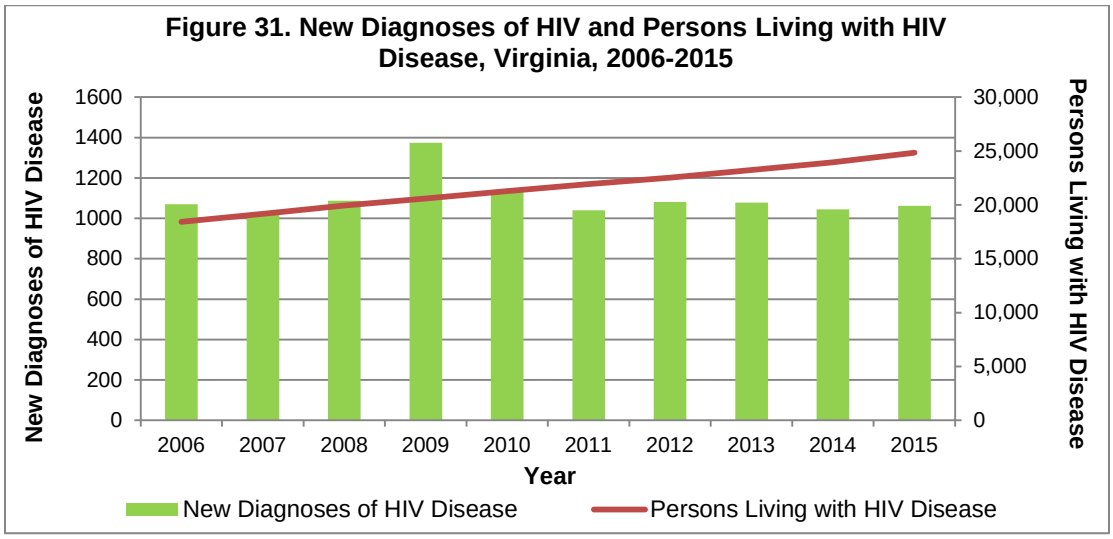


In 2015, the most frequently reported transmission category for HIV disease was men who have sex with men (MSM), which represented 45% of the new cases in Virginia (Figure 30). Among identified MSM cases, 53% were 20-29 years of age at diagnosis and 57% were black, non-Hispanic. Twelve percent of the newly diagnosed cases for 2015 were attributed to heterosexual contact, and 2% to intravenous (IV) drug use. No specific risk factors for transmission were identified for 40% of the new HIV diagnoses in 2015.

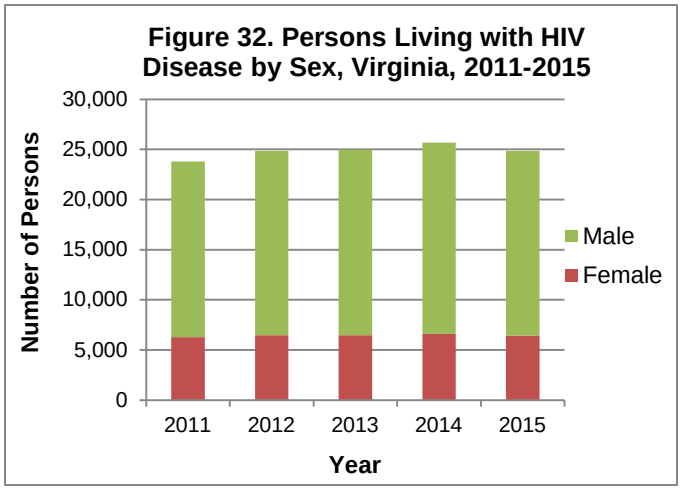
Persons Living with HIV Disease

Due to advances in medical therapies and care strategies, the number of persons living with HIV disease (PLWHA) has continued to increase. As of December 31, 2015, there were 24,853 persons known to be living with HIV disease in Virginia (Figure 31).

Figure 31. New Diagnoses of HIV and Persons Living with HIV Disease, Virginia, 2006-2015



Approximately 75% of PLWHA are male (Figure 32). In addition, 57% of PLWHA were between 40-59 years of age. Among PLWHA in Virginia, 59% were black, non-Hispanic and 47% were attributed to male-to-male sexual contact, 19% to heterosexual contact, and 9% to IV drug use. The highest rates of PLHWA were in the central and eastern regions of Virginia with 419.6 and 416.8 per 100,000 population, respectively. The lowest rate of PLWHA was in the northwest region with 150.3 per 100,000 population. Approximately 50% of those living with HIV disease have also been diagnosed with an AIDS-defining condition.



HIV Disease Incidence Rate by Locality
Virginia, 2015