

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

Agent: Human Immunodeficiency Virus (retrovirus)

Mode of Transmission: Person-to-person via unprotected intercourse, contact of cut or abraded skin with body secretions carrying the virus, use of contaminated needles, blood transfusions and transplants with organs from infected donors, or from mother to child before or during birth or through breastfeeding.

Signs/Symptoms: Initial infection with HIV can cause an acute illness of fever, muscle pain, and sore throat, after which the person can be asymptomatic for several years. Eventually the immune system is affected, causing 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.

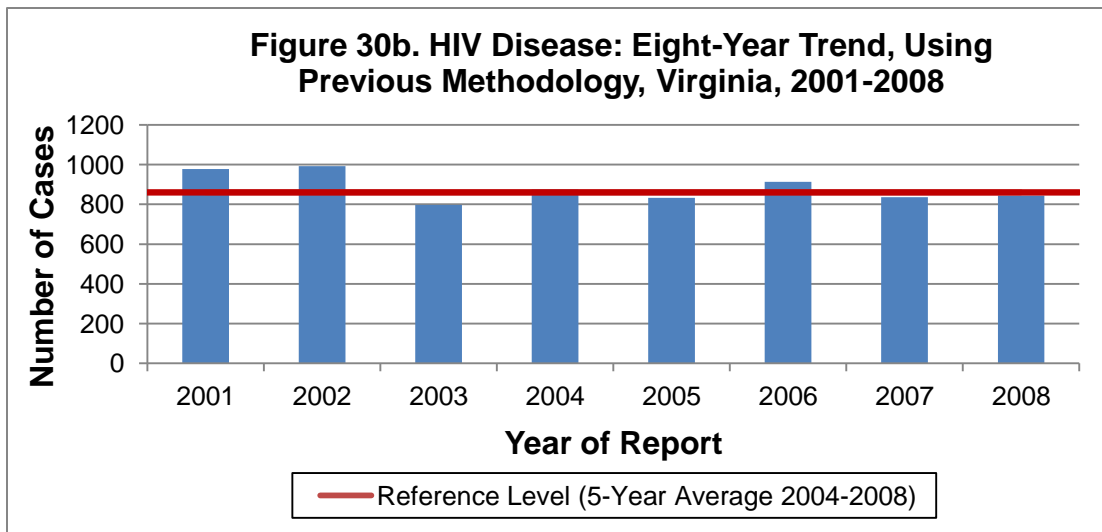
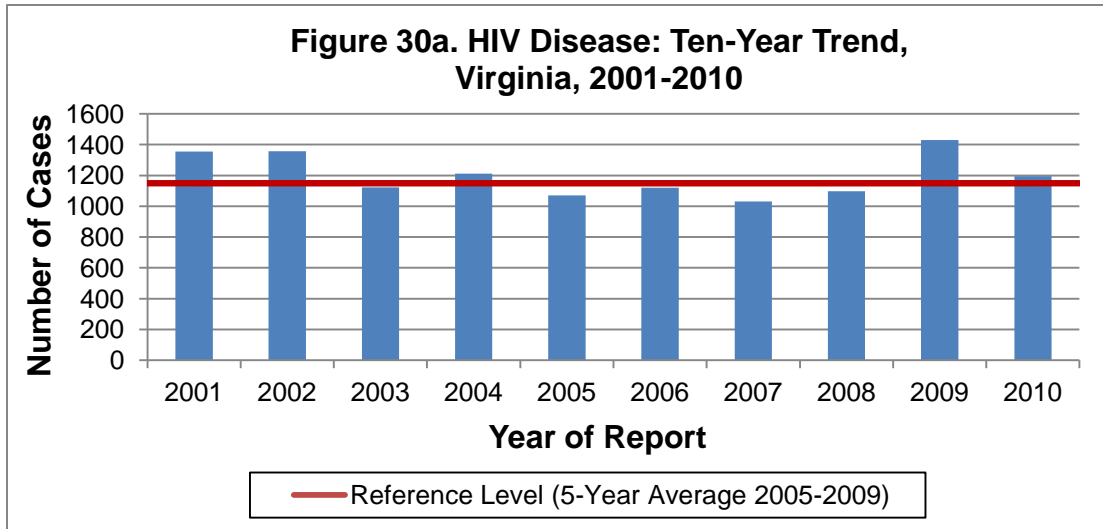
Other Important Information: Data analysis methods for HIV/AIDS were changed in 2009. Statistics are now presented for HIV disease instead of for HIV and AIDS, as explained below. Additional information regarding the changes in analytical methods is available at [http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/Data/documents/Technical Notes and Glossary of Terms Revised_04-2010.pdf](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 STDs, 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, please visit <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5524a2.htm>, call your local health department, or contact the Virginia Department of Health HIV/STD/Viral Hepatitis Hotline at 1-800-533-4148.

Change in Epidemiologic Analyses of HIV Disease

Due to the evolving understanding of the HIV epidemic and current surveillance practices, VDH modified the way HIV and AIDS surveillance data were reported beginning in 2009 to better depict the epidemic in Virginia. HIV, unlike most communicable diseases, is chronic in nature. For epidemiologic and community planning purposes, it is often helpful to evaluate all cases of HIV and AIDS as one group: persons diagnosed with HIV disease. This is a change from previous practices where patients initially reported with an AIDS defining condition were excluded from the count of new HIV infections. Because of this modification, calculations using the new method are not comparable to counts of reported HIV or AIDS cases from previous years using the older method. In general, a reported case of HIV disease refers to anyone who is newly reported as HIV infected, regardless of disease progression. This includes persons who have an AIDS defining condition at the first report of HIV infection.

Figure 30a shows the trend for HIV disease for the previous 10 years when this new methodology is applied to the entire 2001-2010 period. For comparison, Figure 30b uses the previous methodology to depict the trend for HIV infections for the 2000-2008 period

and is comparable to what was presented in earlier reports. Use of the older methodology will be phased out of this report as time progresses. 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 above in the Other Important Information section of this report.

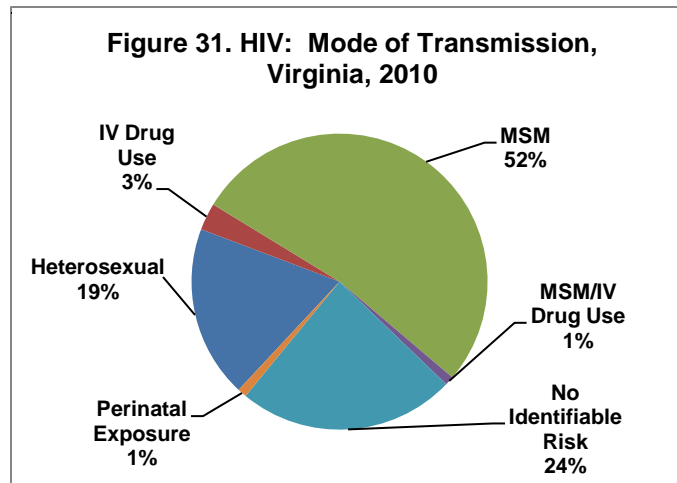


HIV Disease

As illustrated in Figure 30a, 1,194 cases of HIV disease were reported in Virginia during 2010. This represents a 16% decrease from the 1,429 cases in 2009. Analysis of HIV disease data by diagnosis date rather than date of report shows that new diagnoses have remained relatively stable and a substantial number of cases identified in 2009 had been diagnosed in previous years. The 2010 return to counts close to the 5-year average provides additional evidence that the increased number of cases reported in 2009 is the result of enhanced surveillance activities rather than of an increase in disease. A total of 14.9 cases per 100,000 population were reported in 2010.

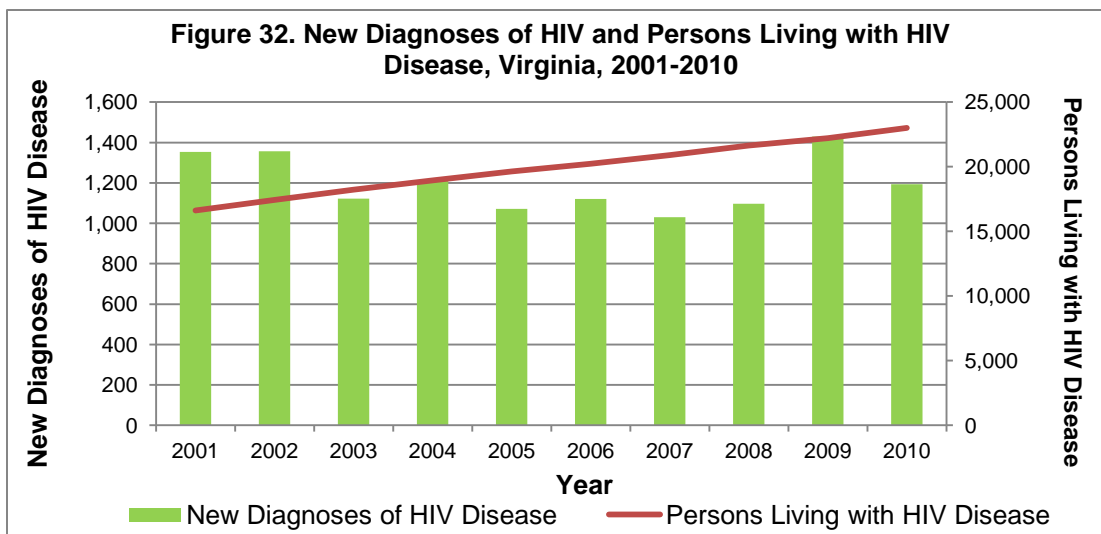
The highest HIV disease rates occurred in the 20-29 year age group (33.0 per 100,000), followed by the 30-39 and 40-49 year age groups (26.5 and 24.0 per 100,000, respectively). The incidence rate in the black population (46.3 per 100,000) was more than seven times the rate in the white population (5.9 per 100,000), and twice the rate in the “other” race population (22.7 per 100,000). Incidence rates among males have been consistently higher than rates among females. In 2010, males were more than four times as likely to be reported with HIV disease as females (23.2 and 7.4 per 100,000, respectively). In 2010, the eastern, central and northern regions reported the highest incidence rates (21.3, 19.5 and 15.9 per 100,000, respectively).

Men who have sex with men (MSM) was the most frequently reported transmission category for HIV disease and represented 52% of Virginia’s cases in 2010. Among cases attributed to MSM, 46% were 20-29 years of age, and 55% were black. Heterosexual contact was identified as the mode of transmission for 19% of all newly reported HIV disease cases, and 3% were attributed to intravenous drug use (Figure 31).

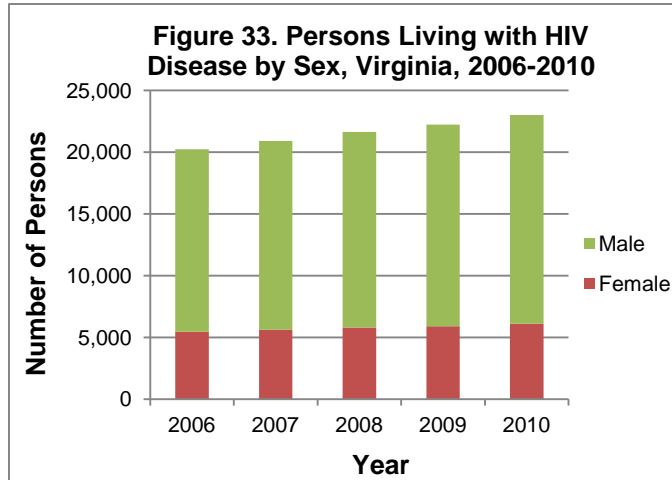


Persons Living with HIV Disease

While new diagnoses of HIV disease have remained relatively stable over the previous 10 years, the number of persons living with the disease continues to increase (Figure 32).



Advances in medical therapies have resulted in people living longer with HIV disease. As of December 31, 2010, 22,993 persons in Virginia, or one in 338 Virginians, were known to be living with HIV disease. Among those living with HIV disease, 74% are men (Figure 33), 49% have an AIDS defining condition, 61% are black, 36% are from the 40-49 year age group, and 41% are associated with MSM transmission.



AIDS

Prior to 1996, approximately 50% of those infected with HIV developed AIDS within 10 years. However, the introduction of anti-retroviral medications significantly extended this interval. The 28% increase in 2009 from the previous year's reported AIDS cases was thought to be the result of enhanced surveillance activities rather than a true increase in disease burden. This is supported by analysis of incidence by diagnosis date, which shows no evidence of an increase, and by the 593 cases of AIDS reported in 2010, which is more similar to the average for the 2005-2008 period. In 2010, the highest AIDS incidence rates were observed in the 40-49 year age group (16.8 per 100,000), followed by the 30-39 year age group (15.1 per 100,000).