

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.

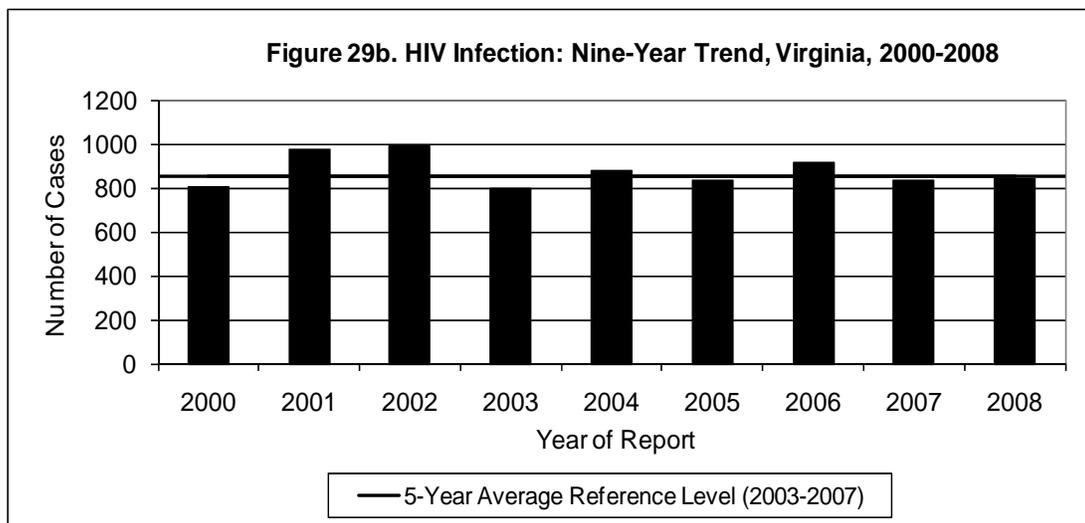
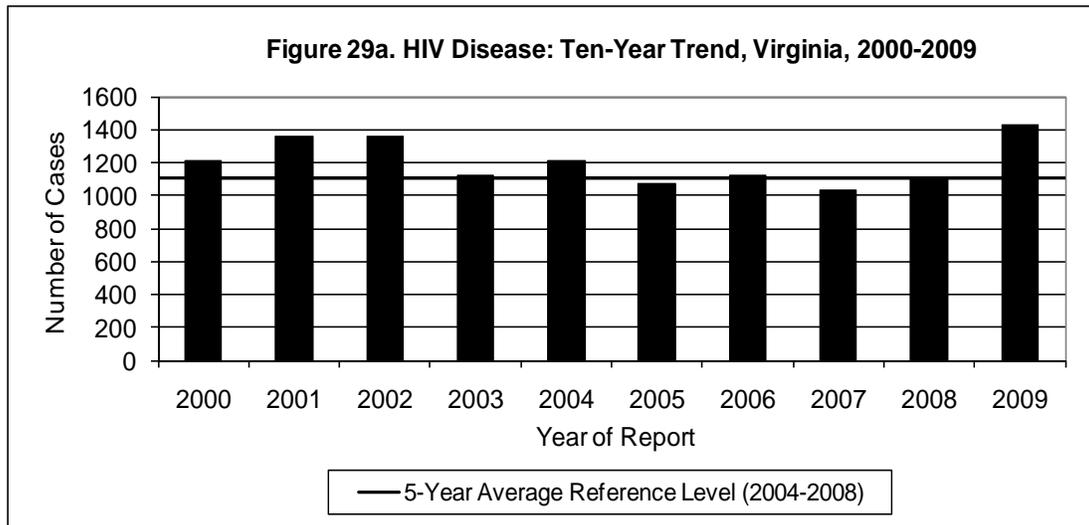
Prevention: Preventive measures include safe sexual practices; screening of blood and plasma; and among infected mothers, antiretroviral prophylaxis, cesarean delivery before labor, and avoidance of breastfeeding.

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%20Revised%2004-2010.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 recommended surveillance practices, VDH has modified the way HIV and AIDS surveillance data are analyzed to better depict the epidemic in Virginia. Unlike many communicable diseases, HIV infection 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. This new analytical strategy was implemented in 2009. Therefore, the number of cases of HIV disease reported in 2009 calculated using the new method is not comparable to counts of HIV or AIDS cases based on the previous method. 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 29a shows the trend for HIV disease for the previous 10 years when this new methodology is applied to the entire 2000-2009 period. For comparison, Figure 29b uses the previous methodology to depict the trend for HIV infections for the 2000-2008 period. 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 in the Other Important Information section of this report.



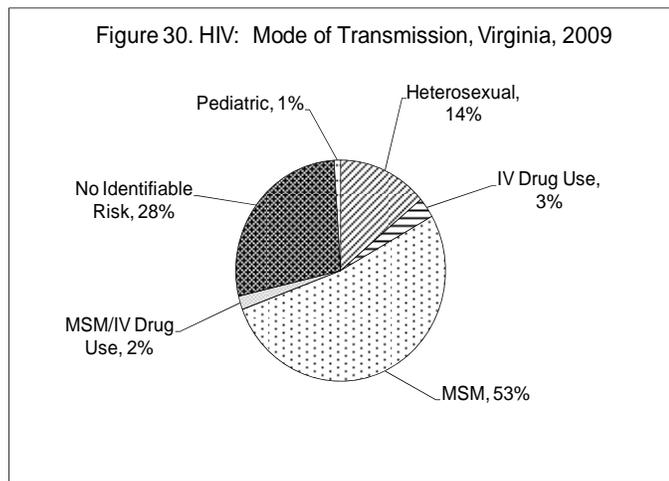
HIV Disease

As illustrated in Figure 29a, 1,429 cases of HIV disease were reported in Virginia during 2009. This represents a substantial increase from the 1,097 cases in 2008. The higher number of cases identified in 2009 is likely the result of enhanced surveillance activities. Analysis of HIV disease data by diagnosis date rather than date of report shows that a substantial number of cases identified in 2009 had been diagnosed in previous years,

suggesting that this does not represent a true increase in disease. A total of 18.1 cases per 100,000 population were reported in 2009.

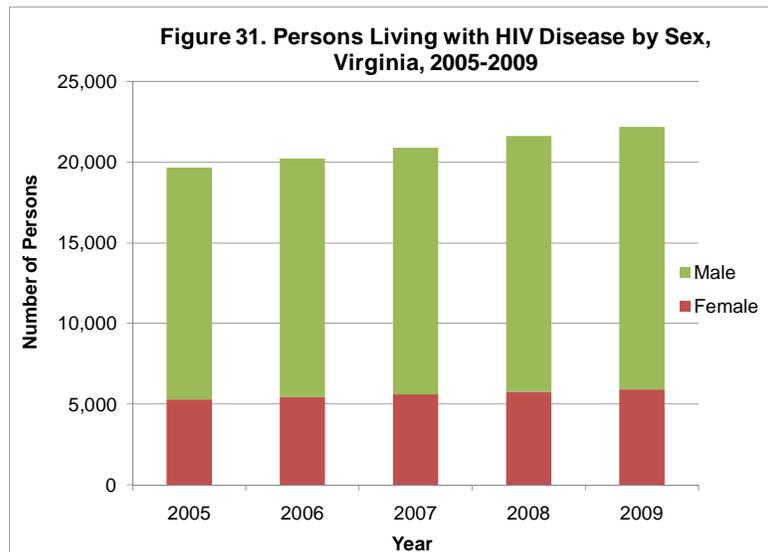
The highest HIV disease rates occurred in the 20-29 and 30-39 year age groups (38.3 and 32.5 per 100,000, respectively), followed by the 40-49 year age group (31.1 per 100,000). The incidence rate in the black population (53.0 per 100,000) was 6.5 times the rate in the white population (8.1 per 100,000), and almost twice the rate in the “other” race population (27.2 per 100,000). Incidence rates among males have been consistently higher than rates among females. In 2009, males were more than four times as likely to be reported with HIV disease as females (29.9 and 7.2 per 100,000, respectively). In 2009, the eastern, central and northern regions reported the highest incidence rates (20.3, 24.3 and 24.5 per 100,000, respectively).

Men who have sex with men (MSM) was the most frequently reported transmission category for HIV disease and represented 53% of Virginia’s cases in 2009. Among cases attributed to MSM, 36% were 20-29 years of age, and 48% were black. Heterosexual contact was the mode of transmission for 14% of all newly reported HIV disease cases, and 3% were attributed to intravenous drug use (Figure 30).

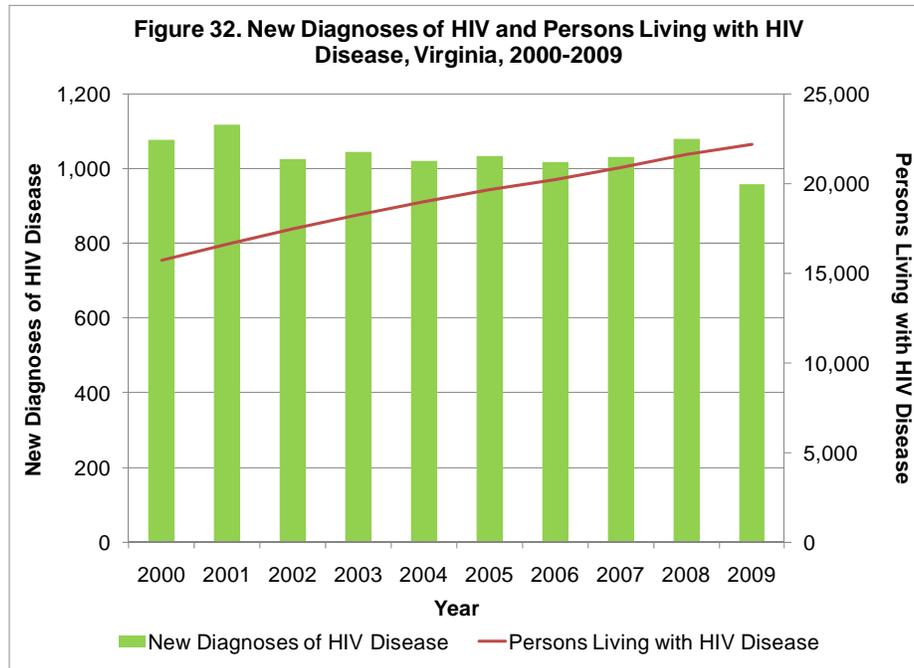


Persons Living with HIV Disease

Advances in medical therapies have resulted in people living longer with HIV disease. As of December 31, 2009, 22,559 persons in Virginia, or one in 349 Virginians, were known to be living with HIV disease. The majority of persons known to be living with HIV disease are men (74%) (Figure 31). Among those living with HIV disease, 49% have an AIDS defining condition, 61% are black, 36% are



from the 30-39 year age group, and 49% are classified as MSM. While new diagnoses of HIV disease have remained stable over the previous 10 years, the number of persons living with the disease continues to increase (Figure 32).



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 annual number of AIDS cases reported in Virginia remained consistent between 2005 and 2008, with an average of just over 613 new cases per year. The number of reported cases increased to 819 in 2009, which equates to a 28% increase from the previous year. As with HIV disease, enhanced surveillance activities in 2009 are likely to have artificially increased AIDS case counts. When AIDS morbidity is analyzed by diagnosis date, there is no evidence of an increase. The highest incidence rates in 2009 were observed in the 40-49 year age group (24.4 per 100,000), followed by the 30-39 year age group (19.9 per 100,000).