New HIV Diagnoses

In 2016, there were 39,782 new HIV diagnoses in the United States (US). Over the past five years from 2011 to 2015, the number of new HIV diagnoses in the US decreased by 5%.[1] This decline in new diagnoses suggests a true decrease in new infections, and can be attributed to increased HIV testing and targeted HIV prevention efforts in recent years. By April of 2008, all 50 states had confidential name-based HIV reporting.[1]
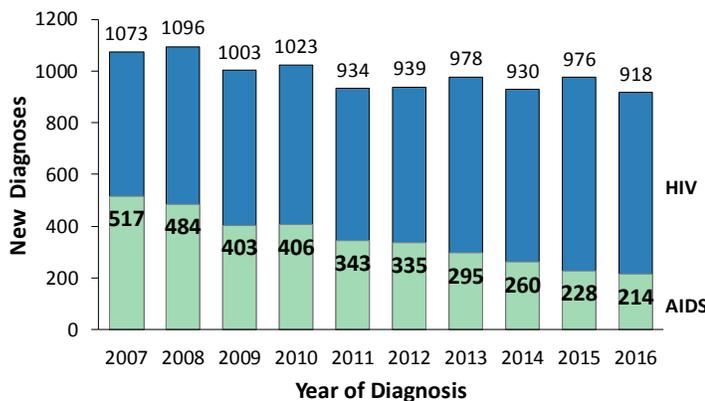
Nationally, men who have sex with men (MSM) are the population most affected with HIV, accounting for 67% of all new diagnoses in 2016. Among MSM, new HIV diagnoses have increased by 14% among Hispanics/Latinos and decreased by 10% among Whites from 2011 to 2015. New HIV diagnoses among Black MSM increased sharply over the past 10 years, but have leveled off over the last five years. The majority of all new HIV diagnoses in the US in 2016 were among persons ages 20-29 (37%) and 20-29 (25%). Geographical differences in the burden of HIV also exist in the US; Southern states represented more than half of all new diagnoses in the US, despite only making up 38% of the total population.

Figure 1: Newly Diagnosed HIV and AIDS Cases in Virginia, 2007-2016

NEW HIV DIAGNOSES IN VIRGINIA

According to national data, Virginia ranked 12th in the number of annual reported new HIV diagnoses in the US and 20th in highest rate of HIV diagnosis in 2015.[1] Virginia ranked 16th in the estimated rate

> **From 2007 to 2016, new HIV diagnoses in Virginia *decreased* by 14%.**

of AIDS diagnoses in 2015 and ranks 14th in the number of cumulative reported cases of AIDS since the beginning of the epidemic.[2,3] Virginia represented nearly 3% of the total population in the US and over 2% of the total HIV-positive population in 2016.

In the past 10 years from 2007 to 2016, new HIV diagnoses in Virginia decreased by over 14%. On average, 987 new HIV cases were diagnosed each year in Virginia. In 2016, 918 new HIV cases were diagnosed in Virginia. From 2007 to 2016, the average number of AIDS diagnoses reported annually was 349 cases. However, 2016 had the lowest number of AIDS diagnoses in Virginia, at 214 cases (Figure 1).
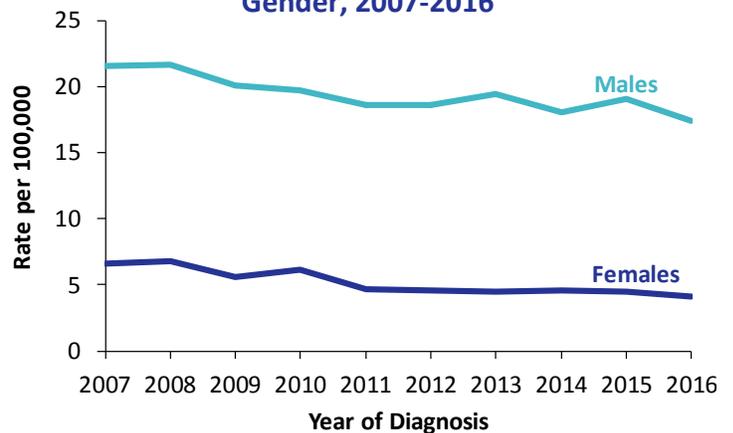
Figure 2: Newly Diagnosed HIV Cases by Gender, 2007-2016

By Gender

In 2016, approximately 81% of the newly diagnosed HIV cases were among men. Rates of new diagnoses among men have stayed relatively stable from 2007 to 2016, at an average of 219 per 100,000 population. Rates of newly diagnosed cases among women have declined from 7 per 100,000 in 2007 to 4 per 100,000 in 2016 (Figure 2). Men were nearly four times more likely to be diagnosed with HIV than women in 2016.

Figure 3: Newly Diagnosed HIV Cases by Age at Diagnosis, 2007 versus 2016
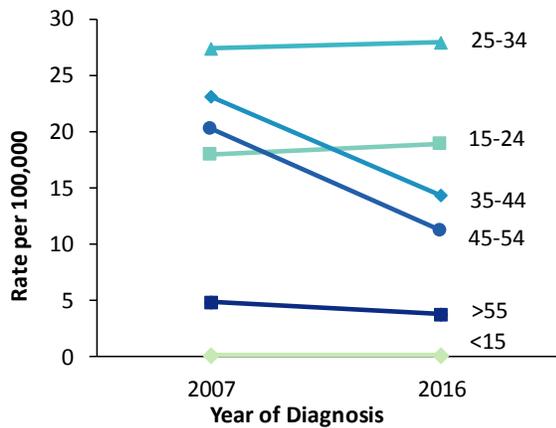
By Age at Diagnosis

Newly diagnosed HIV cases among the young adult population have increased in recent years. In 2016, 23% of the new diagnoses were among persons 15 to 24 years of age, whereas, 18% of the new diagnoses in 2007 were among this age group. Overall, the highest rate of diagnosis occurred among the 25-34 age group in 2016, at 48 per 100,000. Rates among the 35-44 age group and the 45-54 age group have steadily decreased over the past 10 years (Figure 3). Rates of new HIV diagnoses among persons ages 55 and older and 15 and under showed little change across the 10-year time period.

## Figure 4: Newly Diagnosed HIV Cases by Age at Diagnosis and Gender, 2016
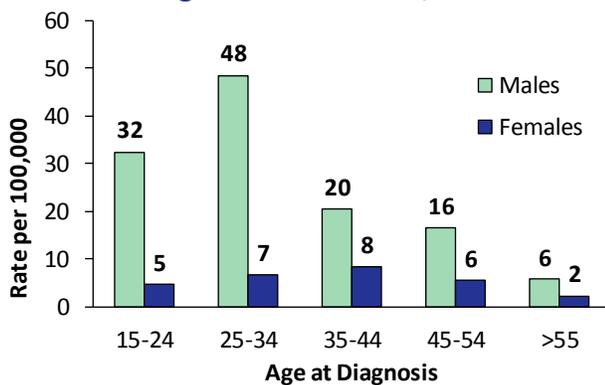
The highest rate of diagnosis in 2016 among males was the 25-34 age group (48 per 100,000), followed by the 15-24 age group (32 per 100,000) (Figure 4). Age at diagnosis for females was slightly older, as the highest rate of diagnosis for females was among the 35-44 age group (8 per 100,000).

Even so, men ages 25-34 were nearly seven times more likely to be diagnosed with HIV than women of the same age.

By Race/Ethnicity

In 2016, 59% of the newly diagnosed cases were Black, non-Hispanic, followed by White non-Hispanic (22%), and Hispanic/Latino persons (13%). On average from 2007 to 2016, 60% of all new HIV diagnoses were among Black persons. In 2016, Black persons were almost nine times more likely to be diagnosed with HIV than their White counterparts, and two times more likely than Hispanics/Latino persons. The lowest rate of diagnosis in 2016 was among the White population at 4 per 100,000.

## Figure 5: Newly Diagnosed HIV Cases by Race/ Ethnicity and Gender, 2016
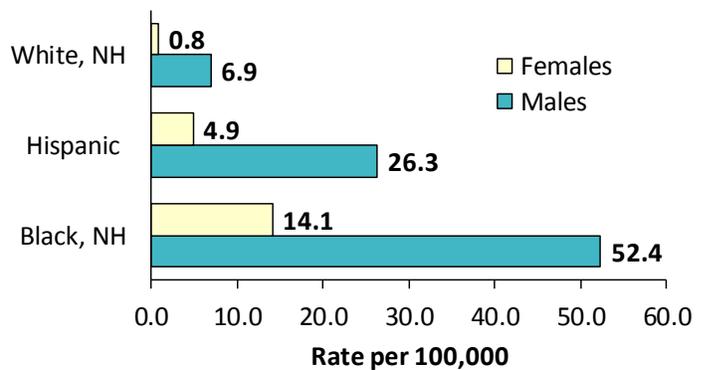
In 2016, Black women were 14 times more likely to be diagnosed with HIV than their White counterparts, and Hispanic/Latina women were five times more likely to be diagnosed than White women (Figure 5). Among the male population in Virginia, Black men were almost eight times more likely to be diagnosed than White men and nearly two times more likely to be diagnosed than Hispanic/Latino men. The greatest disparity in race and gender was among White, non-Hispanic persons, as White men were almost nine times more likely to be diagnosed with HIV than White women; whereas, Hispanic/Latino men were over five times more likely to be diagnosed than Hispanic/Latina women, and Black men were almost four times more likely to be diagnosed than Black women.

By Transmission Risk[‡]

In previous reports, HIV risk transmission was estimated using a multiple imputation (MI) procedure provided by CDC which probabilistically assigned those who did not report or identify a specific risk and estimated a potential risk factor for transmission. At the time of publication, this procedure was not available. Thus, those cases that did not report or identify a risk were not included in the graphs or analysis in this report.

Figure 6: Newly Diagnosed HIV Cases by Transmission Risk, 2016
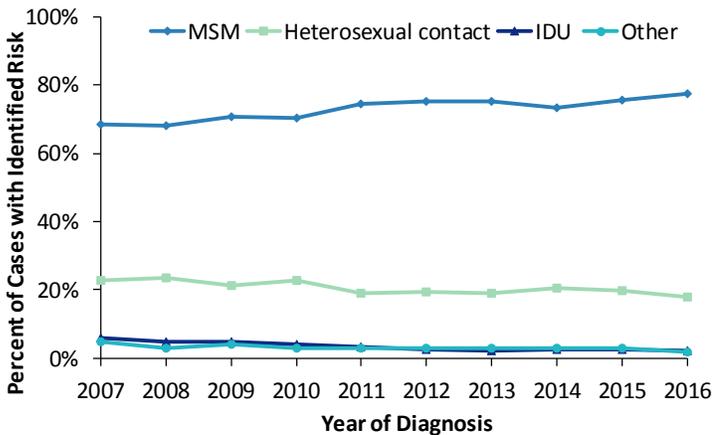

In 2016, nearly 31% of newly diagnosed persons did not report or identify a known risk for HIV transmission. From 2007 to 2016, the percent of newly diagnosed cases attributed to male-to-male sexual contact (MSM) increased from 68% to 77% (Figure 6). Heterosexual contact has remained relatively stable over the past 10 years, at an average of 21%. Injection drug use (IDU) has decreased, from 6% in 2007 to 2% in 2016.

By Health Region

Virginia is divided into 5 health regions for program planning purposes: Central, Eastern, Northern, Northwest, and Southwest. In 2016, the rate of diagnosis was the highest in the Central and Eastern regions at 17 and 15 per 100,000 population, respectively. The lowest diagnosis rates occurred in the Southwest and Northwest health regions (both at 5 per 100,000, population).

As evidenced from Figure 7, higher rates for persons newly diagnosed with HIV in 2016 are located in the southern Central region, and portions of the Eastern region. Lower rates occurred primarily in the Northern and Southwest regions, where rates by county ranged from 1 to 19 per 100,000.

Figure 7: Newly Diagnosed HIV Cases by City/County in Virginia, 2016
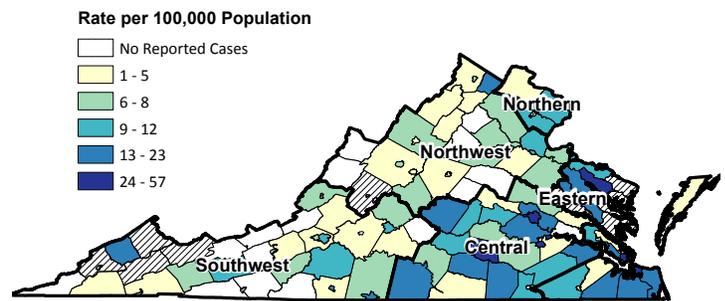
REFERENCES

1. CDC. HIV in the United States: *At A Glance*. Accessed November 9, 2016: https://www.cdc.gov/hiv/statistics/overview/ataglance.html

2. CDC. Diagnoses of HIV infection in the United States and dependent areas, 2014. HIV Surveillance Report 2015;26. Accessed November 16, 2016 at: https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-us.pdf.

3. Kaiser Family Foundation. Accessed January 2018 at: https://www.kff.org/state-category/hivaids/.

Ł New HIV diagnoses that did not report or identify a transmission risk were excluded from analysis.