New HIV Diagnoses

In 2017, there were 38,281 new HIV diagnoses in the United States (US).[1] From 2010 to 2017, the number of new HIV diagnoses in the US decreased by 11%.[2] 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. However, HIV diagnoses have increased among some subgroups.

Nationally, men who have sex with men (MSM) are the population most affected with HIV, accounting for nearly 70% of all new diagnoses in 2017.[1] Among MSM, new HIV diagnoses have increased by 17% among Hispanics/Latinos and decreased by 19% among Whites from 2010 to 2017. New HIV diagnoses among Black MSM remained stabled from 2010 to 2017.[2] The majority of all new HIV diagnoses in the US were among persons ages 20-29 (37%) and 30-39 (26%).[1] Geographical differences in the burden of HIV also exist in the US; rates were the highest in the South at 16 per 100,000 and lowest in the Midwest with 7 per 100,000.[1]

NEW HIV DIAGNOSES IN VIRGINIA

In 2017, Virginia ranked 13th in the number of annual reported new HIV diagnoses in the US and 17th in highest rate of HIV diagnosis.[1] Virginia ranked 21st in the estimated rate of AIDS

> **From 2008 to 2017, new HIV diagnoses in Virginia *decreased* by 20%.**

diagnoses in 2017 and ranks 13th in the number of cumulative reported cases of AIDS since the beginning of the epidemic.[1]

In the past 10 years from 2008 to 2017, new HIV diagnoses in Virginia decreased by almost 20%. On average, 969 new HIV cases were diagnosed each year in Virginia. In 2017, 883 new HIV cases were diagnosed in Virginia. From 2008 to 2017, the average number of AIDS diagnoses reported annually was 322 cases. However, 2017 had the lowest number of AIDS diagnoses in Virginia, at 182 cases (Figure 1).

By Gender

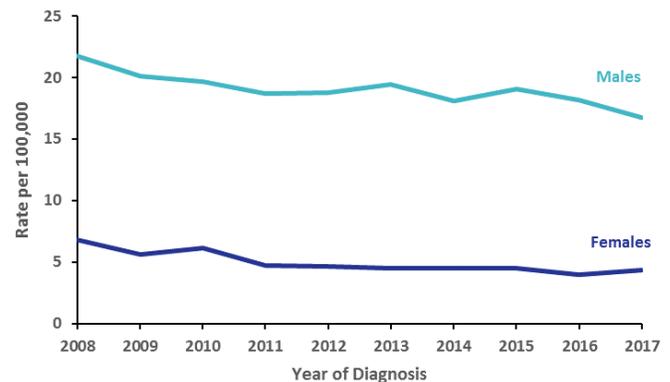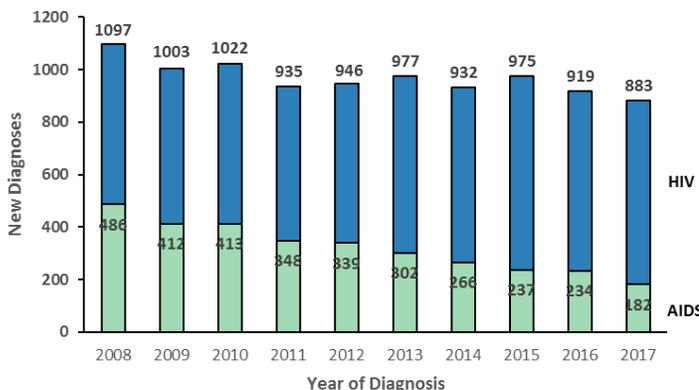**Figure 2: Newly Diagnosed HIV Cases by Gender, 2008-2017**

In 2017, approximately 79% of the newly diagnosed HIV cases in Virginia were among males. Rates of new diagnoses among males have declined from 2008 to 2017, from 22 per 100,000 population in 2008 to 17 per 100,000 in 2017. Rates of newly diagnosed cases among females declined from 7 per 100,000 in 2008 to 4 per 100,000 in 2017 (Figure 2). Males were nearly four times more likely to be diagnosed with HIV than females in 2017.

Figure 1: Newly Diagnosed HIV and AIDS Cases in Virginia, 2008-2017

Figure 3: Newly Diagnosed HIV Cases by Age at Diagnosis, 2008 versus 2017
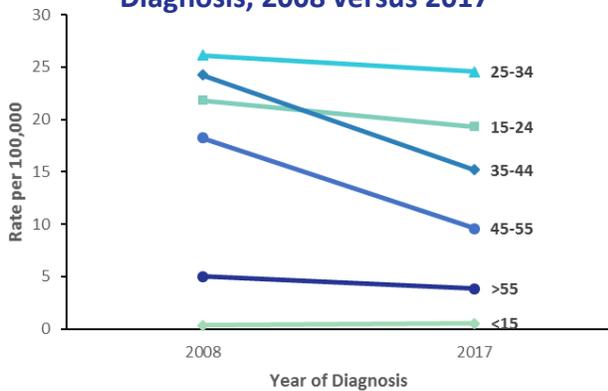
By Age at Diagnosis

The proportion of newly diagnosed HIV cases that occurred among the young adult population has increased in recent years. In 2017, 25% of new diagnoses were among persons under 25 years of age, whereas, 22% of new diagnoses were among this age group in 2008. Overall, the highest rate of diagnosis occurred among the 25-34 age group in 2017, at a rate of 25 per 100,000. Rates among the 35-44 and 45-54 age groups have steadily declined over the past 10 years, from 24 per 100,000 and 18 per 100,000, respectively, in 2008 to 15 per 100,000 and 10 per 100,000, respectively, in 2017 (Figure 3). Rates of new HIV diagnoses among persons ages 55 and older showed little change across the 10-year time period.

Figure 4: Newly Diagnosed HIV Cases by Age at Diagnosis and Gender, 2017
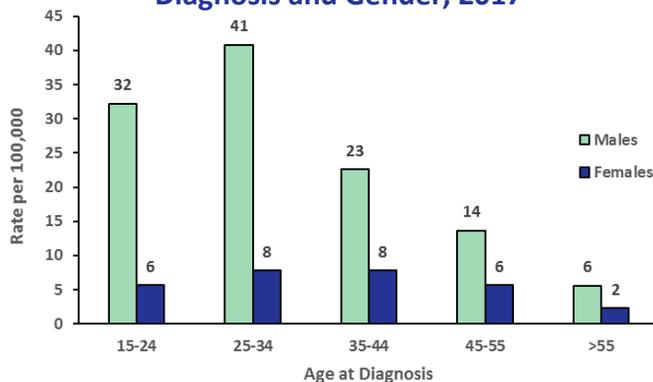

The highest rate of diagnosis in 2017 among males was the 25-34 age group (41 per 100,000), followed by the 15-24 age group (32 per 100,000) (Figure 4). Age at diagnosis for females was slightly older, with the highest rate of diagnosis for females among both the 25-34 and 35-44 age groups (both about 8 per 100,000). Males ages 25-34 were over five times more likely to be diagnosed with HIV than females of the same age.

By Race/Ethnicity

In 2017, 58% of the newly HIV diagnosed cases were Black, non-Hispanic (NH), followed by White, non-Hispanic (25%), and Hispanic/Latino (10%) persons. On average from 2008 to 2017, 60% of all new HIV diagnoses were among Black persons. In 2017, Black persons were over seven times more likely to be diagnosed with HIV than their White counterparts, and nearly three times more likely than Hispanics/Latinos. The lowest rate of diagnosis in 2017 was among the White population at 4 per 100,000.

### Figure 5: Newly Diagnosed HIV Cases by Race and Gender, 2017
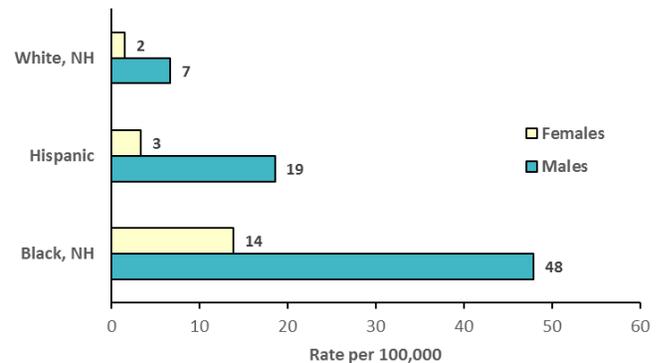
In 2017, Black females were nine times more likely to be diagnosed with HIV than their White counterparts, and Hispanic/Latino females were two times more likely to be diagnosed than White females (Figure 5). Among the male population in Virginia, Black males were seven times more likely to be diagnosed than White males and nearly three times more likely to be diagnosed than Hispanic/Latino males. The greatest disparity in race and gender was among Hispanic/Latino persons, as Hispanic/Latino males were over five times more likely to be diagnosed with HIV than Hispanic/Latino females; whereas, White males were over four times more likely to be diagnosed than White females, and Black males were over three times more likely to be diagnosed than Black females.

By Transmission Risk

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. Between 2008-2017, an average of 25% of reported HIV cases had no reported transmission risk. These cases were estimated using the MI procedure.

Figure 6: Newly Diagnosed HIV Cases by Transmission Risk, 2008-2017
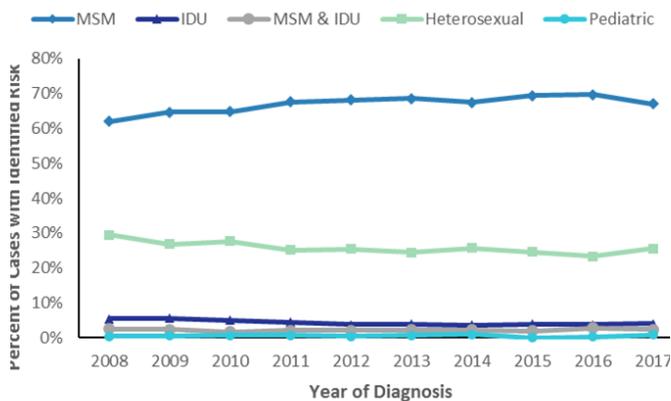
From 2008 to 2017, the percent of newly diagnosed cases attributed to male-to-male sexual contact (MSM) increased from 62% to 67% (Figure 6). Heterosexual contact decreased slightly over the past 10 years, from 30% in 2008 to 26% in 2017. Injection drug use (IDU) has remained relatively stable over the past 10 years, at an average of 4%.

By Health Region

Virginia is divided into 5 health regions: Central, Eastern, Northern, Northwest, and Southwest. In 2017, the rate of diagnosis was the highest in the Eastern and Central regions at 17 and 15 per 100,000 population, respectively. The lowest diagnosis rates occurred in the Southwest and Northwest health regions (5 per 100,000 in each region).

As evidenced from Figure 7, higher rates for persons newly diagnosed with HIV in 2017 are located in the Northern region, Eastern region, and portions of the Central region. Lower rates occurred primarily in the Northwest and Southwest regions, where rates by county ranged from 2 to 19 per 100,000.

Figure 7: Newly Diagnosed HIV Cases by City/County, 2017
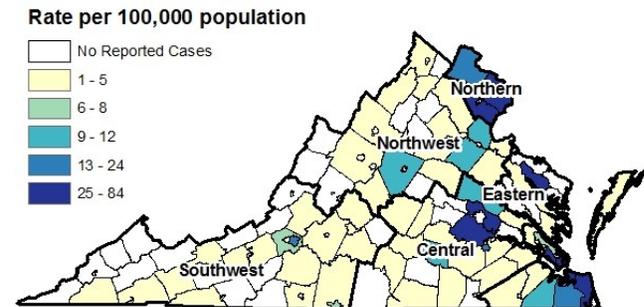
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2. Centers for Disease Control and Prevention. HIV in the United States: *At A Glance*. https://www.cdc.gov/hiv/statistics/overview/ataglance.html. Accessed February 2020:.