

# Outcomes of Surveillance

Type of Data	Definition	How used
Reported HIV/AIDS Diagnoses	The number of cases reported in a specific population during a specific time period	Useful for understanding reporting changes in an area
Estimated HIV/AIDS Diagnoses	The number of cases estimated to be diagnosed in a specific population during a specific time period	Serves as a marker of new infections in areas without incidence surveillance
HIV/AIDS Prevalence Estimate	The number of people estimated to be living with HIV/AIDS in a specific area at a specific point in time	Planning and resource allocation, monitoring trends and discrepancies between groups
HIV Incidence Estimate	The number of people estimated to be newly infected with HIV in a specific area during a specific time period (e.g., one year)	Planning and allocating funds, as well as evaluating the success of prevention programs
HIV/AIDS Prevalence Rate	The HIV/AIDS prevalence for a specific population divided by the number of people in that population	Prevalence rates can better highlight health disparities than number of cases
HIV Incidence Rate	The HIV incidence for a specific population divided by the number of people in that population	Incidence rates reflect rates of new infection within a population, and can highlight health disparities



# Estimated HIV Incidence\*—United States, 2006

56,300 new HIV infections in 2006

95% Confidence Interval:  
48,200 to 64,500

\*Based On Stratified Extrapolation Approach

Ref: *JAMA*, Vol 300, No. 5, August 6, 2008



Note: Data have been adjusted for reporting delay and cases without risk factor information were proportionately redistributed.

**Estimates of New HIV Infections in the United States**

CDC HIV/AIDS FACTS      AUGUST 2008

Accurately tracking the HIV epidemic is essential to the nation's HIV prevention efforts. Yet monitoring trends in new HIV infections has historically posed a major challenge, in part because many HIV infections are not diagnosed until years after they occur.

Now, new technology developed by the Centers for Disease Control and Prevention (CDC) can be used to distinguish recent from long-standing HIV infections. CDC has applied this advanced technology to develop the first national surveillance system of its kind that is based on direct measurement of new HIV infections. This new system represents a major advance in HIV surveillance and allows for more precise estimates of HIV incidence (the annual number of new infections) than ever before possible.

CDC's first estimates from this system reveal that the HIV epidemic is—and has been—worse than previously known. Results indicate that approximately 56,300 new HIV infections occurred in the United States in 2006 (95% CI: 48,200–64,500). This figure is roughly 40% higher than CDC's former estimate of 40,000 infections per year, which was based on limited data and less precise methods (see box on page 5, "Historical Challenges in Tracking HIV Infections").

It is important to note that the new estimate does not represent an actual increase in the annual number of new HIV infections. In fact, CDC's analysis suggests that the epidemic has been roughly stable since the late 1990s, though the number of new HIV infections remains unacceptably high. These findings underscore the ongoing challenges in confronting

this disease and the urgent need to expand access to effective HIV prevention programs.

**Breakthrough Technology Allows Clearest Picture to Date**

CDC's new HIV surveillance system is based on an approach known as STARHS (serologic testing algorithm for recent HIV seroconversion), which uses innovative testing technology to determine, at the population level, which positive HIV test results indicate new HIV infections (those that occurred within approximately the past 5 months). Before the widespread availability of this technology, HIV diagnosis data provided the best indication of recent trends in key populations. However, diagnosis data indicate when HIV infection is diagnosed, not when a person becomes infected (infection can occur many years before a diagnosis).

**Definitions**

**HIV incidence:** The number of people who become newly infected with HIV in a given period.

**HIV diagnoses:** The number of HIV diagnoses during a given period, regardless of when the persons became infected.

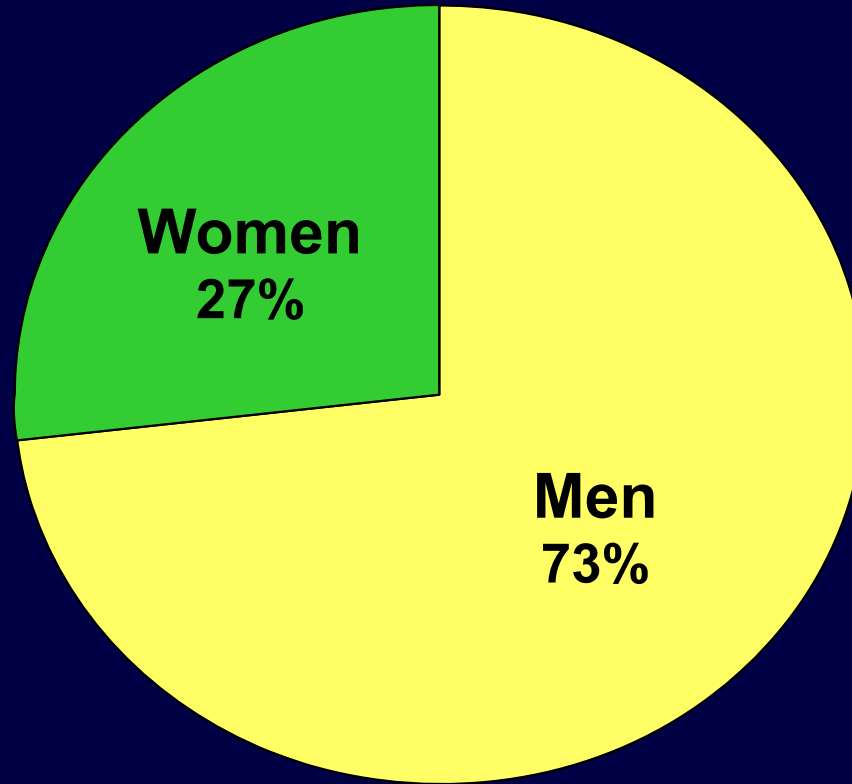
**AIDS diagnoses:** The number of AIDS diagnoses during a given period. AIDS is diagnosed when an HIV-infected person's immune system becomes severely compromised (measured by CD4 cell count) and/or the person becomes ill with an opportunistic infection. In the absence of treatment, AIDS usually develops 8 to 10 years after initial HIV infection. With early HIV diagnosis and treatment, an AIDS diagnosis may be delayed by many years.

1-800-CDC-INFO (232-4636)  
In English, an Español  
24 Hours/Day  
cdcinfo@cdc.gov  
<http://www.cdc.gov/hiv>





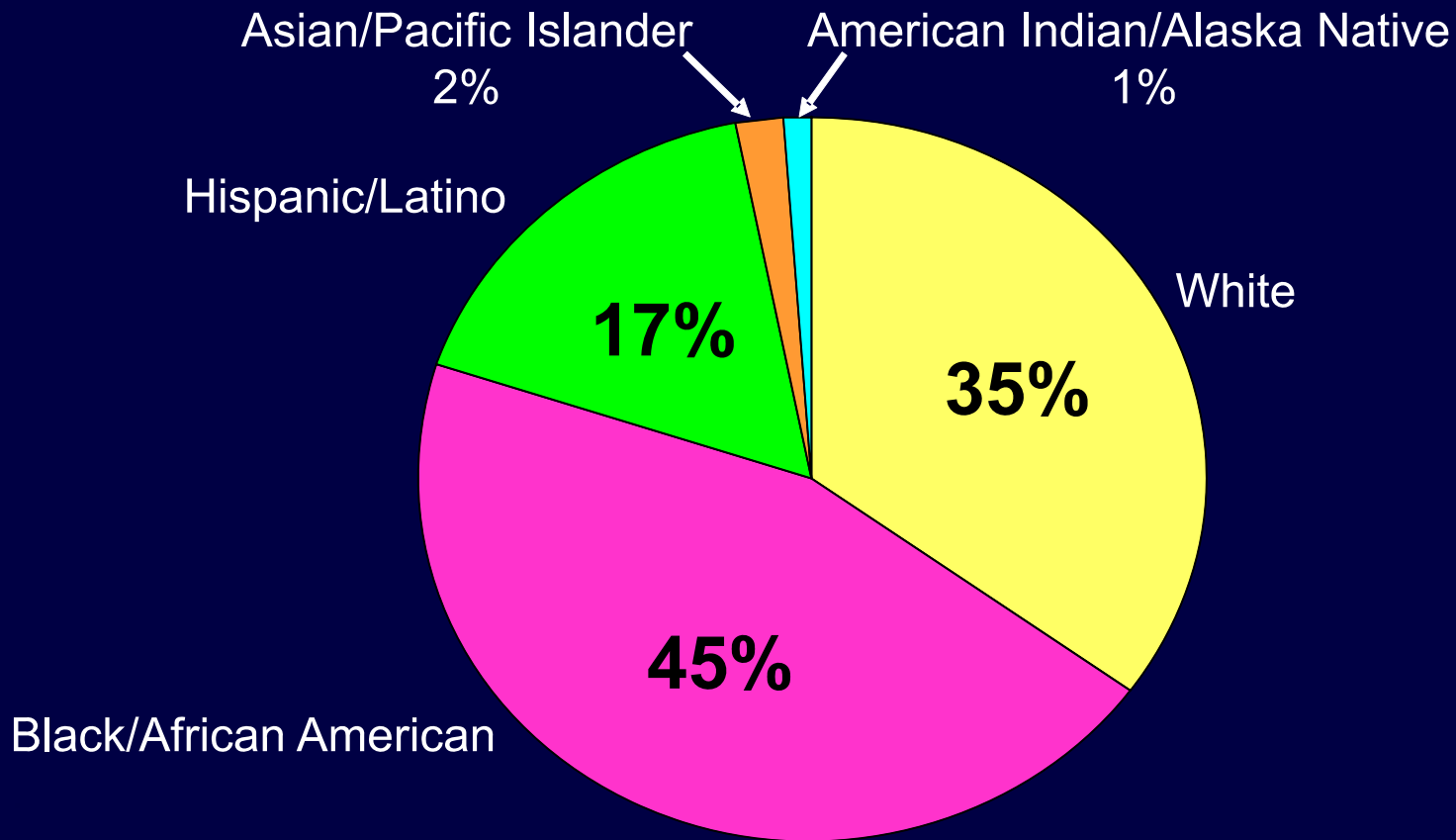
# Estimated Percentage of New HIV Infections by Sex—United States, 2006



Note: Data have been adjusted for reporting delay.



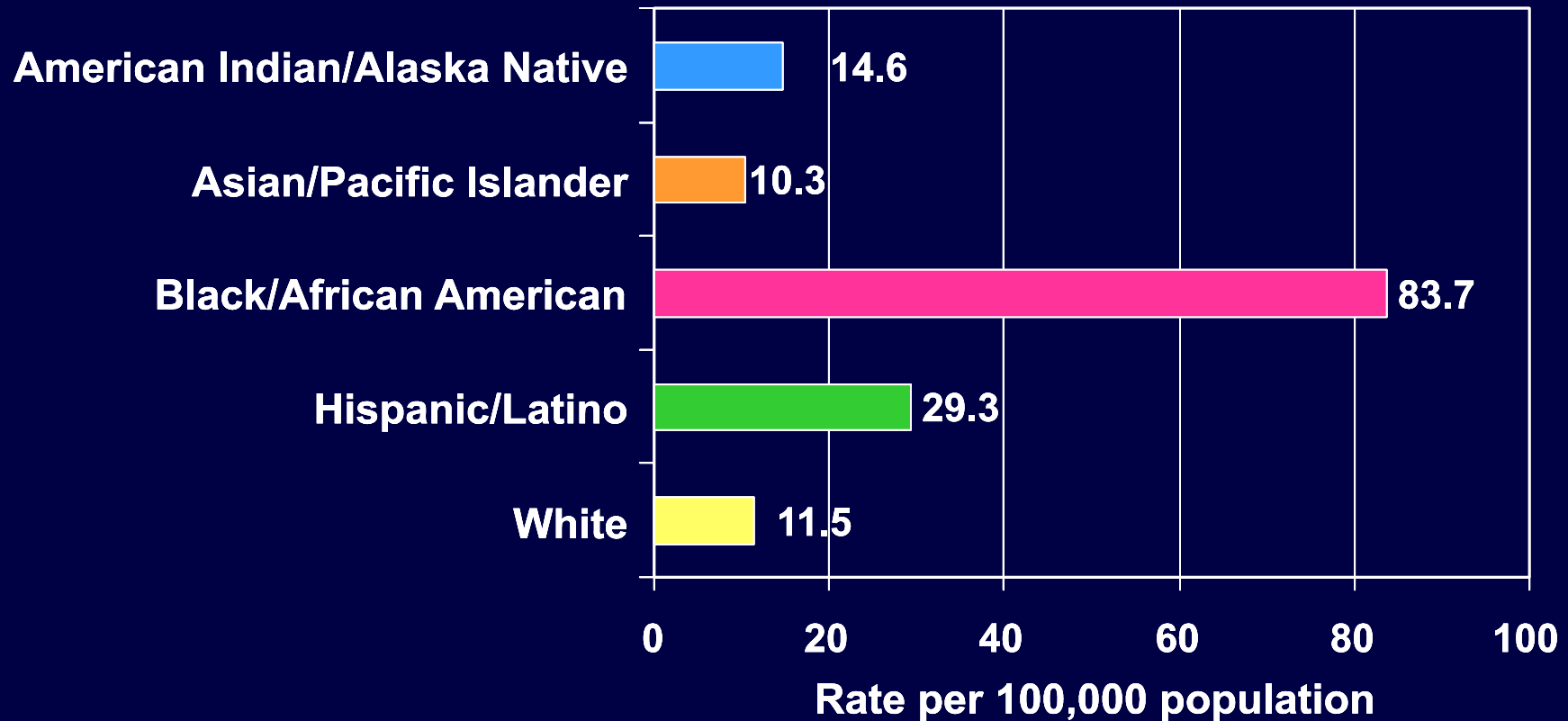
# Estimated Percentage of New HIV Infections by Race/Ethnicity—United States, 2006



Note: Data have been adjusted for reporting delay.



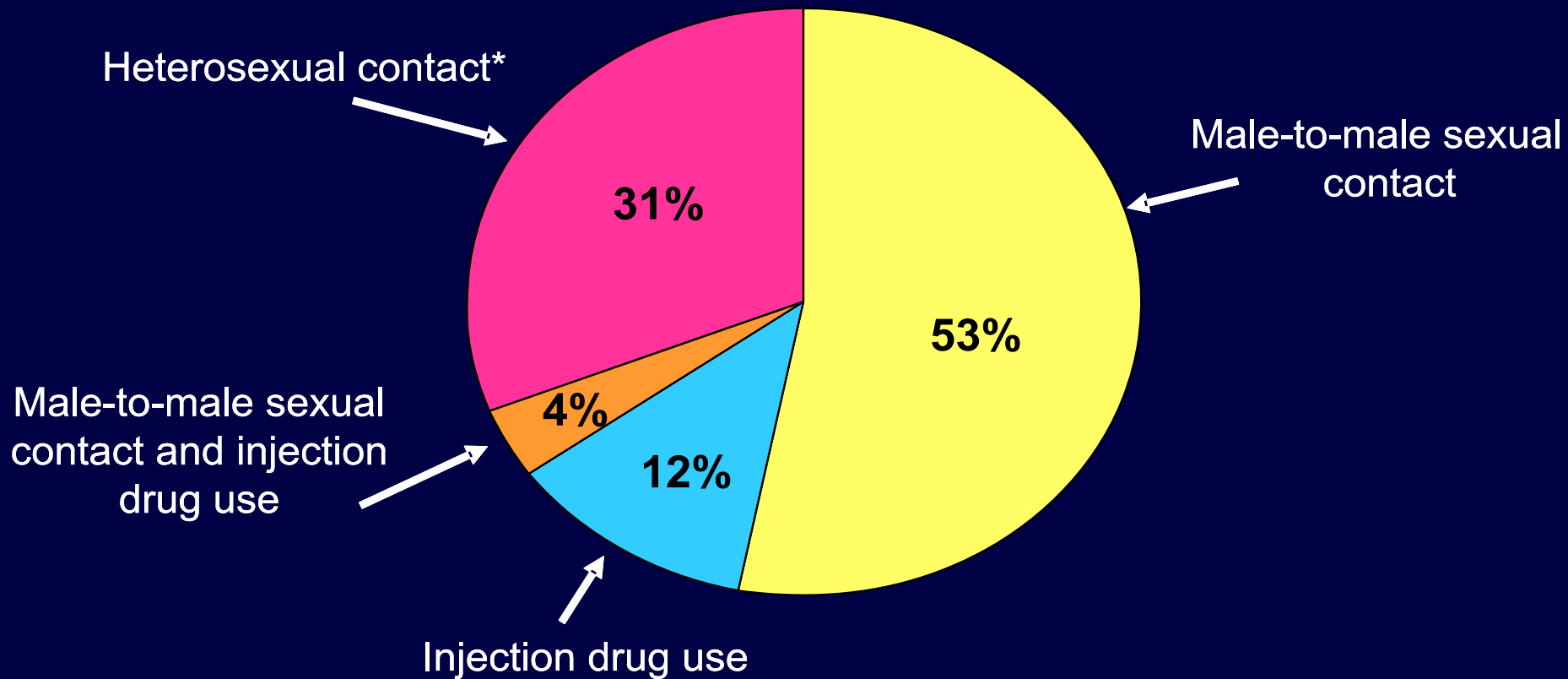
# Estimated Rate of New HIV Infections by Race/Ethnicity—United States, 2006



Note: Data have been adjusted for reporting delay.



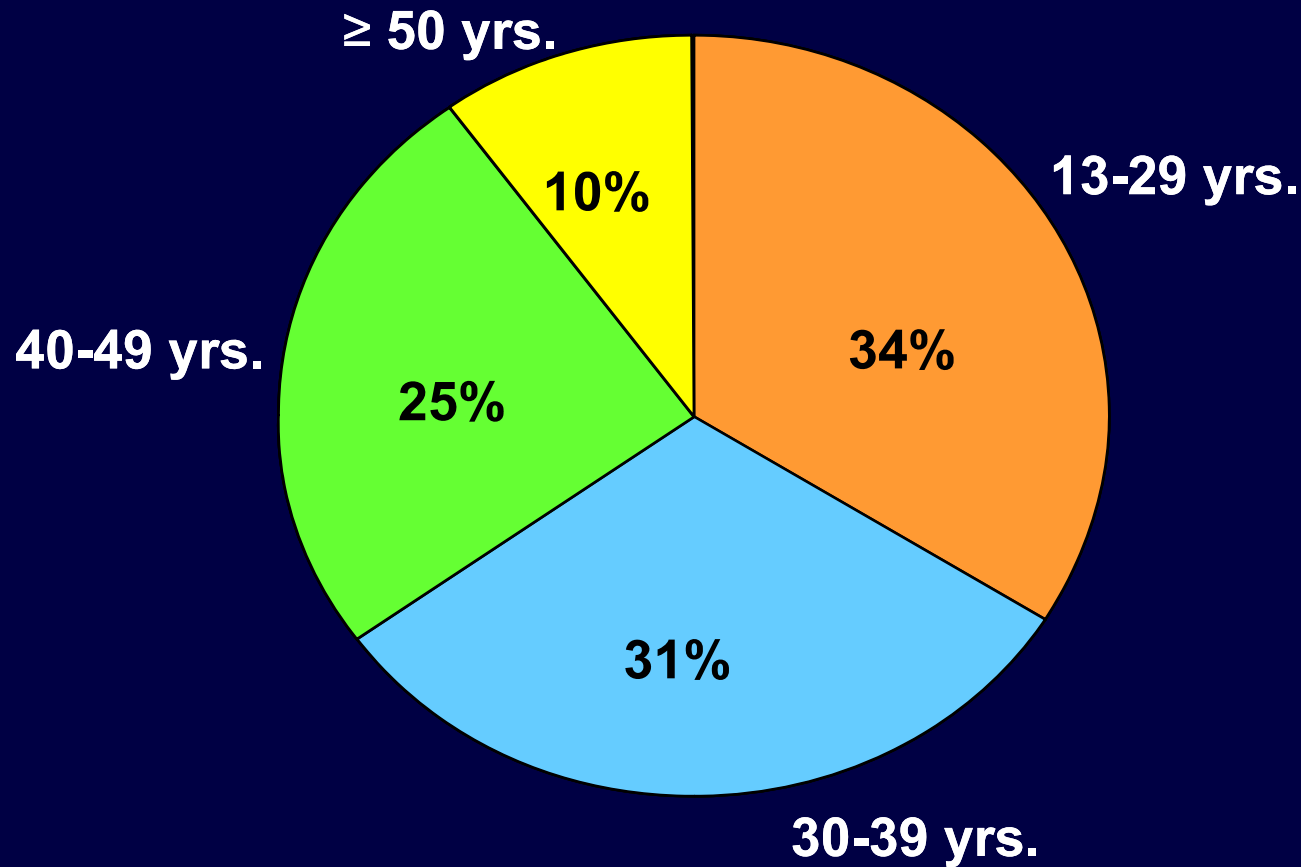
# Estimated Percentage of New HIV Infections by Transmission Category—United States, 2006



\*Heterosexual contact with a person known to have, or to be at risk for, HIV infection.  
Note: Data have been adjusted for reporting delay. Cases without risk factor information were proportionately re-distributed.



# Estimated Percentage of New HIV Infections by Age—United States, 2006



Note: Data have been adjusted for reporting delay.

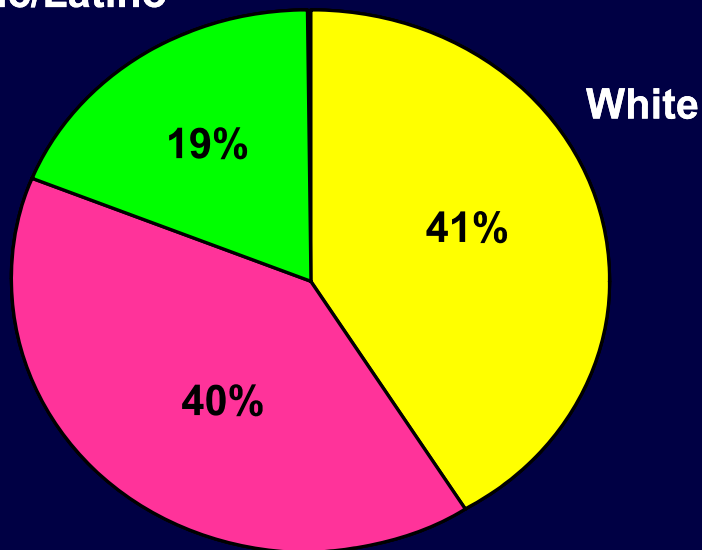


# Estimated Percentage of New HIV Infections by Sex and Race/Ethnicity—United States 2006

N = 54,230

## Male

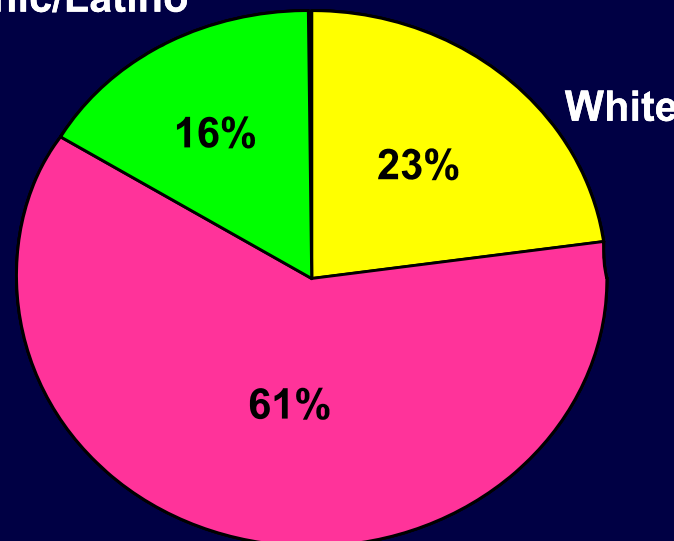
Hispanic/Latino



Black/African American

## Female

Hispanic/Latino



Black/African American



Note: Data have been adjusted for reporting delay. Data presented on blacks/African Americans, Hispanics/Latinos and whites only. Small number of new infections in Asians/Pacific Islanders and American Indians/Alaska Natives preclude further stratification.















