

HIV in Racial and Ethnic Minority Populations

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Module 6: [Key Populations](#)

Lesson 6: [HIV in Racial and Ethnic Minority Populations](#)

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Introduction

Background

In the United States, the HIV epidemic disproportionately impacts racial and ethnic minority populations.[1] For all persons with HIV, accessible, affordable, and effective antiretroviral therapy is critical for improving health and preventing transmission of HIV. In the United States, since 2010, national strategies and priorities for HIV have emphasized reducing HIV-related health disparities and inequities, as well as ensuring that all persons with HIV receive access to treatment and care that is nonstigmatizing, culturally sensitive, and culturally competent.[2,3] Unfortunately, disparities and inequities continue to exist.

Clinician Awareness of HIV-Related Disparities

Multiple factors contribute to HIV-related disparities in the United States, including historical trauma, cultural differences, and socioeconomic inequalities. Clinicians working in the HIV field should be aware of these health disparities because they significantly impact clinical care. It is important to note that the racial disparities in HIV stem from long-standing and ongoing institutionalized racism and other sociostructural barriers, not biological differences. This Topic Review will address the epidemiology of HIV within racial and ethnic minority communities, highlight differences in engagement in care and HIV outcomes, explore key paradigms for understanding unique vulnerabilities to HIV among certain subpopulations, and investigate strategies to reduce HIV-related inequities in racial and ethnic minority populations.

HIV Epidemiology In United States by Race/Ethnicity

HIV Prevalence Estimates Based on Race/Ethnicity

The HIV prevalence is the estimated number of persons living with HIV. This estimate includes persons living with diagnosed or undiagnosed HIV. The Centers for Disease Control and Prevention (CDC) HIV reported that an estimated 1,212,400 persons 13 years of age and older living with HIV (diagnosed and undiagnosed) in the United States at year-end 2021.[4] Of these, 487,500 (40%) were Black/African American individuals, 342,000 (28%) were White people, and 297,200 (25%) were Hispanic/Latino people (Figure 1).[4] Further, Black/African American individuals had the highest HIV prevalence rate (1,402 per 100,000 population at year-end 2021), which was 7 times higher than in White individuals.[4] These data underscore the disproportionate burden of HIV carried by minority populations within the United States, especially Black people.[4,5]

HIV Incidence Estimates Based on Race/Ethnicity

The HIV incidence represents an estimated number of persons who newly acquire HIV during a fixed time period. In the United States, the CDC typically reports estimated HIV incidence as new HIV infections that have occurred over a 1-year period. For the year 2021, the CDC estimated 32,050 persons newly acquired HIV in the United States; among the new HIV infections, 13,000 (41%) occurred in Black/African American individuals, 9,300 (29%) in Hispanic/Latino individuals, 8,200 (26%) in White individuals, and the remaining 5% of new HIV infections occurred in Asian, American Indian/Alaska Native, and Native Hawaiian/Other Pacific Islander individuals (Figure 2).[4] The estimates for HIV incidence rates (new infections per 100,000 population) showed that Black/African American persons had the highest incidence rates—7.8 times higher than for White persons. In addition, Hispanic/Latino persons had an HIV incidence rate that was approximately 3.9 times higher than the rate in White persons.[4]

Projected Lifetime Risk of Acquiring HIV

The overall projected lifetime risk of being diagnosed with HIV in the United States for all persons is approximately 0.94-0.95% (or 1 in 106 persons); the risk varies significantly by sex and by racial/ethnic group (Figure 3).[6] For males, the lifetime risk of a diagnosis of HIV is 1 in 68, though the risk is much higher among Black/African American men (1 in 22).[6] For females, the lifetime risk of a diagnosis of HIV is 1 in 250, with the highest risk occurring among Black/African American females (1 in 54).[6] These data illustrate the dramatic disparities in HIV acquisition risk that occur among different racial/ethnic groups in the United States.

Comparison of HIV Diagnosis and Care by Race/Ethnicity

The HIV Care Continuum, which is also referred to as the HIV care cascade, represents the framework for providing medical care to persons living with HIV and involves five major steps: (1) diagnosis of HIV, (2) linkage to care, (3) engagement and retention in care, (4) prescription of antiretroviral therapy, and (5) achievement of virologic suppression.[7,8] Some disparities exist along the continuum of HIV care for racial and ethnic minorities, as discussed below.[9,10,11]

HIV Testing and Diagnosis

Screening for HIV and diagnostic testing is a crucial step in the HIV Care Continuum. In the United States in 2021, the proportion of persons living with undiagnosed HIV decreased to less than 21% in all racial/ethnic groups, with a range of 10.4% in multiracial persons to 20.5% in American Indian/Alaska Native individuals(Figure 5).[4] Although the proportion of persons diagnosed with HIV has increased in recent years across racial and ethnic groups, the fraction of those who have been diagnosed in all groups falls short of the national benchmark goal to have at least 90% of persons living with HIV become aware of their HIV serostatus.[2]

Stage at Diagnosis

In 2021, fewer than 26% of persons in all racial/ethnic groups had stage 3 (AIDS) at the time of HIV diagnosis, with the highest rates among Asian individuals and Native Hawaiian/Pacific Islander individuals (Figure 6).[12] Potential barriers to HIV testing in racial/ethnic minority populations include the lack of convenient and culturally/linguistically appropriate testing locations, stigma, poverty, and low perception of HIV risk.[13,14,15,16]

HIV Care Among People Diagnosed with HIV

The CDC surveillance data reports include rates for receipt of any medical care (indicated by at least one CD4 cell count or HIV RNA measurement during the year) and retention in care (at least 2 CD4 or HIV RNA tests obtained at least 3 months apart during the year).[17] In addition, the CDC surveillance data also includes rates of HIV RNA suppression, which is the final step in the HIV Care Continuum, and it represents a critical outcome measure. In the CDC HIV surveillance report, the rates of viral suppression are based on an HIV RNA level of less than 200 copies/mL on the most recent HIV RNA test during that year.[12] Overall, the year-end 2021 rates of these different HIV care components were relatively similar among different racial/ethnic groups, but were slightly higher in multiracial people and White people; the lowest rates of viral suppression were seen in Black people and Native Hawaiian/Pacific Islander people (Figure 7).[12]

HIV PrEP Coverage by Race/Ethnicity

In 2019, the United States Department of Health and Human Services (HHS) launched the Ending the HIV Epidemic (EHE) initiative with a goal of reducing new HIV infections in the United States by 90% by the year 2030, with the achievement of this goal accomplished through the scale-up of HIV prevention and treatment strategies.^[18] The use of HIV preexposure prophylaxis (PrEP) is the central component of the element of the EHE initiative that focuses on preventing HIV infections among persons without HIV who are at risk of acquiring HIV.^[18] The Ending the HIV Epidemic goals for 2025 include a goal to increase HIV PrEP coverage to 50%—meaning that 50% of people with an indication for HIV PrEP will have HIV PrEP prescribed for them.^[18] In 2022, the HIV PrEP coverage in the United States was 36%, and this represents a significant increase from the 23% HIV PrEP coverage in 2019.^[19] The HIV PrEP coverage has varied tremendously based on racial/ethnic groups, with markedly higher coverage in White people at risk for HIV than in Black/African American or Hispanic/Latino people at risk for HIV ([Figure 9](#)).^[19]

Health Outcomes and Death by Race/Ethnicity

In 2021, based on CDC surveillance data, the number of HIV-related deaths was by far the highest in Black/African American individuals ([Figure 8](#)).^[20] In addition, the population-based HIV death rate (deaths related to HIV per 100,000 population) was highest among Black/African American persons (20.1), and this death rate was 6.5 times higher than in White persons (3.1).^[20] The differences in HIV-related death rates among different ethnic/racial groups are not fully explained by the lower proportion of persons achieving HIV RNA suppression.^[21] Retrospective analyses of hospital and insurance records have also found that Black/African American individuals living with HIV are approximately six times more likely than White persons with HIV to require hospitalization.^[22] Mortality differences exist across other racial/ethnic groups as well. These differences in health outcomes and deaths highlight major health disparities that continue to occur in Black people with HIV.

Factors Associated with Health Inequities

Several paradigms for understanding the unique vulnerability to HIV in racial and ethnic minority populations have been proposed. This section will explore multiple potential factors that help to explain how significant racial/ethnic inequities have occurred in the HIV epidemic in the United States.

Syndemic Theory

Syndemic refers to two or more factors that interact in a synergistic manner and result in an excess burden of disease that exceeds the contribution of either factor alone.^[23] In syndemic theory, social determinants of health are integral to any explanation of high HIV rates in minority communities. Syndemic theory posits that the overlap of HIV, substance use, trauma, poverty, and incarceration are responsible for the disproportionate burden of HIV in minority populations, particularly in persons who are Black/African American or Hispanic/Latino.^[23] For example, Black/African American and Hispanic/Latino persons living in poverty are more likely to experiment with injection drug use in adolescence or resort to exchange sex, both of which increase vulnerability to HIV acquisition. Similarly, high rates of drug use and violence lead to higher incarceration rates, which destabilize families and disrupt stable sexual partnerships, further increasing vulnerability to HIV. High sentencing rates for specific drug-related crimes reinforce the syndemic, given the disproportionately large numbers of young Black/African American males who have been incarcerated for drug offenses.^[24] The relationships are reciprocal and synergistic, such that incarceration can lead to unemployment and poverty, and poverty can lead to increased drug use and sexual risk-taking, which, in turn, can lead to HIV acquisition.

Risk Environmental Model

The “Risk Environmental Model” proposes that racial and ethnic disparities in HIV infection arise because minority groups more often live in an environment that creates vulnerability to adverse HIV-related outcomes.^[25] The “environment” in this model refers to social, economic, political, and physical influences that interact to increase an individual’s vulnerability to HIV.

Minority Stress Theory

The minority stress theory proposes that health disparities among populations can be explained by stressors caused by stigma and discrimination. Extensive social science research has correlated the experiences of stigma and discrimination with adverse health outcomes in relation to cardiovascular disease, mental health, substance use disorders, and HIV infection.^[26,27,28,29] Several studies suggest that stressors of stigma and discrimination among minority populations can contribute to increased rates of depression, substance use disorders, and sexual activity that increase the risk of HIV acquisition.^[26,30] Ethnic and racial minorities who also experience sexual-orientation-based stigma and discrimination may face a double burden.^[31,32] Ethnographic research has identified that stigma and discrimination based on sexual orientation increases HIV acquisition risk behavior similar to the increased risk seen with racial/ethnic-associated stigma and discrimination.^[31]

Sexual Networks and Concurrency

Risk for HIV acquisition is mediated not only by traditional sexual-risk factors, such as condomless intercourse, sex with multiple partners, or sex under the influence of alcohol or drugs, but also by sexual networks and patterns of relationships that are integrated into community structures. Concurrent sexual partnerships, defined as sexual relationships that overlap in time, have been identified as a driving factor in the HIV epidemic.^[33] Concurrent partnerships may lead to faster spread of HIV than sequential (serial monogamous) partnerships, especially in concurrent situations where both partners are not engaging in monogamy.^[33,34] Concurrency may be an especially important factor in HIV transmission for Black/African American women.^[33]

Incarceration

In order to understand the theory that incarceration increases the vulnerability of minority populations to HIV, it is important to recognize the overlapping epidemics of incarceration and HIV, particularly for low-income people of color.[35] In 2021, in the United States, Black/African American persons were imprisoned at a rate 4.8 times higher than in White persons.[36,37] Different rates in drug-related arrests, as well as drug sentencing, are major contributors to the differences in incarceration rates based on race.[24] Similar findings exist among persons with HIV who are incarcerated. In one study that included 1,233 men and women with HIV who entered jail at 10 sites, 65% of subjects self-identified as Black and 25% as Hispanic.[35] Incarceration directly and indirectly contributes to racial and ethnic differences related to HIV acquisition risk. High rates of incarceration among young Black men, for example, lead to fewer young Black men in the community, which causes an imbalanced ratio of men and women in the community.[38] Incarceration also disrupts primary intimate partnerships, and men with incarceration histories have higher rates of multiple sex partners, concurrent partners, unprotected sex, and illicit drug use.[39,40,41] Young people in communities with high rates of violence and incarceration may also suffer from a lack of role models. Adolescents with a history of incarceration have increased rates of activities associated with HIV acquisition, including substance use during sex, condomless sex, and multiple partners.[42,43]

Historical Trauma Theory and Social Victimization

Racial and ethnic segregation, disproportionate incarceration rates in minority communities, and a history of unethical treatment of persons of color have all created mistrust of societal institutions, including the health care system. Examples involving several groups are highlighted below. Efforts to address HIV prevention and treatment in communities that experience historical trauma may fall short unless the factors underlying mistrust and loss are adequately addressed.

- **Black/African American Persons:** The Tuskegee experiment is perhaps the most infamous among unethical medical research in the United States. In this study, curative treatment for syphilis was deliberately withheld from 399 Black/African American men so that the natural history of the disease could be studied.[44] Ongoing experiences of stigma and health care system inequities may contribute to the underutilization of health care services and complicate public health efforts to engage Black/African American individuals in HIV prevention and care.[45,46]
- **Hispanic/Latino Persons:** Social marginalization may contribute to the reluctance of Hispanic/Latino populations to seek HIV-related services.[47] One study of 190 sexual and gender minority Hispanic/Latino persons in North Carolina found that avoidance of HIV testing was often due to fear of disclosure and repercussions of a positive test, such as fear the test result would be reported to the government.[48] In addition, reluctance to participate in HIV care may arise among undocumented immigrants who face concerns about deportation.[47]
- **American Indian/Alaska Native Persons:** Historical trauma theory can help to explain HIV vulnerabilities among other minority populations. For example, mistrust of the medical establishment, as well as HIV denialism is common among Native populations within the United States.[49,50] One study of Native American persons living on the Fort Peck Reservation in Montana found that a particular type of intergenerational trauma designated as “Historical Loss” (from loss of language, land, and traditional spiritual and cultural identity) is linked to psychological symptoms and an increased likelihood of sex with multiple concurrent partners.[51]

Future Directions for Reducing HIV-Related Disparities

Reducing HIV-related disparities in racial/ethnic minorities will require a coordinated, multidisciplinary approach that addresses the social and structural drivers of HIV (poverty, unemployment, geographic segregation, incarceration, and differential access to health care) and that can be tailored to meet specific local and cultural needs.[52]

Use of Community Partnerships

Philadelphia's citywide faith-based HIV prevention campaign, initiated in 2010, provides one example of how a community partnership was successfully created to help achieve national benchmark HIV care continuum goals.[53] The campaign attracted a coalition of faith-based organizations, academic institutions, private and public sector players, and the media in order to promote HIV testing, awareness, and prevention; faith-based organizations played a particularly important role with Black/African American individuals.[53] This campaign demonstrated that community-based advocacy is effective in increasing dialogue around HIV that can translate into public health action.[54]

Increasing Numbers of Racial/Ethnic Minorities in HIV Workforce

Patient-provider racial concordance has been shown to improve the rates of testing for sexually transmitted infections among Black/African American women attending sexually transmitted diseases clinics, and both racial and language concordance have been associated with improved rates of medication adherence.[55,56] Early studies also suggested that racial concordance between persons with HIV and their medical providers reduced the time to receipt of antiretroviral therapy.[57] Ongoing efforts for HIV workforce development can play an important role in reducing disparities in HIV medical care. In particular, training more minority clinicians who can provide HIV medical services may help improve engagement in care for minority patients with HIV. Regardless of racial/ethnic concordance or discordance, the level of trust between patient and provider remains paramount, thus reinforcing the need to have a culturally sensitive and competent HIV workforce.[58]

Early Engagement in Care

Available evidence suggests that focusing on early engagement in HIV care may yield the greatest returns in terms of improving racial and ethnic disparities in the HIV care cascade. Retention in the first year after HIV diagnosis predicts future patterns of engagement—most individuals who engage in care during the first year remain in care. At the retention step of the HIV Care Continuum, major disparities among racial and ethnic groups emerge.[59] More resources should be directed at ensuring that persons who are diagnosed with HIV are immediately linked to HIV care upon HIV diagnosis and that they receive convenient and culturally sensitive medical care. These efforts should also include strategies and infrastructure to maximize their retention in HIV care.

Addressing Needs of Undocumented Individuals

It is crucial to address the challenges of meeting the health care needs of undocumented immigrants with HIV in the United States. The Affordable Care Act reduced disparities in insurance coverage rates by race and ethnicity but did not extend insurance coverage to undocumented immigrants. Typically, undocumented individuals only qualify for emergency services and pregnancy-related services, which makes it difficult to access medical care for HIV testing, prevention, and treatment.[60] For undocumented individuals, the barrier created by lack of insurance is compounded by others, including lack of knowledge about the health care system, fear of deportation, oppressive work environments, and social isolation.[61] Given the public health implications of excluding an entire subpopulation from access to HIV services, including antiretroviral therapy, it is important that HIV prevention and treatment services are improved for undocumented individuals.

Summary Points

- In the United States, a disproportionate burden of HIV is carried by Black/African American and Hispanic/Latino populations.
- Black/African-American persons constitute the highest number and rate of persons with HIV in the United States. Hispanic/Latino persons have the second highest HIV prevalence rate.
- One of the three main HIV-related federal benchmark goals is to reduce HIV-related health disparities and inequities.
- The percentage of persons with undiagnosed HIV is less than 13% in White, Asian, and Black/African American individuals.
- Along the HIV Care Continuum, Black/African American persons have relatively lower rates of linkage to HIV medical care, retention in care, and virologic suppression.
- Major disparities exist in HIV PrEP coverage with Black/African American and Hispanic/Latino individuals having much lower HIV PrEP coverage than White individuals.
- The number and rate of deaths in persons with HIV in the United States was by far the highest in Black/African American individuals at year-end 2021.
- Several paradigms for understanding the unique vulnerability to HIV in racial and ethnic minority populations have been proposed, including syndemic theory, the risk environmental model, minority stress theory, historical trauma theory, and other paradigms that emphasize the impact of sexual networks and incarceration on HIV risk.
- Reducing disparities in HIV infection and improving outcomes in racial and ethnic minorities will require a coordinated, multidisciplinary approach.
- HIV workforce development efforts should include the recruitment of more minority healthcare providers as well as on improving cultural competency.

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Figures

Figure 1 Estimated HIV Prevalence, by Race/Ethnicity, United States, 2021

These estimates are for persons aged 13 years and older living with diagnosed and undiagnosed HIV infection in the United States at year-end 2021.

Source: Centers for Disease Control and Prevention. Estimated HIV Incidence and Prevalence in the United States, 2017-2021. HIV Surveillance Supplemental Report. 2023;28(3). Published May 2023.

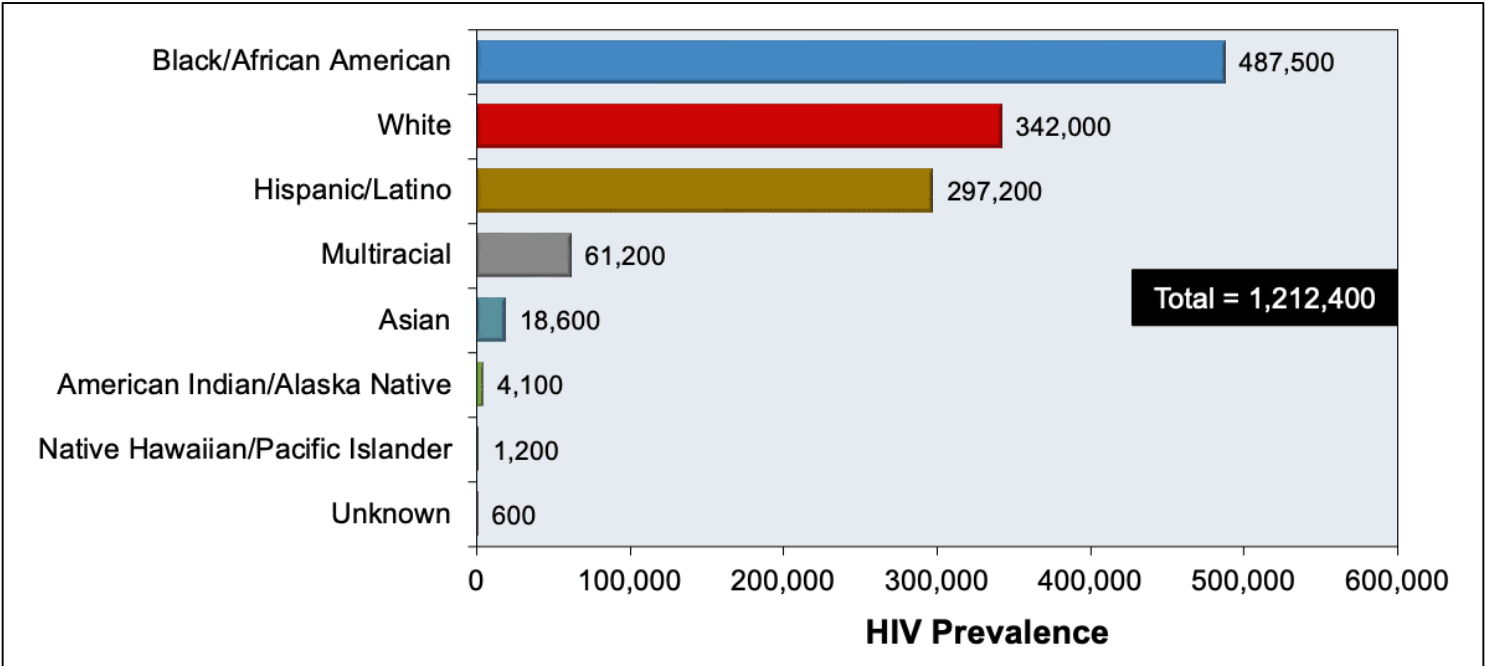


Figure 2 Estimated New HIV Infections, by Race/Ethnicity, United States, 2021

These estimates are for persons aged 13 years and older in the United States who newly acquired HIV during 2021.

Source: Centers for Disease Control and Prevention. Estimated HIV Incidence and Prevalence in the United States, 2017–2021. HIV Surveillance Supplemental Report. 2023;28(3). Published May 2023.

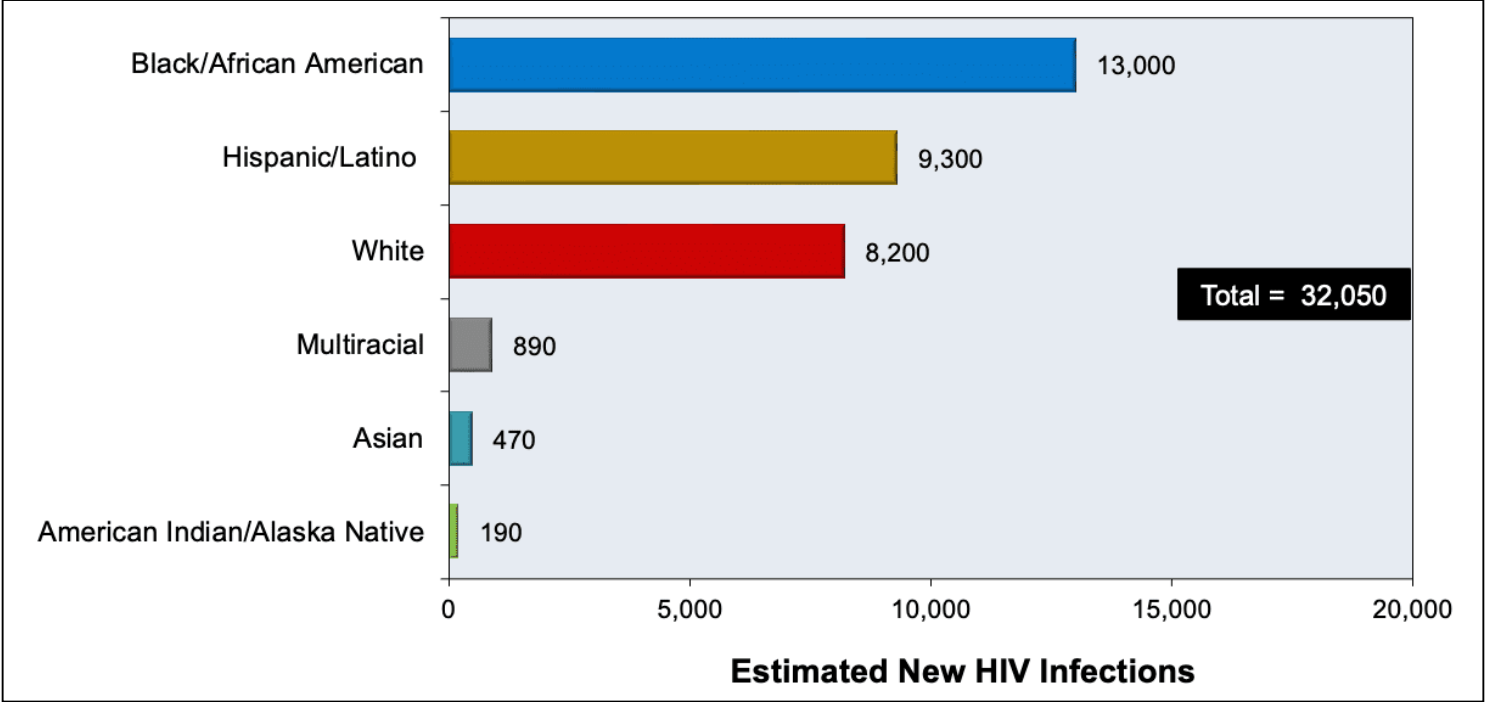


Figure 3 Lifetime Risk of HIV Diagnosis in Males and Females, by Race/Ethnicity

The numbers shown in this table represent the probability as "one in n" persons who will be diagnosed with HIV during their lifetime.

Source: Hess KL, Hu X, Lansky A, Mermin J, Hall HI. Lifetime risk of a diagnosis of HIV infection in the United States. *Ann Epidemiol.* 2017;27:238-43.

Estimates for Lifetime Risk of HIV Diagnosis		
Ethnicity	Males	Females
Overall	1 in 68	1 in 253
Black/African American	1 in 22	1 in 54
Hispanic/Latino	1 in 51	1 in 256
Native Hawaiian/Pacific Islander	1 in 95	1 in 403
American Indian/Alaska Native	1 in 131	1 in 432
White	1 in 140	1 in 941
Asian	1 in 176	1 in 943

Figure 4 Estimated HIV Incidence for Hispanic/Latino Persons, United States, 2014-2018

Source: Centers for Disease Control and Prevention. Estimated HIV Incidence and Prevalence in the United States, 2014-2018. HIV Surveillance Supplemental Report. 2020;25(No. 1):1-77. Published May 2020.

Estimated HIV Incidence for Hispanic/Latino Persons in United States, 2014-2018

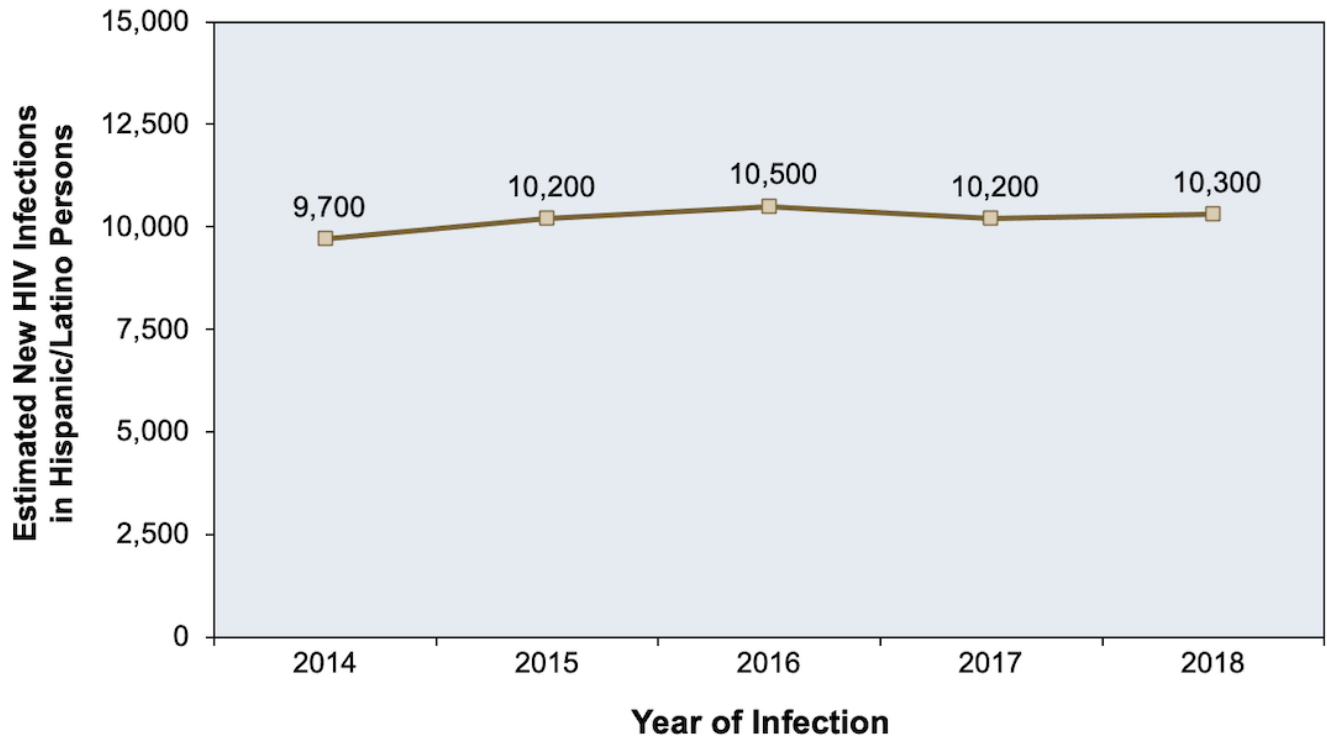


Figure 5 Persons with Undiagnosed HIV, by Race/Ethnicity, United States, 2021

Source: Centers for Disease Control and Prevention. Estimated HIV Incidence and Prevalence in the United States, 2017-2021. HIV Surveillance Supplemental Report. 2023;28(3). Published May 2023.

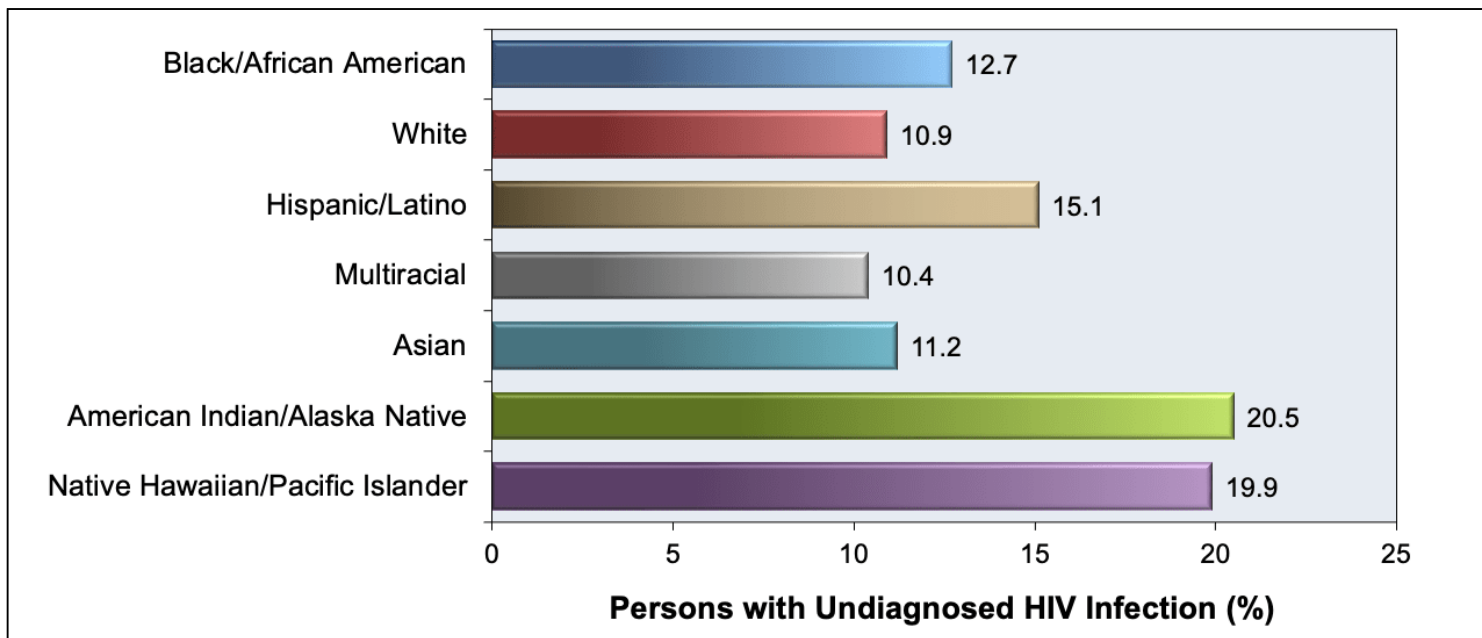


Figure 6 Stage 3 (AIDS) at Time of HIV Diagnosis, by Race/Ethnicity, United States, 2021

These data are from 47 states and the District of Columbia.

Source: Centers for Disease Control and Prevention. Monitoring Selected National HIV Prevention and Care Objectives by Using HIV Surveillance Data—United States and 6 Dependent Areas, 2021. HIV Surveillance Supplemental Report. 2023;28(No. 4). Published May 2023.

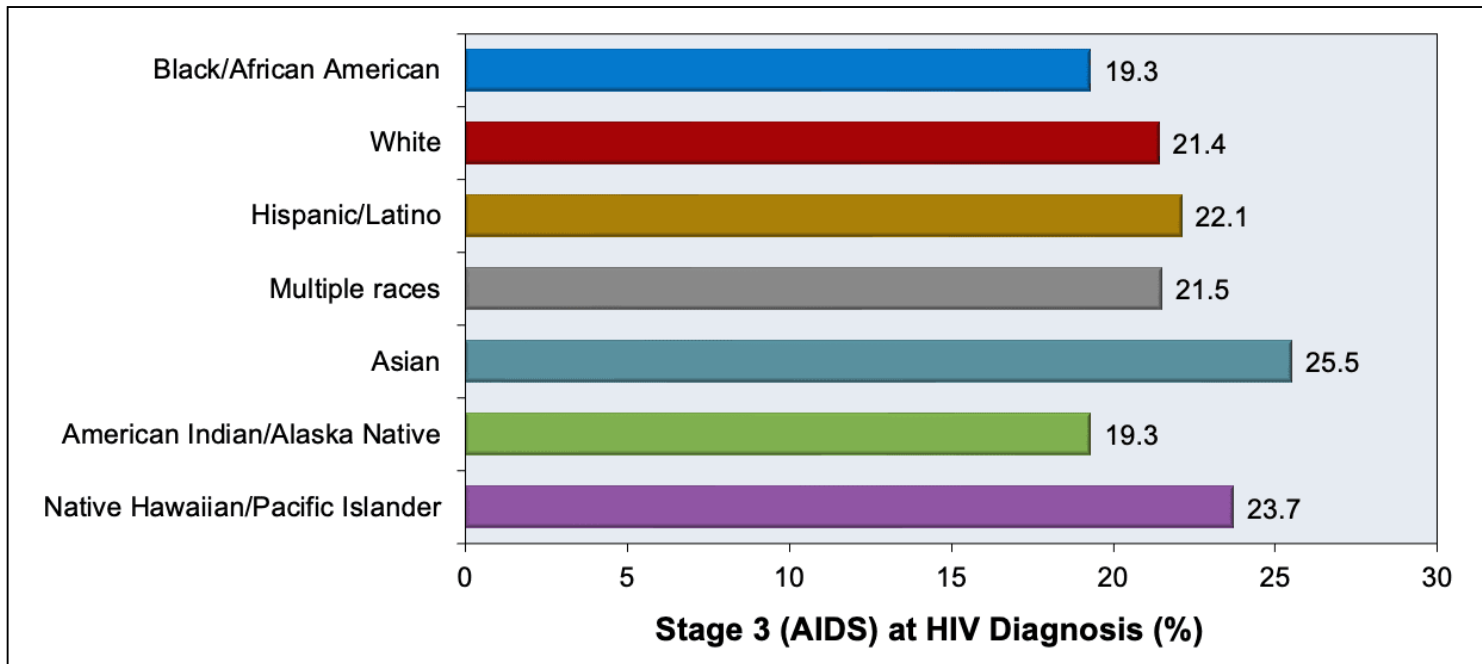


Figure 7 HIV Care Among People with Diagnosed HIV, United States, 2021

These data are from 47 states and the District of Columbia.

Source: Centers for Disease Control and Prevention. Monitoring Selected National HIV Prevention and Care Objectives by Using HIV Surveillance Data—United States and 6 Dependent Areas, 2021. HIV Surveillance Supplemental Report. 2023;28(No. 4). Published May 2023.

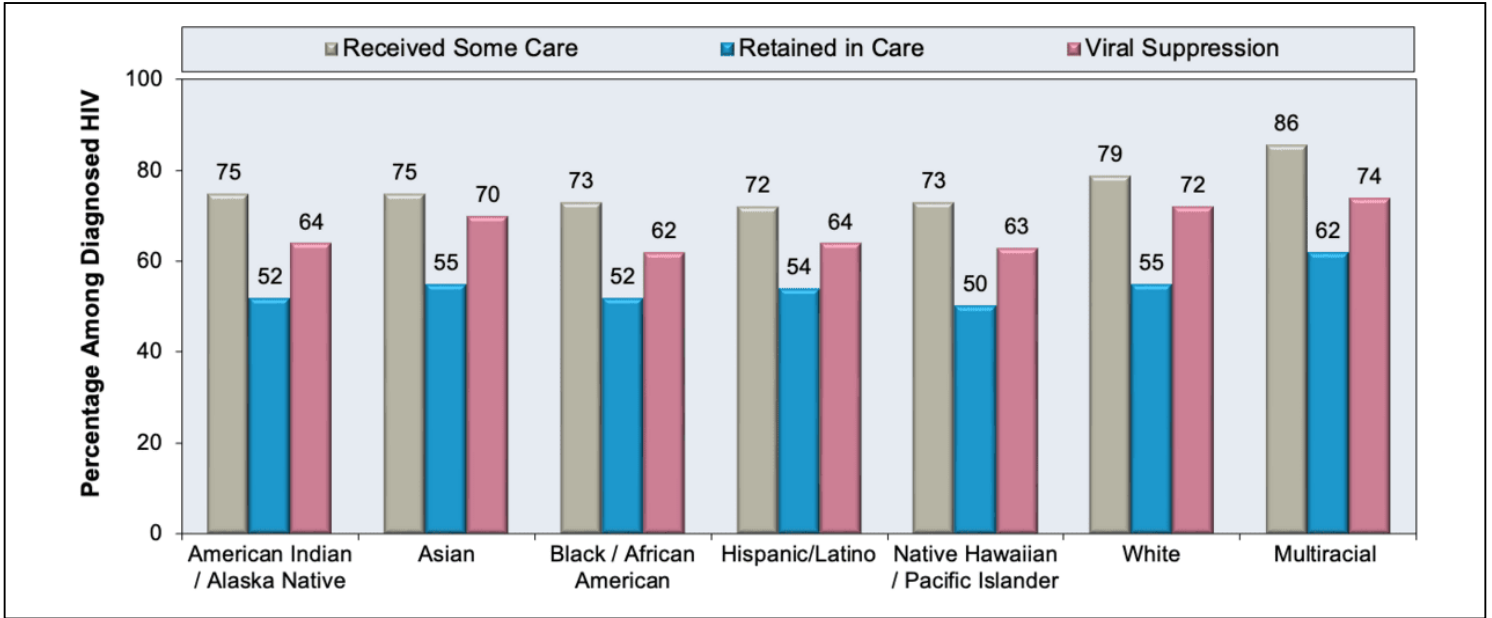


Figure 8 Deaths of Persons with Diagnosed HIV, by Race/Ethnicity, United States, 2021

Source: Centers for Disease Control and Prevention. Diagnoses of HIV infection in the United States and dependent areas, 2021. HIV Surveillance Report, 2021; vol. 34. Published May 2023.

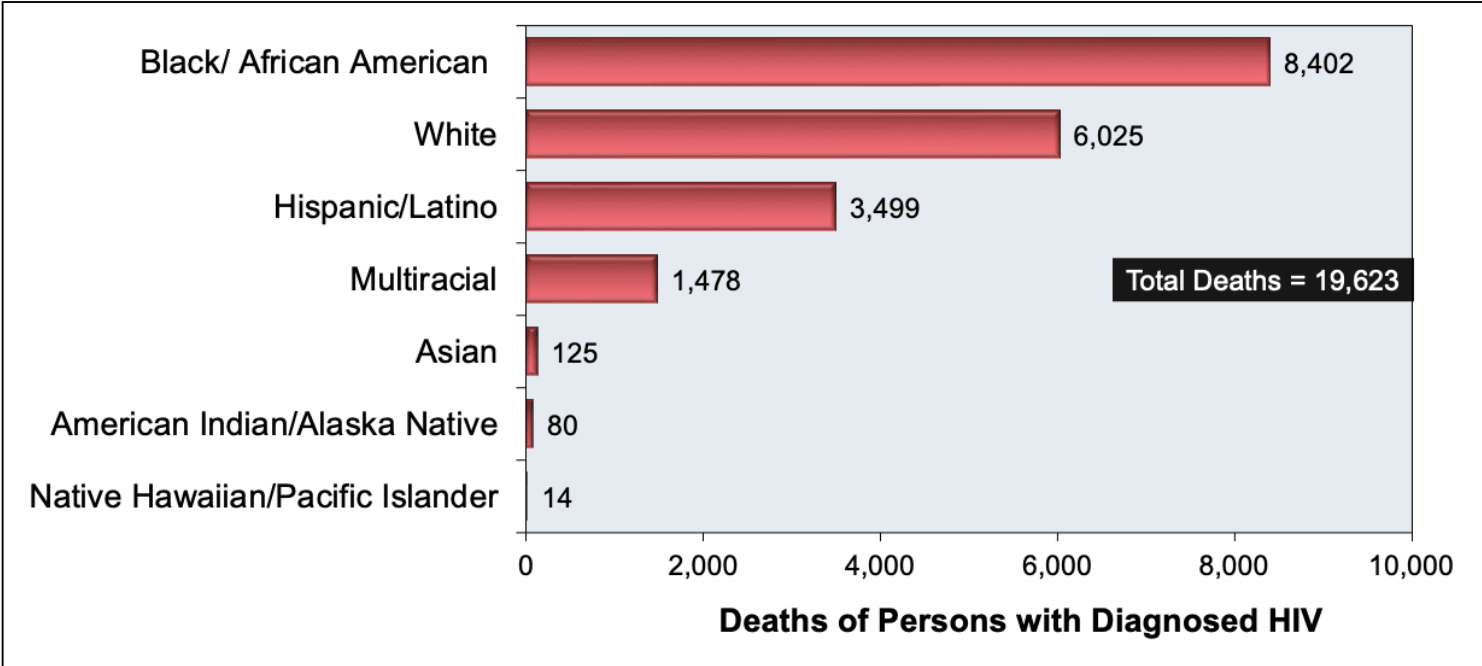


Figure 9 HIV PrEP Coverage, by Racial/Ethnic Group, United States, through December 2022

Source: Centers for Disease Control and Prevention. Core indicators for monitoring the Ending the HIV Epidemic initiative (preliminary data): National HIV Surveillance System data reported through March 2023; and preexposure prophylaxis (PrEP) data reported through December 2022. HIV Surveillance Data Tables 2023;4(2). Published June 2023.

