

# HIV/AIDS IN ARIZONA

---

2022

ANNUAL REPORT

Analysis Completed July 2022  
Data through 2021



**HIV Surveillance**

Office of Disease Integration & Services



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

## TABLE OF CONTENTS

---

Executive Summary.....	2
Statewide Overview.....	4
HIV Care Continuum, 2021 .....	5
Incidence Trend Analysis, 1982 – 2021.....	6
COVID-19 Impact on HIV Testing, 2019 - 2021 .....	11
Arizona Incidence & Prevalence Cases by Race/Ethnicity, 2021.....	12
American Indian & Alaska Native Population .....	15
Young MSM of Color .....	20
Acknowledgements.....	22
Appendix 1: Statewide Incidence Demographics .....	23
Appendix 2: Statewide Prevalence Demographics.....	26
Appendix 2: Statewide & County Data Tables .....	29
References .....	38

## EXECUTIVE SUMMARY

---

### Background

The HIV Surveillance Program at Arizona Department of Health Services, in conjunction with local health departments, collects and analyzes data to assess the burden of HIV/AIDS throughout the state. Active and passive surveillance are used to monitor trends in new and existing cases of HIV/AIDS. The majority of new HIV/AIDS cases are identified through passive surveillance, which involves health care providers and/or laboratories reporting lab results related to HIV/AIDS to the HIV Surveillance Program. Less often, local health departments may employ active surveillance by soliciting information from health care providers and/or laboratories to confirm new diagnoses or ensure that a person living with HIV/AIDS (PLWH) is receiving health care.

Surveillance data are used by a variety of stakeholders, from the Centers for Disease Control and Prevention (CDC) to local community partners. Furthermore, these data may help inform HIV prevention strategies, identify areas and populations in need of HIV care and services, and provide situational awareness about the status of HIV/AIDS in Arizona compared to other jurisdictions.

This report provides an overview of HIV/AIDS surveillance data for 2021, including a statewide analysis as well as analyses for individual counties. Throughout the report, rates are calculated to describe the burden of HIV/AIDS relative to population size—all rates are calculated per 100,000 people. Race/ethnicity includes six categories: White, Black, Hispanic, American Indian/Alaska Native (AI/AN), Asian/Pacific Islander/Native Hawaiian (A/PI/NH), and multi-race/other/unknown. Risk categories include men who have sex with men (MSM), injection drug use (IDU), men who have sex with men and injection drug use (MSM/IDU), high-risk heterosexual contact (HRH), no indicated risk/no risk reported (NIR/NRR), and Perinatal/Transfusion/Other.

### HIV Care continuum

The HIV care continuum consists of various milestones that an individual may reach from the time they receive an HIV diagnosis to achieving viral suppression. Appropriate use of Highly Active Antiretroviral Therapy (HAART) allows PLWH to achieve and maintain an undetectable viral load. Maintaining an undetectable viral load also prevents transmission of HIV through sexual contact. Therefore, it has become a national priority to ensure that individuals are aware of their HIV status, linked to HIV care, and receiving adequate treatment for HIV such that it is possible to achieve and maintain an undetectable viral load.

In this report, a diagnosis-based HIV care continuum was used, and each step of the continuum (described below) is a percentage of the number of PLWH in Arizona at the end of 2021 who received a diagnosis prior to the end of 2020. Individuals who did not have a documented lab in the last 15 years were excluded from the denominator. An individual is considered linked to care if they received lab test (i.e. viral load, CD4) within 30 days of their diagnosis. Linkage to care is a measure that cannot be compared to other outcomes in the HIV care continuum, because the denominator includes only individuals who were diagnosed with HIV/AIDS in 2021.

*HIV-Diagnosed:* Individuals who were diagnosed with HIV/AIDS before the end of 2021.

*Receipt of Care:* PLWH who received one or more lab test (i.e. viral load, CD4, or HIV genotype) in 2021.

*Retained in Care:* PLWH who received two or more lab tests (i.e. viral load, CD4, or HIV genotype) that were at least 90 days apart in 2021.

*Viral Suppression:* PLWH whose last viral load test result in 2021 was less than or equal to 200 copies/mL.

## HIV/AIDS IN ARIZONA

---

**In 2021, 19,435 people were living with HIV/AIDS in Arizona. There were 852 new (incident) cases of HIV/AIDS, and the HIV/AIDS incidence rate was 11.4 cases per 100,000.** In comparison, there were 696 incident cases of HIV/AIDS and an incidence rate of 9.6 cases per 100,000 in 2020. HIV/AIDS incidence differs based on factors such as geographic location, sex, age, race/ethnicity, and reported risk behavior. By county, 552 (64.8%) incident cases resided in Maricopa County, and Pinal County had the highest HIV/AIDS incidence rate (13.6 per 100,000). The incidence rate was 20.2 per 100,000 for males compared to 2.9 per 100,000 for females. By age, the groups with the highest HIV/AIDS incidence rates were ages 20-24 (20.4 cases per 100,000) and 25-29 (33.0 cases per 100,000).

For race/ethnicity, 258 (30.3%) incident cases identified as white and 368 (43.2%) identified as Hispanic. While fewer newly diagnosed individuals identified as black, the incidence rate of HIV/AIDS in black individuals was the highest at 36.5 per 100,000. Men who have sex with men (MSM) was the most commonly reported risk behavior, with 377 (54.2%) incident cases reporting MSM.

Since the introduction of antiretrovirals (ARVs), PLWH who take HIV medicine as prescribed can live longer and healthier lives. As a result, the number of deaths related to HIV/AIDS has decreased. **In 2021, 316 deaths occurred among known PLWH in Arizona.**

## STATEWIDE OVERVIEW

---

### 2021 SUMMARY

ARIZONA POPULATION: 7,421,401

HIV/AIDS INCIDENCE: 852

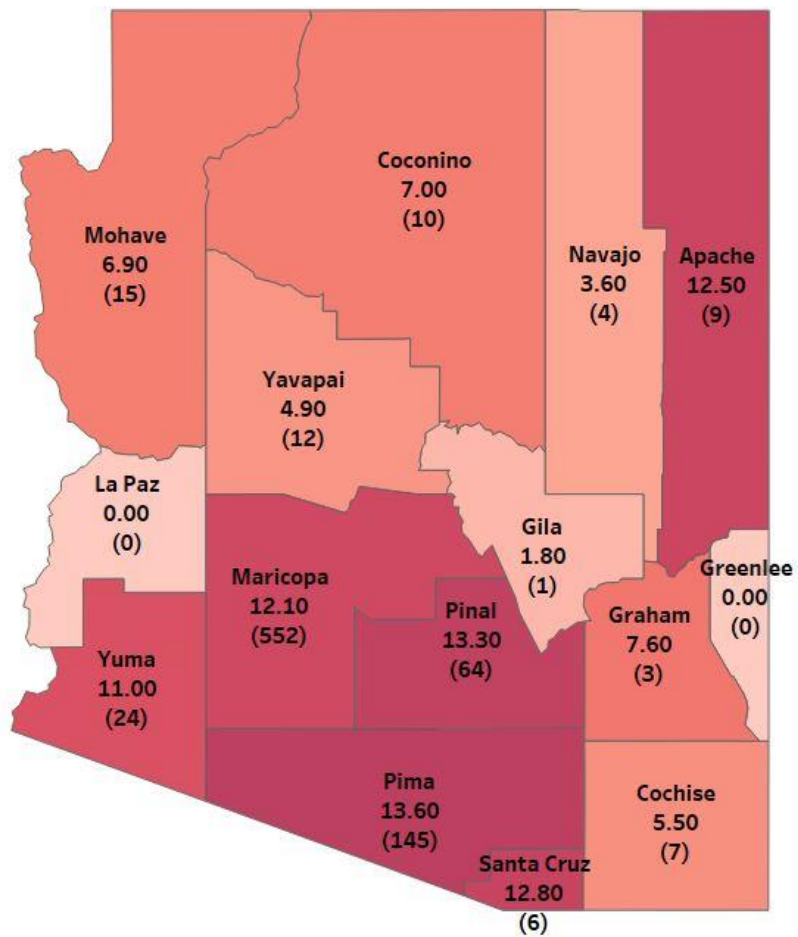
HIV/AIDS INCIDENCE RATE: 11.4 PER 100,000

HIV/AIDS PREVALENCE: 19,435

HIV/AIDS PREVALENCE RATE: 261.8 PER 100,000

HIV/AIDS-RELATED DEATHS: 316

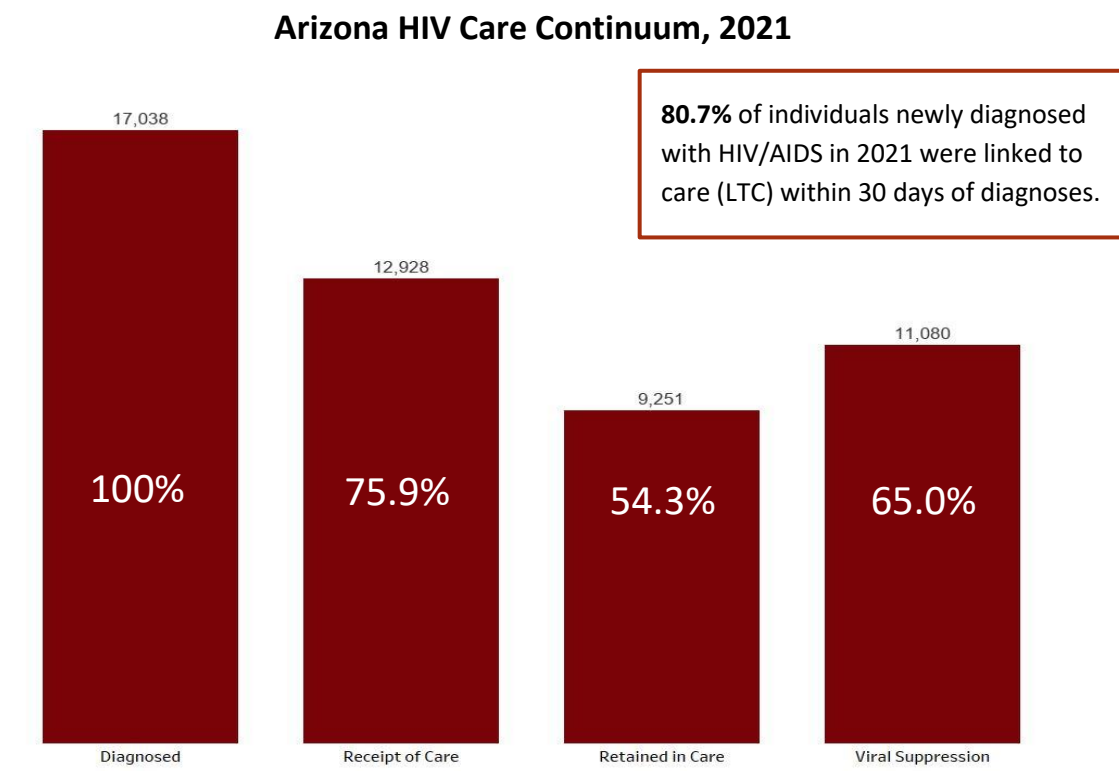
Figure 1: Arizona HIV/AIDS Incidence Rate and (count) by County, 2021.



## HIV CARE CONTINUUM, 2021

---

The HIV care continuum consists of various milestones that an individual may reach from the time they receive an HIV diagnosis to achieving viral suppression. Appropriate use of antiretroviral therapy (ART) allows PLWH to achieve and maintain an undetectable viral load and live long and healthy lives. Maintaining an undetectable viral load also prevents transmission of HIV through sexual contact. Therefore, it has become a national priority to ensure that individuals are aware of their HIV status, linked to HIV care, and receiving adequate treatment for HIV such that it is possible to achieve and maintain an undetectable viral load.



**Figure 2:** HIV Care Continuum include patients who were diagnosed, received care, retained in care, and virally suppressed, Arizona 2021.

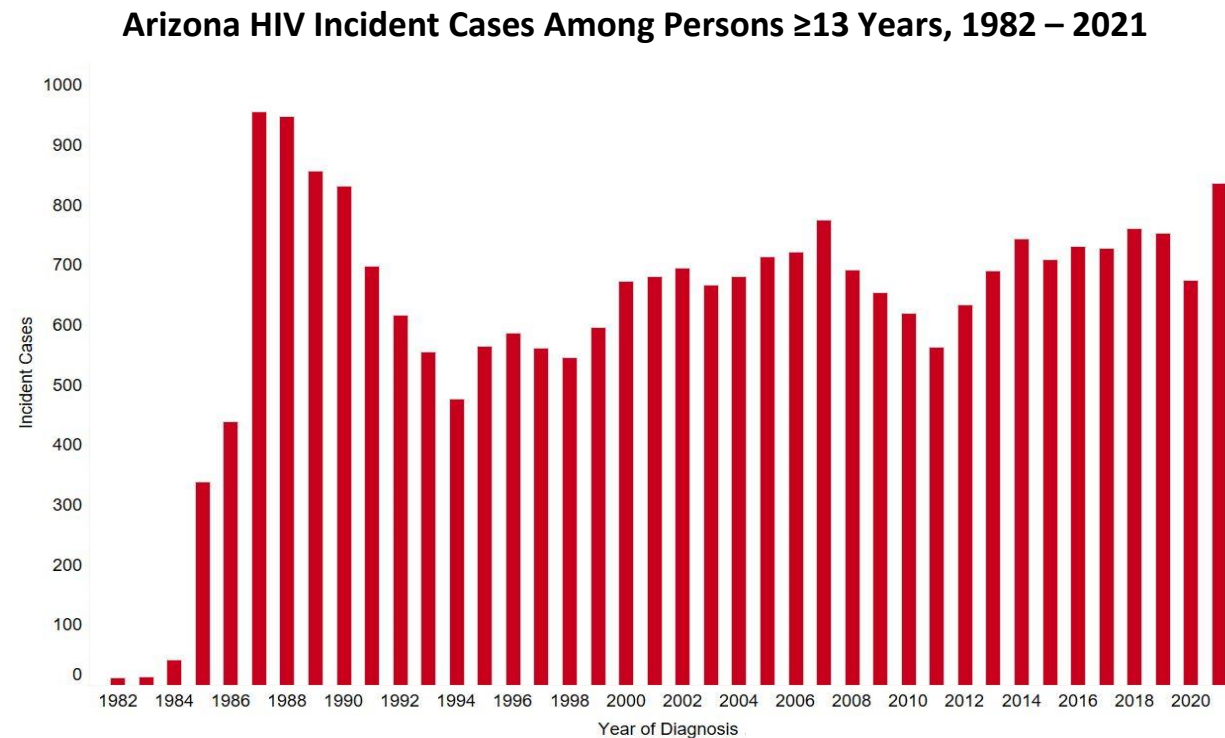
Individuals who did not have a documented lab in the last 15 years were excluded from the denominator. An individual is considered linked to care if they received lab test (i.e. viral load, CD4) within 30 days of their diagnosis. Linkage to care is a measure that cannot be compared to other outcomes in the HIV care continuum, because the denominator includes only individuals who were diagnosed with HIV/AIDS in 2021. Using the HIV Care Continuum described above, 80.7% of people in Arizona who were diagnosed with HIV/AIDS in 2021 were linked to care. Of the 17,038 PLWH in Arizona in 2021, 75.9% demonstrated receipt of care, 54.3% were retained in HIV care, and 65.0% were virally suppressed.

## INCIDENCE TREND ANALYSIS 1982-2021

---

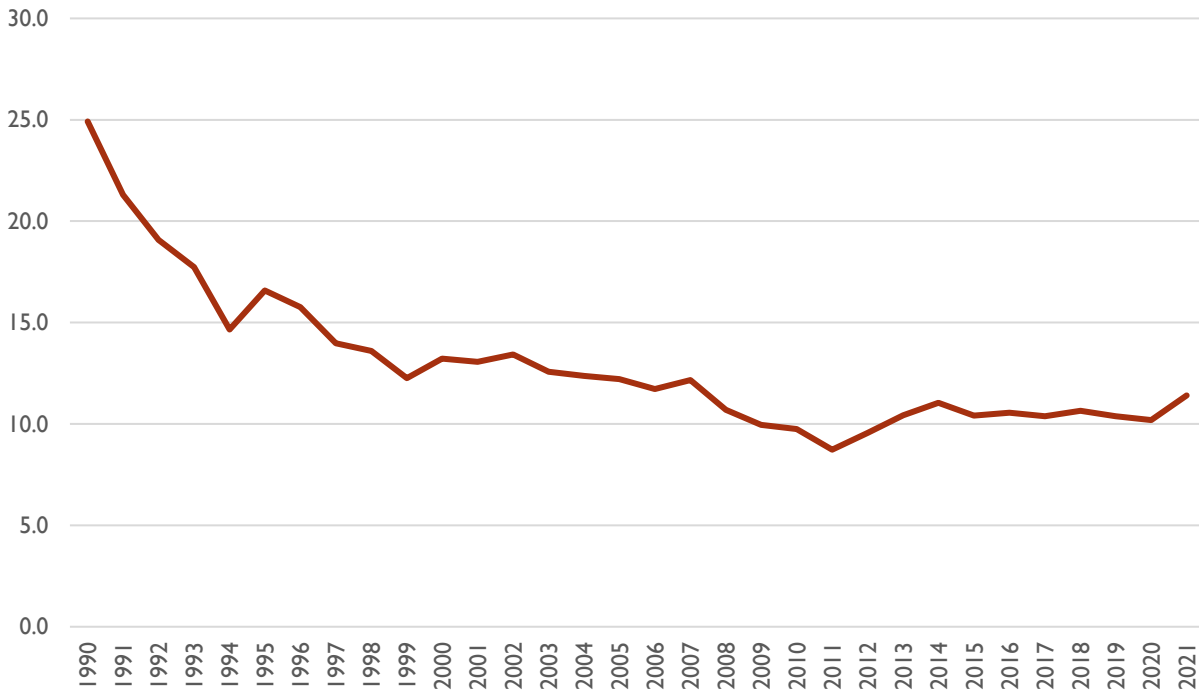
HIV/AIDS was first identified in the early 1980s, quickly becoming one of the leading causes of death among adults in the United States (U.S.)<sup>1</sup> The HIV epidemic reached its peak in Arizona by 1988 with 940 new infections and reached its low of 464 new infections in 1994. Zidovudine (AZT) was the first antiretroviral drug to be approved to treat HIV/AIDS and has been widely available since 1987.<sup>2</sup> Testing for HIV using EIA and Western Blot technology began in 1986 and was seen in wide use by 1987. Federal and state funding and messaging created high demand for testing which created a large peak of positive cases from 1987 to 1990 as both new and older infections were detected at this point. Following the peak in cases a gradual decline in HIV/AIDS incidence was observed from 1991, representing a 49% decrease in the span of 6 years. A steady increase of new infections emerged between 1994 – 2007 peaking with 769 new infections, despite of the development of Highly Active Antiretroviral Therapy (HAART) in 1995. HAART is a treatment regimen usually consisting of a combination of three or more antiretroviral drugs used to treat HIV infected patients.<sup>3</sup> A steady decline in incident cases between 2008 – 2011 during the financial collapse of that era, and reached a low of 564 new infections in 2011.

Notably, the COVID-19 pandemic may have affected HIV/AIDS testing measures in 2020 by projecting a lower number of HIV/AIDS incident cases. From 2020-2021, the number of HIV/AIDS incident cases detected increased by 19% following the COVID-19 pandemic. Over the last ten years of the HIV epidemic (2011-2021), an average of 727 incident cases per year have been recorded.



**Figure 3:** Number of HIV incident cases among persons ≥13 years, Arizona from 1982-2021.

## Arizona HIV/AIDS Incidence Rate, 1990 – 2021



**Figure 4:** The HIV/AIDS incidence rate, Arizona 1990 – 2021.

### Cases in Females

At the peak of the HIV epidemic in 1988, individuals assigned female at birth comprised 10% of new HIV infections in Arizona and 49% of those cases identified as IDU as a risk factor. In 2021, individuals assigned female at birth consisted of 13% of new infections and 5% of those HIV cases reported IDU as a risk factor. New infections among the Black female population increased from 16 HIV cases in 2010 to 27 HIV cases in 2020, a 47% increase over ten years. During this span, the Hispanic female population experienced a 44% increase in new infections while the White female population experienced a 16% decrease of new infections. Overall, the Black and Hispanic populations have continued to experience a rise in new infections every year. Conversely, the AI/AN female population experienced a 71% decrease in new infections from 7 HIV cases in 2011 to 2 HIV cases in 2019, with an average increase of 7 cases per year. The majority of new female infections occurred in women of childbearing age, raising concerns about potential sexually transmitted co-infections.



## Arizona HIV Incident Cases Among Persons ≥13 years by Age, 1982 - 2021

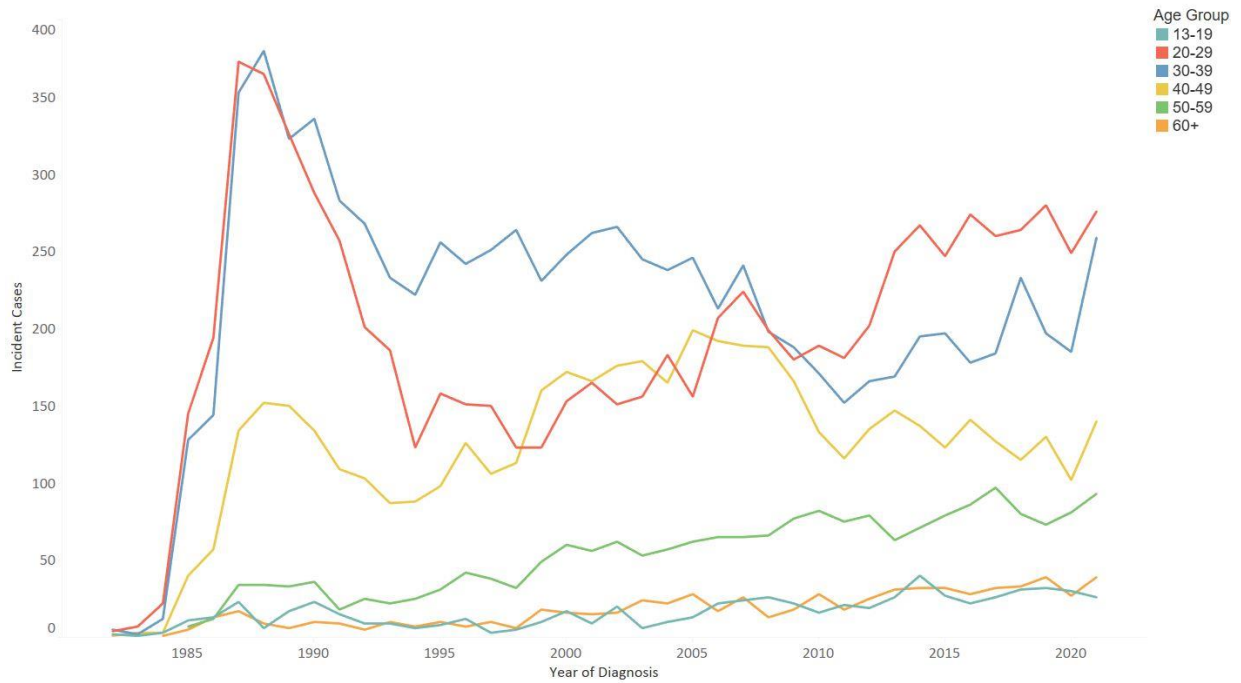


Figure 5: Number of HIV incident cases among persons ≥13 years by age group, Arizona 1982 to 2021.

During the peak of the HIV epidemic, persons aged 20-39 years were at the highest risk of acquiring HIV infection. In 2020 and 2021, persons aged 20-39 years accounted for 64% of reported incident cases.

## Arizona HIV Incident Cases Among Persons ≥13 Years by Risk, 1982 - 2021

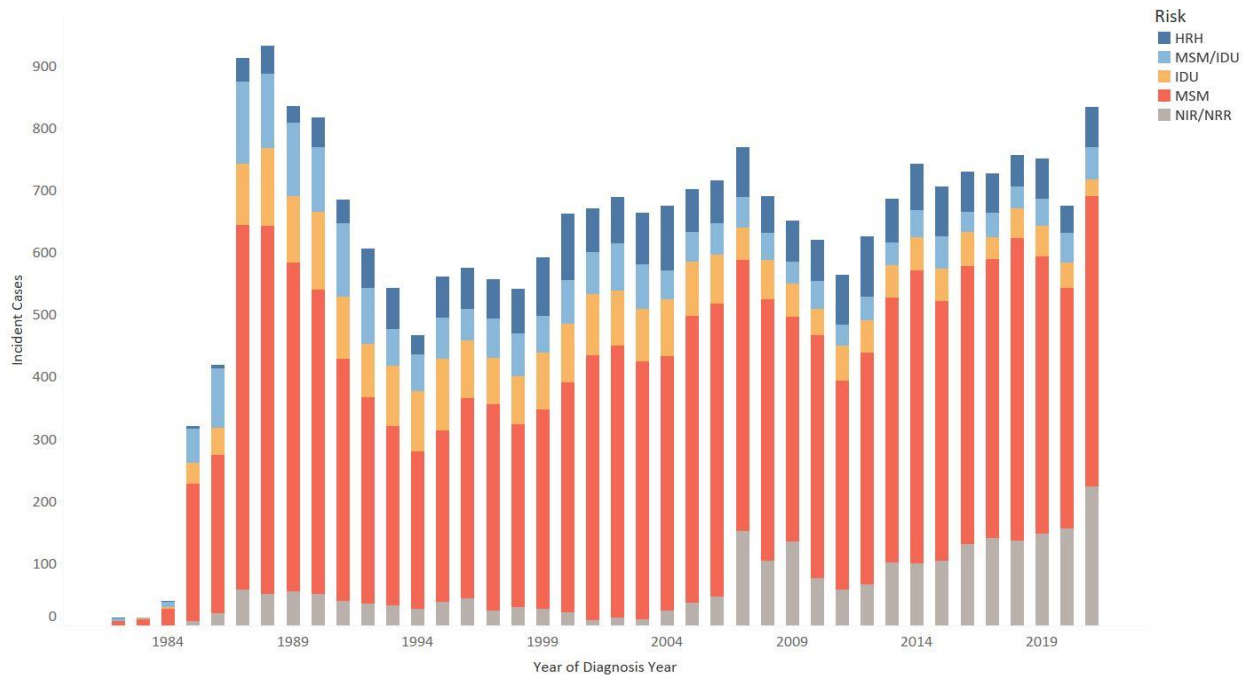
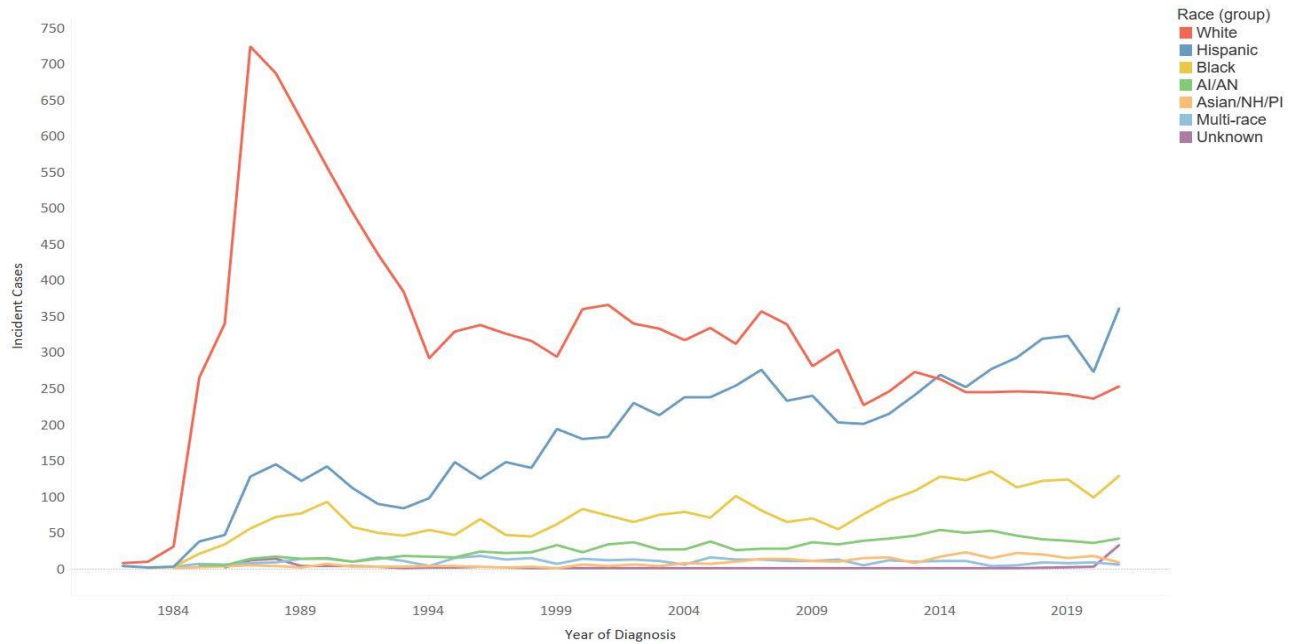


Figure 6: Number of HIV incident cases among persons ≥13 years by risk, Arizona 1982 to 2021.

### Cases by Risk

Men who have Sex with Men (MSM) has been the primary HIV transmission risk throughout the HIV epidemic. MSM as a risk factor represented 57% of new HIV infections in 2020 and 56% of new HIV infections in 2021. Overall HIV incidence cases reported among MSM decreased by 21% from its peak of 592 HIV cases in 1988 to 466 HIV cases in 2021. However, the Black and Hispanic MSM population have experienced a 71% increase of new infections from 79 HIV cases in 1995 (the year HAART was first introduced) to 276 HIV cases in 2021. The highest rate of incidence cases in the Black and Hispanic MSM population was 298 cases in 2018, followed by 276 cases in 2021. The number of new HIV infections among the Hispanic population surpassed new HIV infections among the White population in 2014 and maintained a high case count through 2021. The Hispanic population experienced a 60% increase in HIV cases since the peak of the HIV pandemic and has continued an upward trend reaching a high incidence case rate of 382 in 2021. From 2000 – 2021, the AI/AN population has encountered a 45% increase in new HIV infections. From 2016-2020 there was a 32% decline in new infections in the AI/AN population, however, there has been a 14% increase in new infections AI/AN from 2020-2021. Comparatively, the White population experienced a 63% decrease in cases since the height of the HIV epidemic and has continued at a 2% downward trend over the last 5 years.

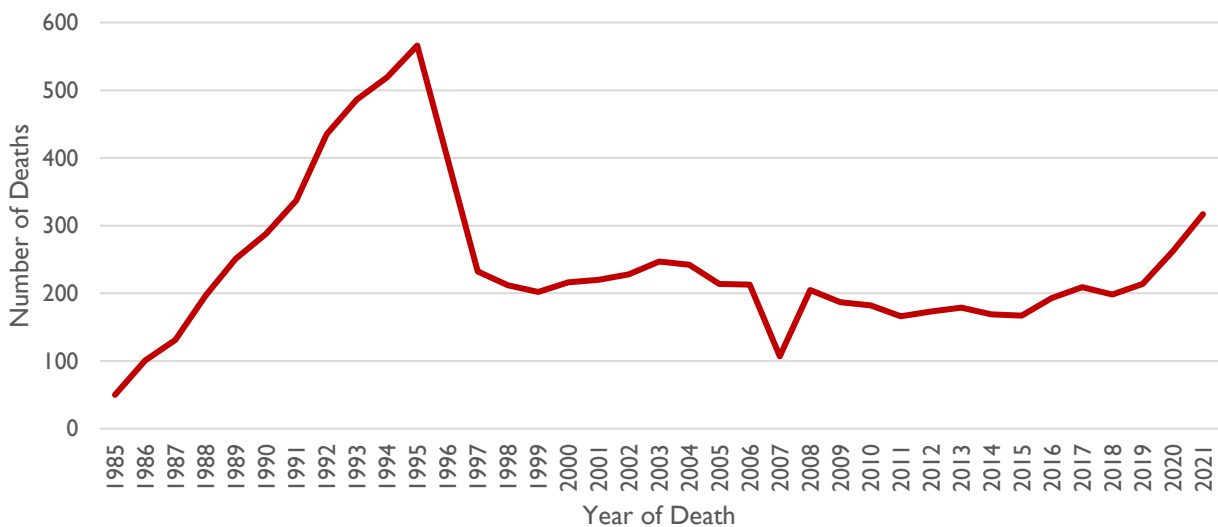
## Arizona HIV Incident Cases Among Persons ≥13 Years by Race/Ethnicity, 1982 - 2021



**Figure 7:** Number of HIV incident cases among persons ≥13 years by race/ethnicity, Arizona 1982 to 2021.

In 1988, the White population accounted for 72% of new HIV infections. From 1988 – 2021, the White population experienced a 63% decrease in HIV incidence, whereas the Hispanic population experienced a 61% increase of new HIV infections.

## Deaths Among People Living with HIV/AIDS in Arizona, 1985 - 2021



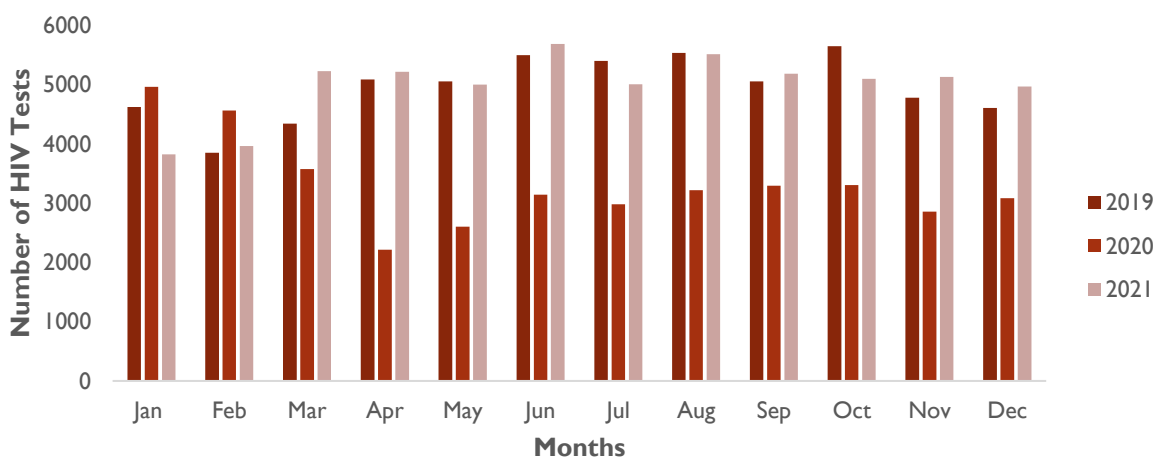
**Figure 8:** Number of HIV related deaths in Arizona 1985-2021.

## COVID-19 IMPACT ON HIV TESTING, 2019-2021

The first case of COVID-19 was reported in Arizona on January 22, 2020 which disrupted or halted HIV-related services entirely, including HIV testing and outreach, partner services, and linkage to care.<sup>4</sup> The number of new HIV diagnoses in 2020 were likely impacted by the COVID-19 pandemic. In 2021, the number of new HIV diagnoses may have returned to pre-pandemic norms, however, the COVID-19 pandemic altered HIV-related services to accommodate ongoing COVID-19 testing measures. Although the COVID-19 rate of infection has decreased since 2020, many individuals are still affected by COVID-19.

There was a 33% decrease in publicly-funded HIV testing in 2020 (39,813 tests) as compared to 2019 (59,468 tests). The reduction in new HIV diagnoses in 2020 may reflect decreased access to services including testing, rather than represent a true decrease in the number of incident cases. Notably, publicly-funded HIV testing increased by over 33% in 2021 (59,825 tests) as compared to 2020 (39,813 tests). The number of new HIV diagnoses in 2020 may reflect decreased access to services, while the number of new HIV diagnoses in 2021 may reflect a recovery in access to services following the COVID-19 pandemic.

**Arizona Yearly and Monthly HIV Tests, 2019 - 2021**



**Figure 9:** Number of HIV Tests by month and year, Arizona, 2019-2021. Home-test kit data not included in graph above.

Data from the ADHS HIV Prevention Program indicates that traditional testing decreased at funded sites in Maricopa County by 28%, while the demand for home-test kits increased by 43% from 2019 to 2020. While initial testing lagged throughout the COVID-19 pandemic, the volume of viral load and CD4 tests reported to ADHS remained consistent with expectations based on previous years, suggesting that COVID-19 was a barrier for individuals seeking initial testing but had a lesser impact on PLWH who were already established in care. From 2020 to 2021, traditional testing increased at funded sites in Maricopa County by 27% and the demand for home-test kits continued to increase by 41%. The increase in demand for home-test kits alongside the return to pre-pandemic norms for traditional testing rates may indicate a need for home-test kits to be made more accessible to the population at large or to those who continue to have concerns with COVID-19.

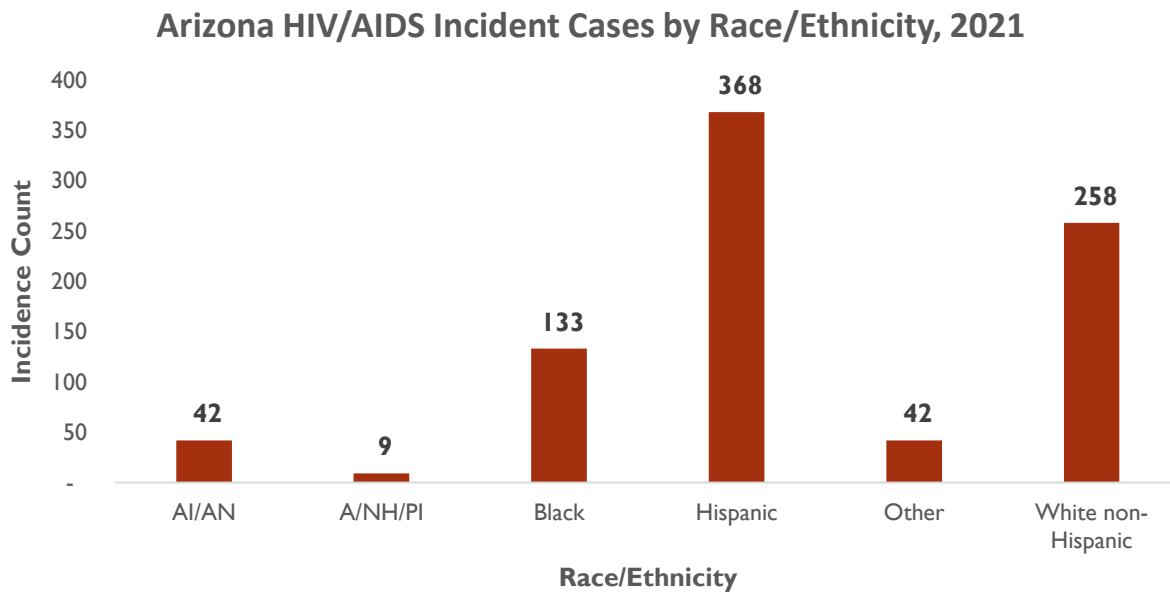
## ARIZONA INCIDENCE & PREVALENCE CASES BY RACE/ETHNICITY, 2021

---

In the U.S., HIV/AIDS can affect anyone regardless of race, ethnicity, sex, age, and location. Some population sub-groups experience a higher rate of infection due to socio-economic and demographic factors, such as discrimination, income, stigma, and, education.

In Arizona, the Hispanic population experienced the highest total number of HIV/AIDS incident cases in 2021 with 368 cases, followed by the White population at 258 cases, and the Black population at 133 cases. In contrast, the Black population experienced the highest HIV/AIDS incidence rate in 2021 with 34.7 HIV/AIDS cases per 100,000, followed by the Hispanic population at 15.5 per 100,000, and the AI/AN population at 14.1 HIV/AIDS per 100,000.

In 2021, the White population experience the highest total number of HIV/AIDS prevalent cases with 8,971 cases, followed by the Hispanic population at 6,029 cases, and the Black population at 2,869 cases. In contrast, the Black population experienced the highest HIV/AIDS prevalence rate in 2021 with 748.5 per 100,000, followed by the AI/AN population at 268.0 per 100,000, and the Hispanic population at 254.7 per 100,000.



**Figure 10:** The number of incident cases by Race/Ethnicity, Arizona 2021.

### Arizona Incidence Rate Per 100,000 by Race/Ethnicity, 2021

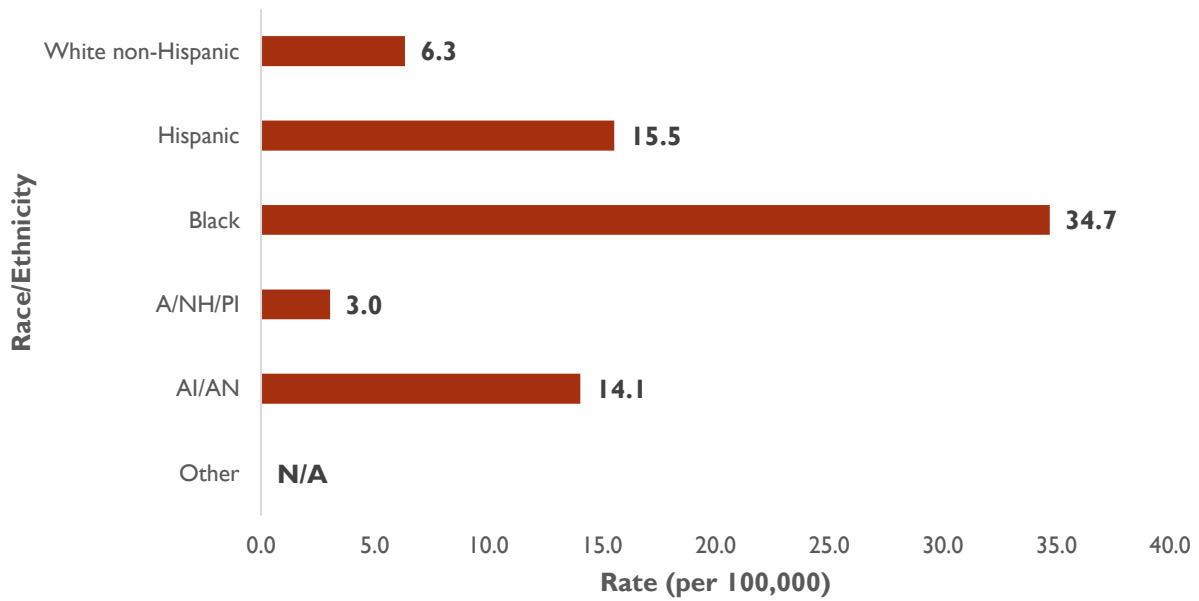


Figure 11: The incidence rate per 100,000 by Race/Ethnicity, Arizona 2021.

### Arizona HIV/AIDS Prevalence Cases by Race/Ethnicity, 2021

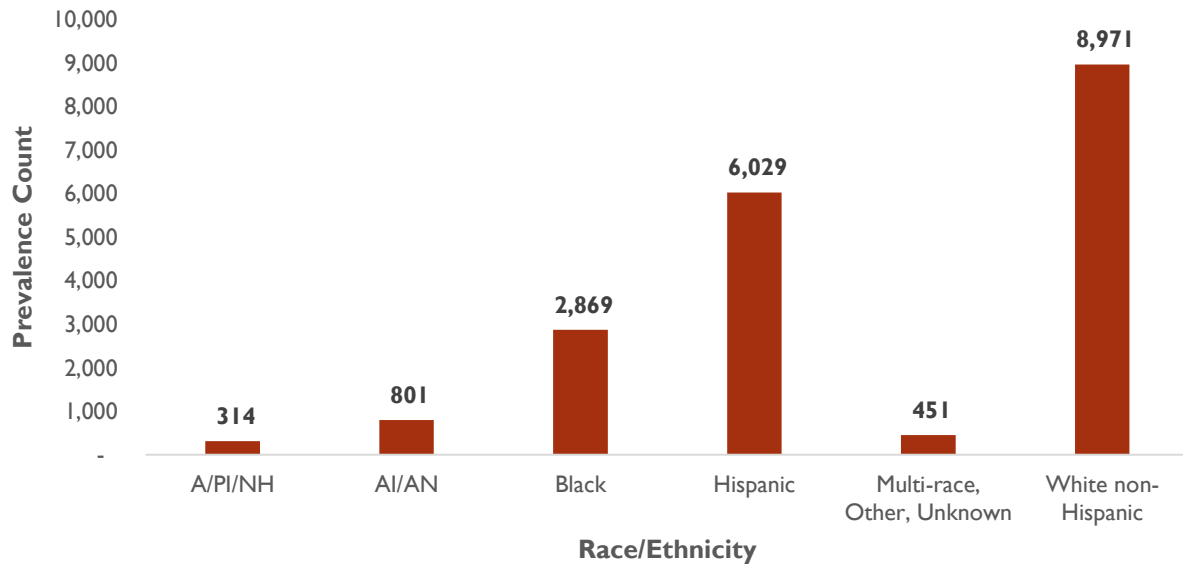


Figure 12: The number of incident cases by Race/Ethnicity, Arizona 2021.

### Arizona Prevalence Rate per 100,000 by Race/Ethnicity, 2021

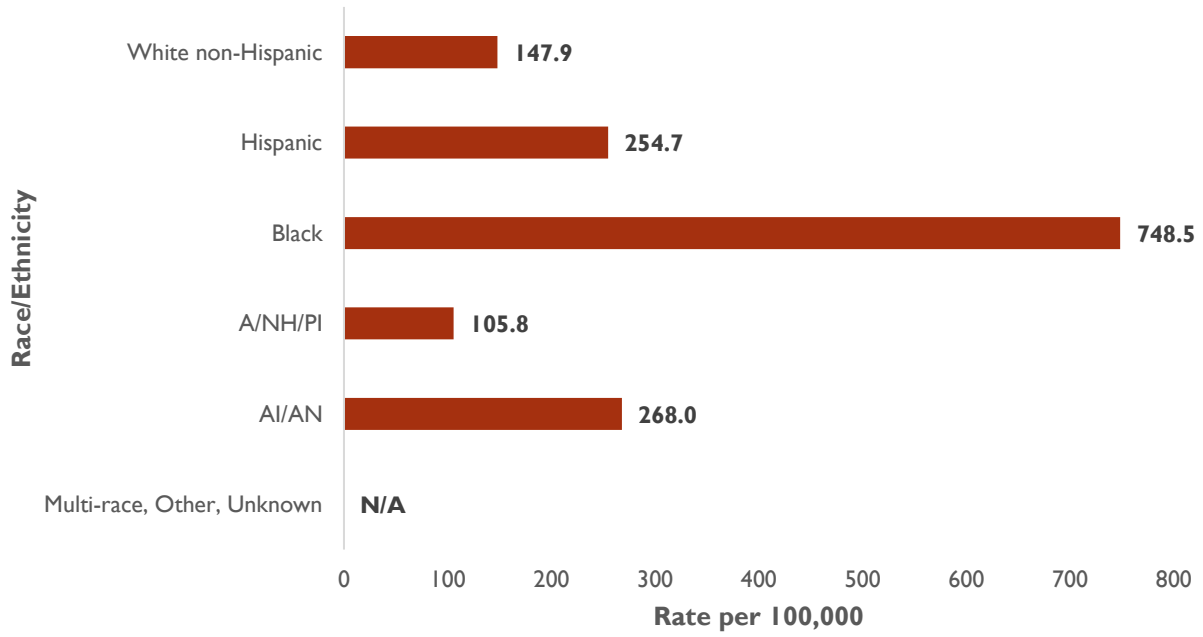


Figure 13: The prevalence rate per 100,000 by Race/Ethnicity, Arizona 2021.

## AMERICAN INDIAN & ALASKA NATIVES POPULATION

Since the height of the HIV epidemic in 1988, the AI/AN population experienced a 59% increase in new infections. Overall HIV incidence cases reported among the AI/AN population decreased by 23% from its peak of 55 HIV cases in 2014 to 42 HIV cases in 2021. In 2021, AI/AN individuals accounted for 4% of Arizona’s population and 5% of all incident HIV/AIDS cases reported in Arizona. While the AI/AN population shares a small portion of all new HIV/AIDS cases in Arizona, the HIV/AIDS incidence rate (per 100,000) among the population increased from 12.04 to 14.1. The AI/AN population experienced the third highest incidence rate per 100,000 by race/ethnicity at 14.1 in 2021. In comparison, the black population experienced the highest incidence rate per 100,000 by race/ethnicity in Arizona at 34.7, followed by the Hispanic population at 15.5.

### Arizona HIV/AIDS Incident Cases Among American Indian/Alaska Native, 1985-2021

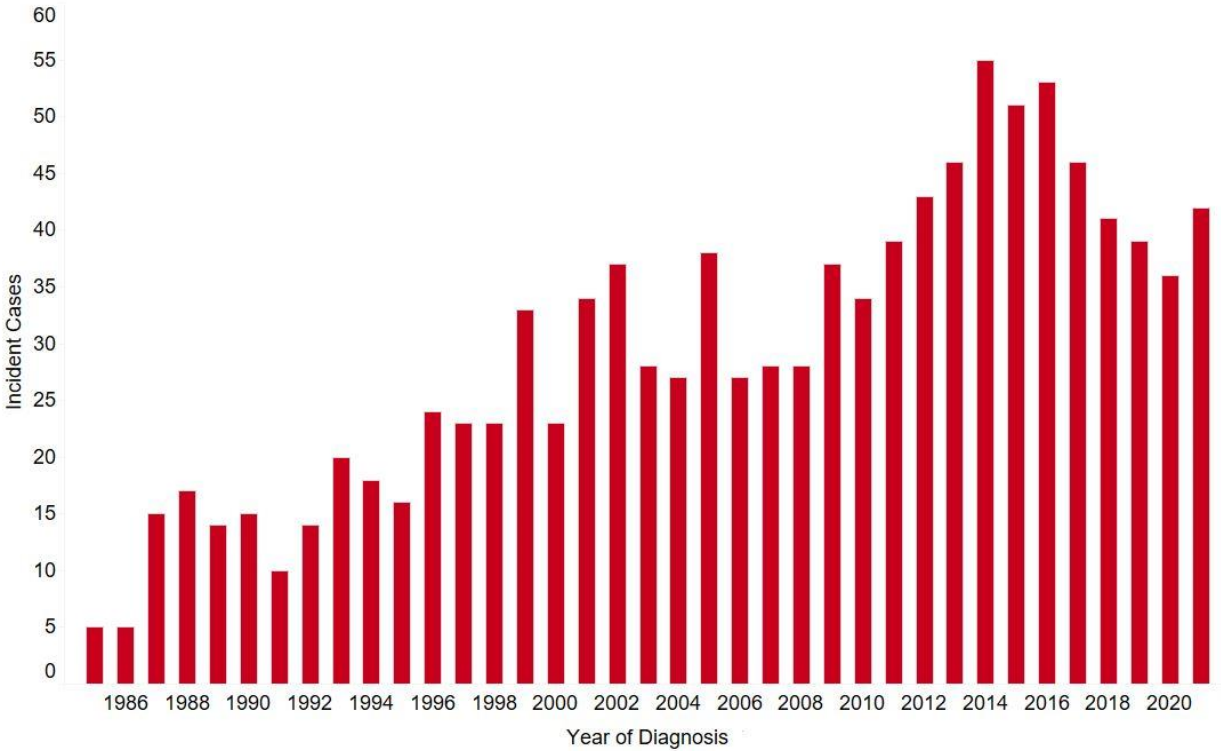


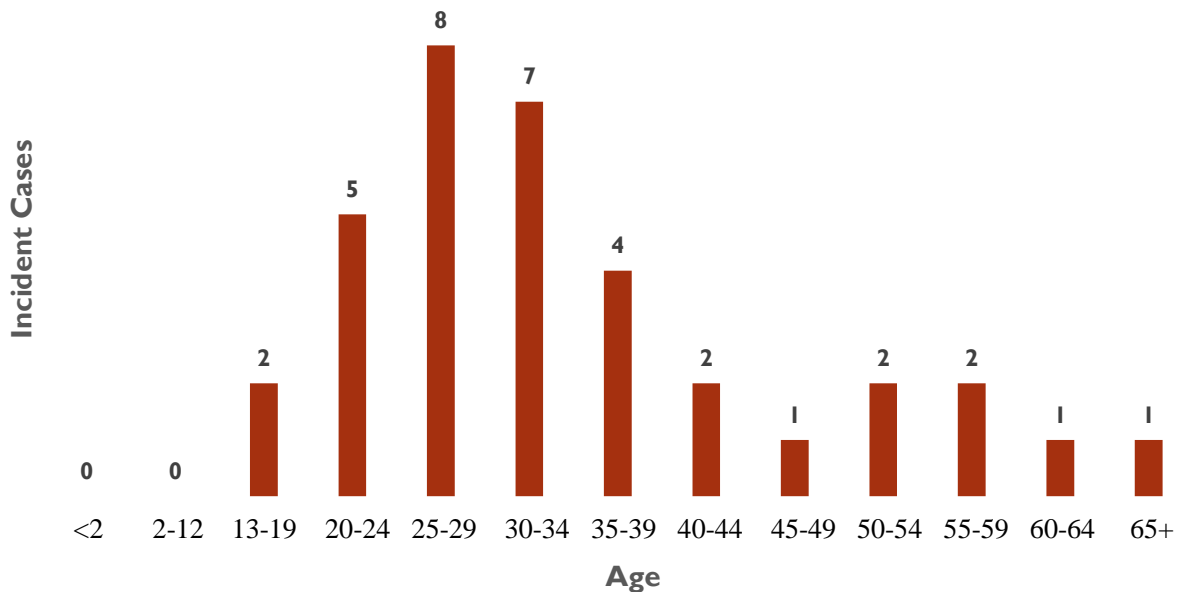
Figure 14: Number of HIV/AIDS Incident cases among American Indian/Alaska Native population, Arizona 2021 - 2021.



### Cases by Age

In 2021, individuals aged 25-29 years accounted for over 22% of all incident HIV/AIDS cases in the AI/AN population in Arizona, and individuals aged 30-34 years accounted for 20%. In comparison, individuals aged 25-29 accounted for 20% of statewide HIV/AIDS incident cases in Arizona, and individuals aged 30-34 years accounted for 19%.

### **Arizona HIV/AIDS Incident Cases Among American Indian/Alaska Native by Age, 2021**



**Figure 15:** Number of HIV/AIDS Incident cases by age among American Indian/Alaska Native population, Arizona 2021.

### Cases by Sex at Birth

In 2021, over 91% of newly diagnosed Arizona HIV/AIDS cases occurred in assigned male at birth in the AI/AN population. AI/AN incidence rates for individuals assigned male at birth are over 10 times greater than those of their assigned female at birth counterparts. In comparison, the overall statewide portion of Arizona HIV/AIDS new cases for individuals assigned male at birth was 87%, and individuals assigned female at birth was 13%. Incidence rate for AI/AN individuals' assigned male at birth (22.1 per 100,000) was higher when compared to males of all races/ethnicities in Arizona (20.2 per 100,000), while the incidence rate for AI/AN individuals' assigned female at birth (1.9 per 100,000) was lower when compared to females of all races/ethnicities in Arizona (2.9 per 100,000).

### Cases by Risk Factors

In 2021, 69% of AI/AN incident HIV/AIDS cases in Arizona reported the risk factor as MSM alone, which was 13 percentage points higher than the 56% of incident HIV/AIDS cases for all races/ethnicities statewide which reported the risk factor as MSM alone. IDU and MSM/IDU accounted for 6% of AI/AN incident cases in 2021, while high-risk heterosexual cases comprised 3% of cases. Additionally, 23% of AI/AN incident HIV/AIDS cases in 2021 had no risk reported.

### **Arizona HIV/AIDS Incident Cases Among American Indian/Alaska Native by Risk, 2021**

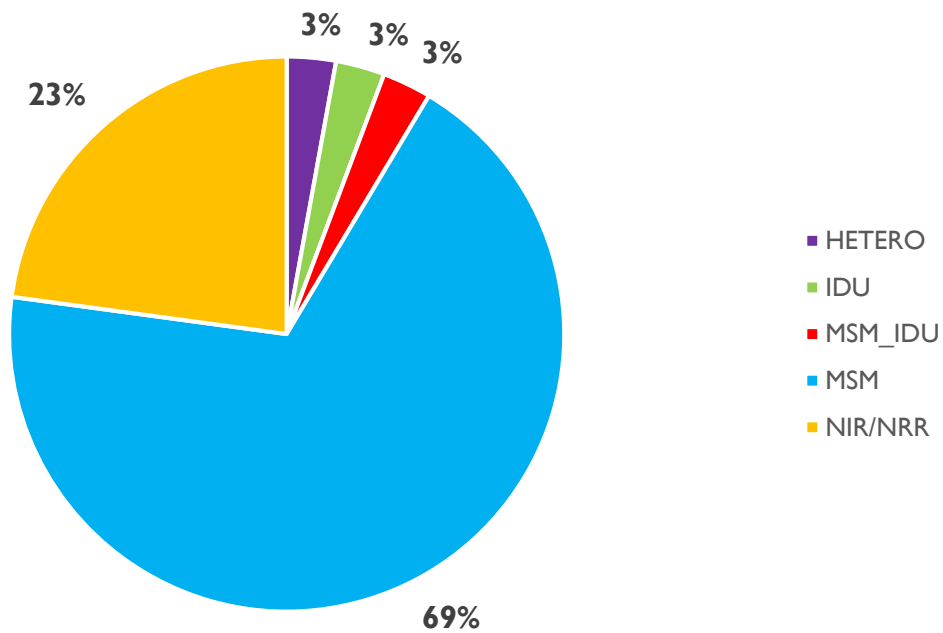


Figure 16: Percent of HIV incident cases among American Indian/Alaska Native population by risk, Arizona 2021.

### Cases by Race/Ethnicity at Initial HIV/AIDS Diagnosis (CD4 Count)

According to the CDC, HIV infection is classified as Stage 1 or Stage 2 when the immune system of a person infected with HIV is compromised but not yet AIDS defined.<sup>5</sup> Stage 1 is defined as an acute HIV infection, and stage 2 is defined as chronic HIV infection with a CD4 cell count greater than 200.<sup>5</sup> AIDS infection is classified as HIV Stage 3 when the immune system of a person infected with HIV becomes severely compromised (defined by CD4 cell count <200) and/or the person becomes ill with an opportunistic infection.<sup>5</sup> Opportunistic infections and other AIDS-defining conditions occur more frequently, and are more severe, in people with weakened immune systems. In the absence of treatment, AIDS usually develops 8 to 10 years after initial HIV infection.<sup>5</sup>

In 2021, 86% of newly diagnosed HIV/AIDS cases in the AI/AN population were diagnosed with HIV (CD4 count 200>500; not AIDS defined), while 14% were diagnosed with AIDS (CD4 count under 200). Likewise, 85% of HIV/AIDS cases in the Black population were diagnosed with HIV, while 15% were diagnosed with AIDS.

In the Hispanic population, 79% were diagnosed with HIV and 21% were diagnosed with AIDS. In the White Non-Hispanic population, 81% were diagnosed with HIV and 19% were diagnosed with AIDS. In the Asian/Native Hawaiian/Pacific Islander population, 60% were diagnosed with HIV and 40% were diagnosed with AIDS.

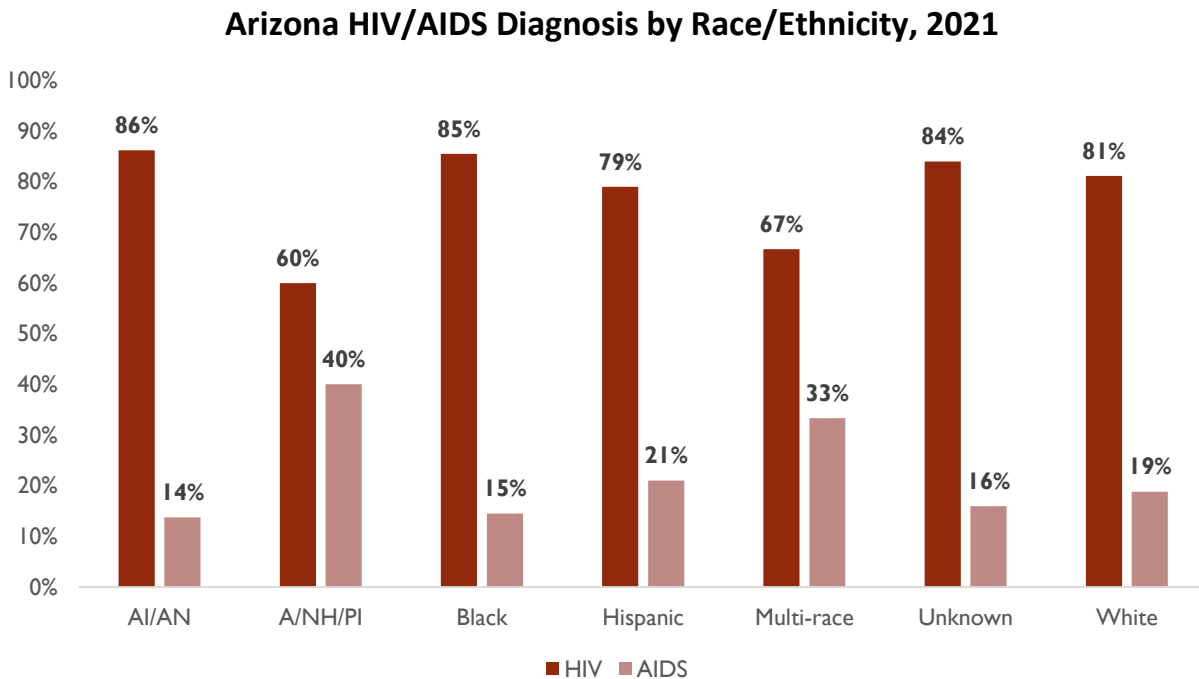


Figure 17: Percent of initial HIV/AIDS Diagnosis (CD4 count) by race/ethnicity, Arizona 2021.

Cases by County, 2017-2021

From 2019 to 2021 in Arizona, both Maricopa County and Apache County experienced an increase in HIV/AIDS cases. In 2021, Maricopa County accounted for 54% of all Arizona HIV/AIDS incidence cases in the AI/AN population, while Apache County accounted for over 22%. From 2019 to 2021, Coconino County experienced a decrease in the rate of HIV/AIDS cases in the AI/AN population from 23.74 per 100,000 to 8.05 per 100,000. From 2019 to 2021, Navajo County experienced a decrease in the rate of HIV/AIDS cases in the AI/AN population from 14.23 per 100,000 to no cases reported.

**Arizona HIV/AIDS Incident Cases Among American Indian/Alaska Native by Counties, 2011 - 2021**

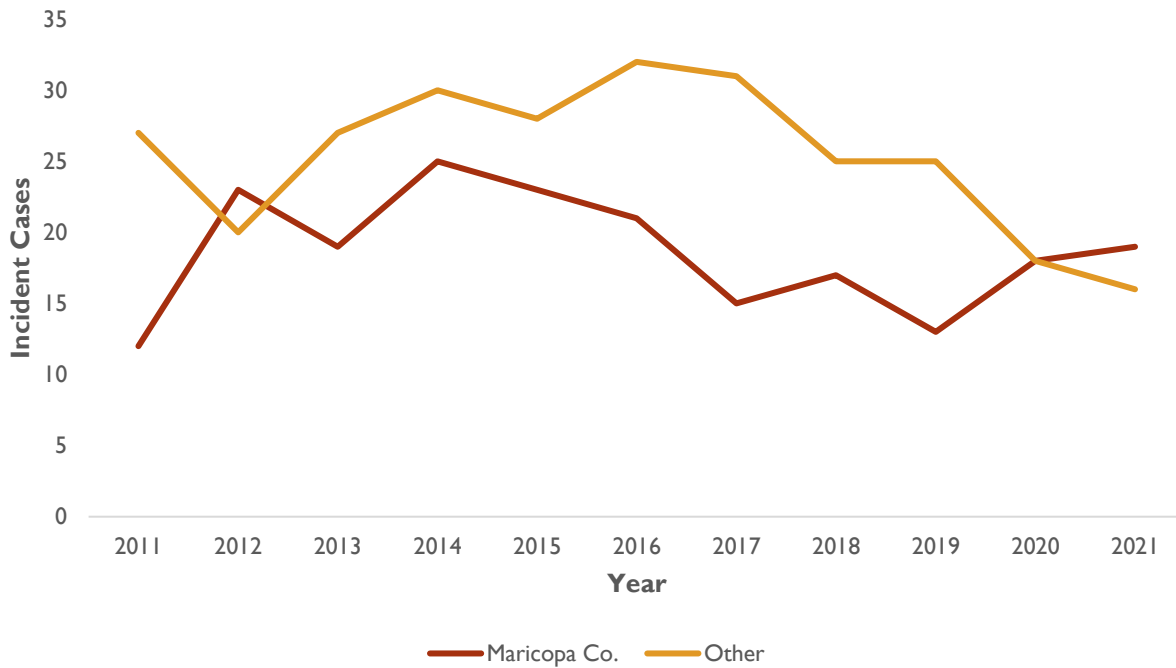


Figure 18: Number of HIV/AIDS incident cases in American Indian/Alaska Native; Maricopa County and Other Counties, 2011-2021. Other Counties include: Apache County, Cochise County, Coconino County, Gila County, Graham County, Greenlee County, La Paz County, Mohave County, Navajo County, Pima County, Pinal County, Yavapai County, and Yuma County.

## YOUNG MSM OF COLOR

---

According to the CDC, 20% of all new HIV/AIDS infections in the U.S. occurred in youths between the ages of 13-24 in 2020.<sup>6</sup> Youths are least likely to be retained in care and virally suppressed. The CDC detailed that 68% of youth HIV/AIDS incident cases reported Men who have sex with men (MSM) as their risk factor, while the two most heavily impacted race/ethnicity groups were Black/African American and Hispanic/Latino.

In the U.S., Black, Hispanic, and young MSM are disproportionately impacted by HIV.<sup>7</sup> These two groups combined formed the population of young MSM of color. Young MSM of color have experienced inequities related to contracting HIV/AIDS and obtaining treatment and/or care even if they are experiencing seroconvert stages (when the immune system is reacting to the presence of HIV virus in the body).<sup>7</sup> In the U.S., the challenges young MSM face include low rates of testing, low rates of pre-exposure prophylaxis (PrEP) uptake, higher rates of STI coinfection, and lower socioeconomic status.<sup>7</sup> The difficulties young MSM face prioritizes the population in ending the HIV/AIDS epidemic.

In 2021, there were 85 new cases of HIV/AIDS among young (aged 13-24) MSM of color reported — an increase of 2 cases from 2018. These 85 cases makeup 10.1 percent of all incident HIV/AIDS cases in Arizona in 2021; of which, 9.9% reported MSM as the risk factor, 65.9% were 13-24 years of age, and 16.9% were Black or Hispanic. Within this demographic Maricopa County had the largest number of incident cases reported (57), followed by Pima County (19). Furthermore, three of the incident cases were reported in trans women.

### Arizona HIV/AIDS Incident Cases Among Young MSM of Color by Location, 2021

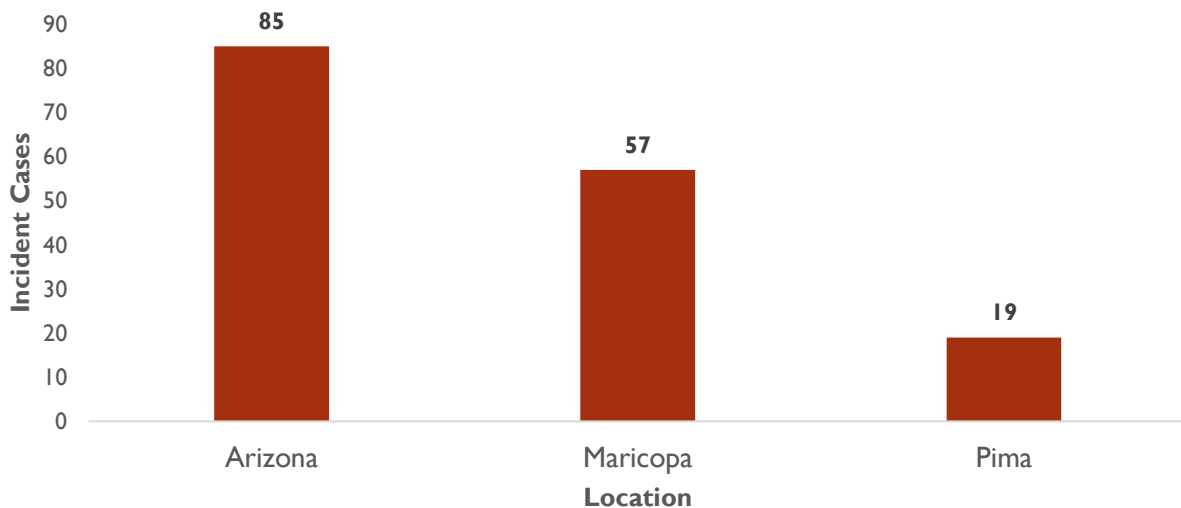


Figure 19: Number of HIV/AIDS incident Cases by Location among young MSM of color, Arizona 2021.

At the end of 2021, there were 207 people living with HIV/AIDS in the young MSM of color population. These 207 cases comprise 1.1 percent of all prevalent cases, 1.5 percent of prevalent cases with MSM as the risk factor, 38.6 percent of the prevalent cases aged 13-24, and 2.3 percent of the prevalent cases that identify as Black/African American and Hispanic. Similar to the incidence burden by geographic location, Maricopa County (151) and Pima County (34) have the highest number of prevalent cases reported in this demographic.

**Arizona Prevalent Cases Among Young MSM of Color by Location, 2021**

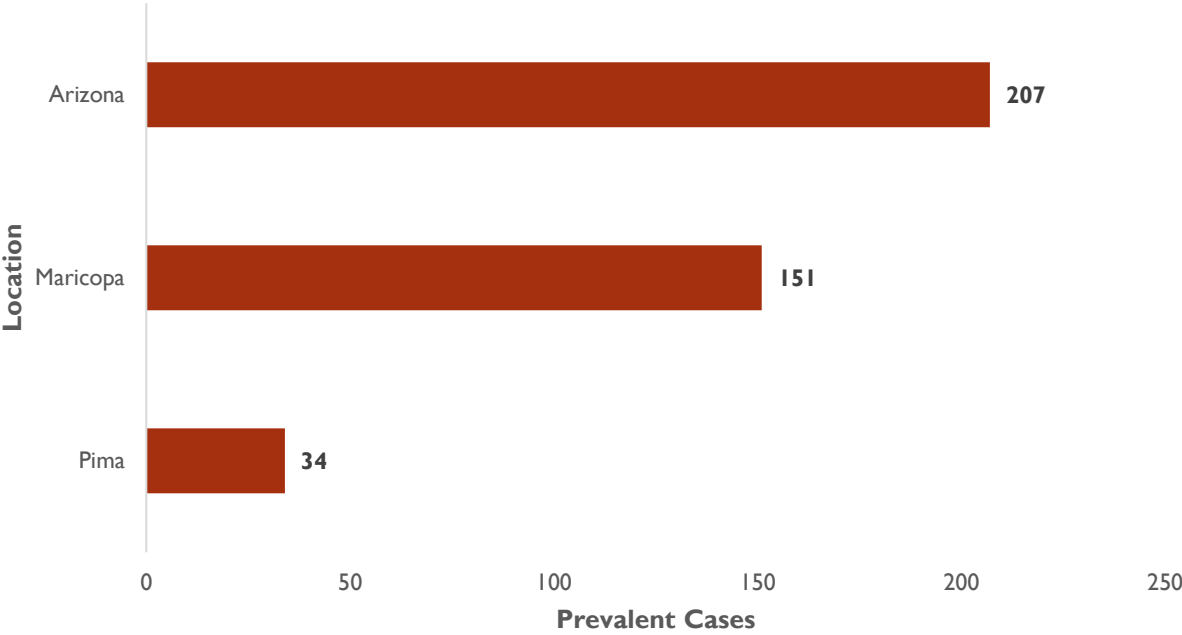


Figure 20: Number of prevalent cases in young MSM of color by location, Arizona 2021.

## ACKNOWLEDGEMENTS

---

The HIV Surveillance Program at Arizona Department of Health Services would like to thank the following individuals for their support of the program and publication of this report:

### **Authors**

Mercedes Seschillie, MPH – Epidemiologist, HIV Surveillance

Maxwell Short, MPH – Epidemiologist/Data Manager, HIV Surveillance

### **HIV Surveillance Staff**

Rick DeStephens, MHA – Program Manager, HIV Surveillance

Heidi Fraitnick, MPH – Epidemiologist/Surveillance Coordinator, HIV Surveillance

Ramu Gudigantala, MD, MPH, CPH – Epidemiologist, HIV Surveillance

Samantha Colquitt, MPH – Epidemiologist, HIV Surveillance

Blanca Hughes – Program Project Specialist, HIV Surveillance

Julia Mulligan – Incidence Coordinator, HIV Surveillance

Rosalinda Avila – Program Project Specialist, HIV Surveillance

Priscilla Hernandez – Data Entry, HIV Surveillance

Gabriela Ramirez – Data Entry, HIV Surveillance

### **Acknowledgements**

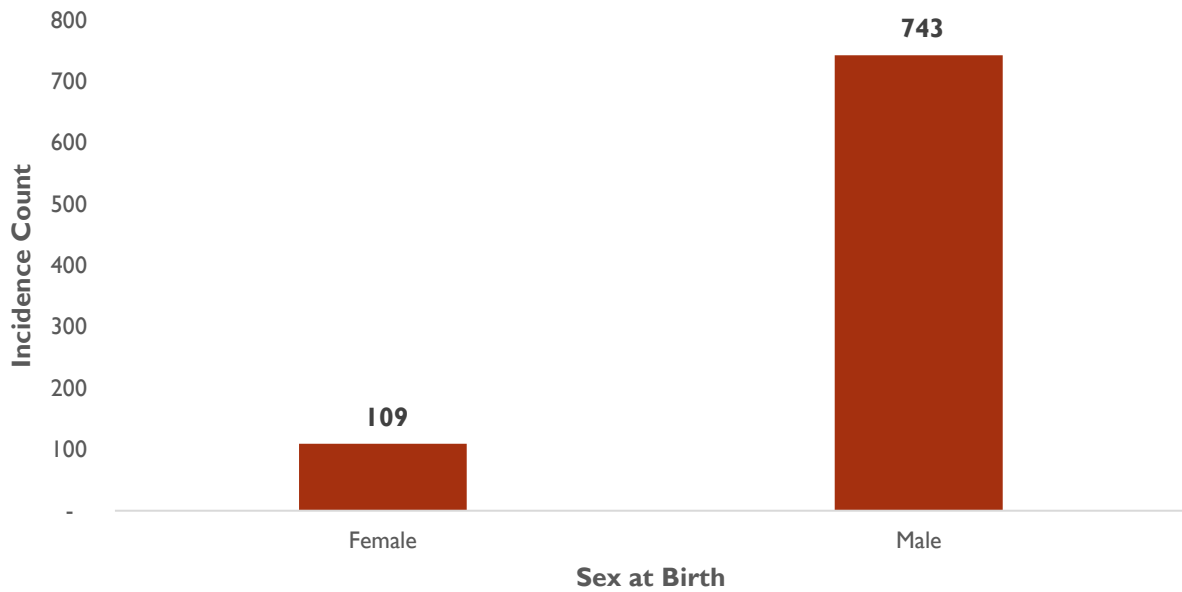
Rebecca Scranton, MPH – Chief, Office of Disease Integration and Services

Eugene Livar, MD, CIC – Assistant Director, Division of Public Health Preparedness

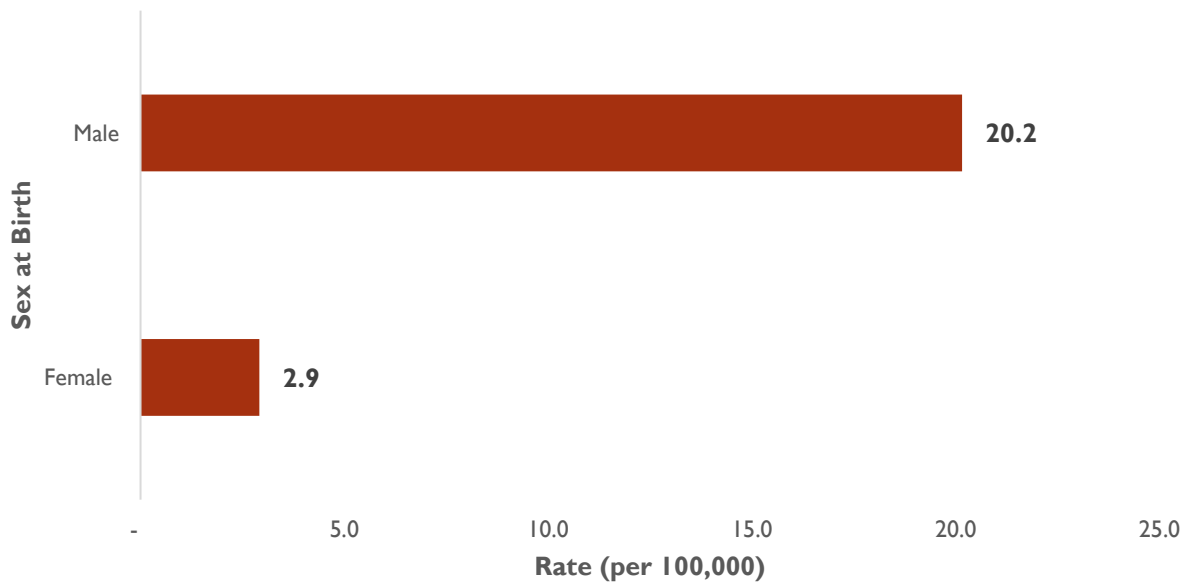
## APPENDIX 1: STATEWIDE INCIDENCE DEMOGRAPHICS

---

### Arizona HIV/AIDS Incidence Count by Sex, 2021

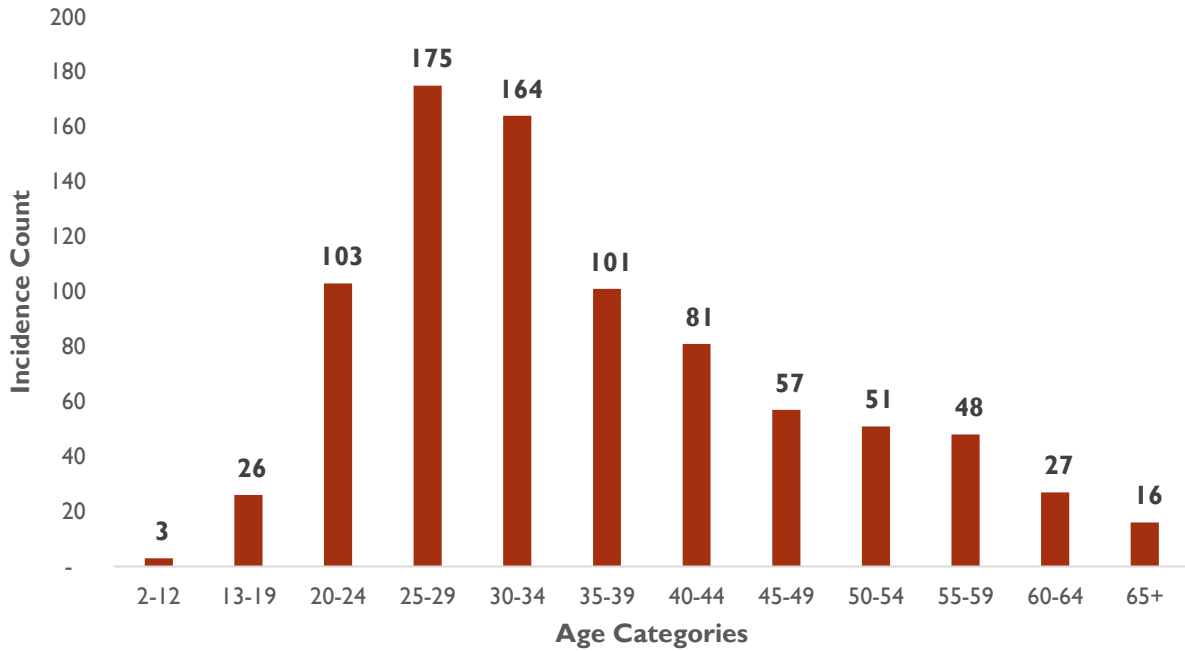


### Arizona Incidence Rate Per 100,000 by Sex, 2021

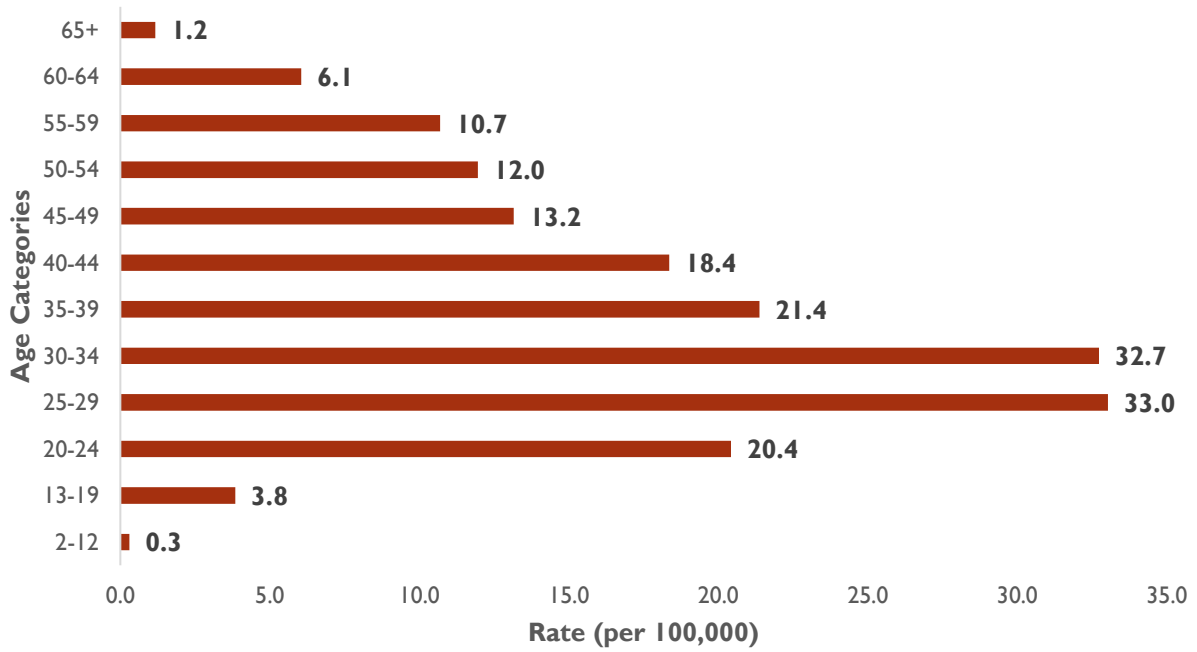




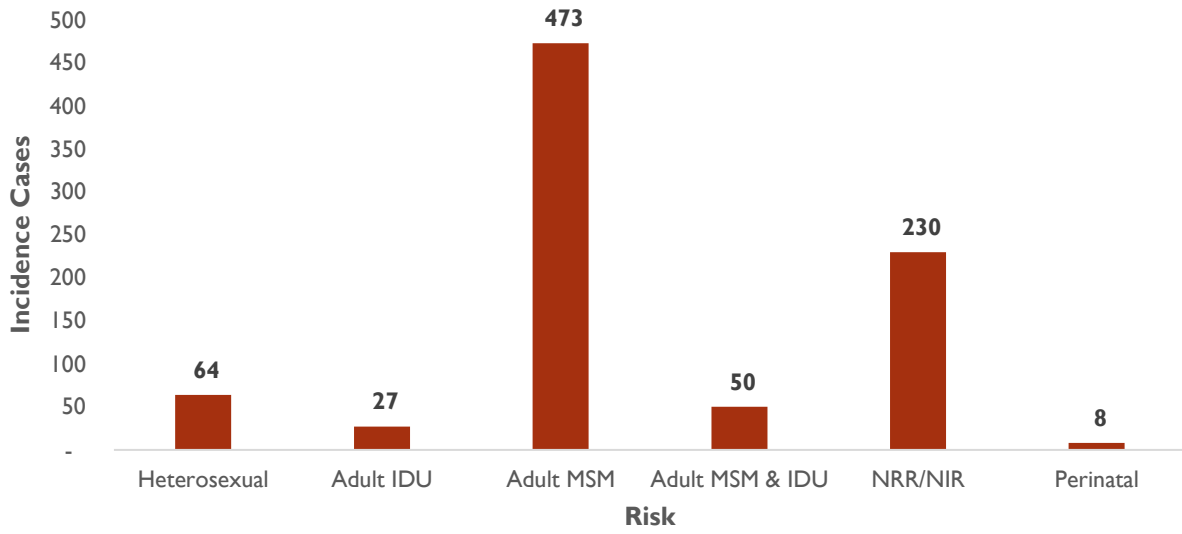
### Arizona HIV/AIDS Incidence Count by Age, 2021



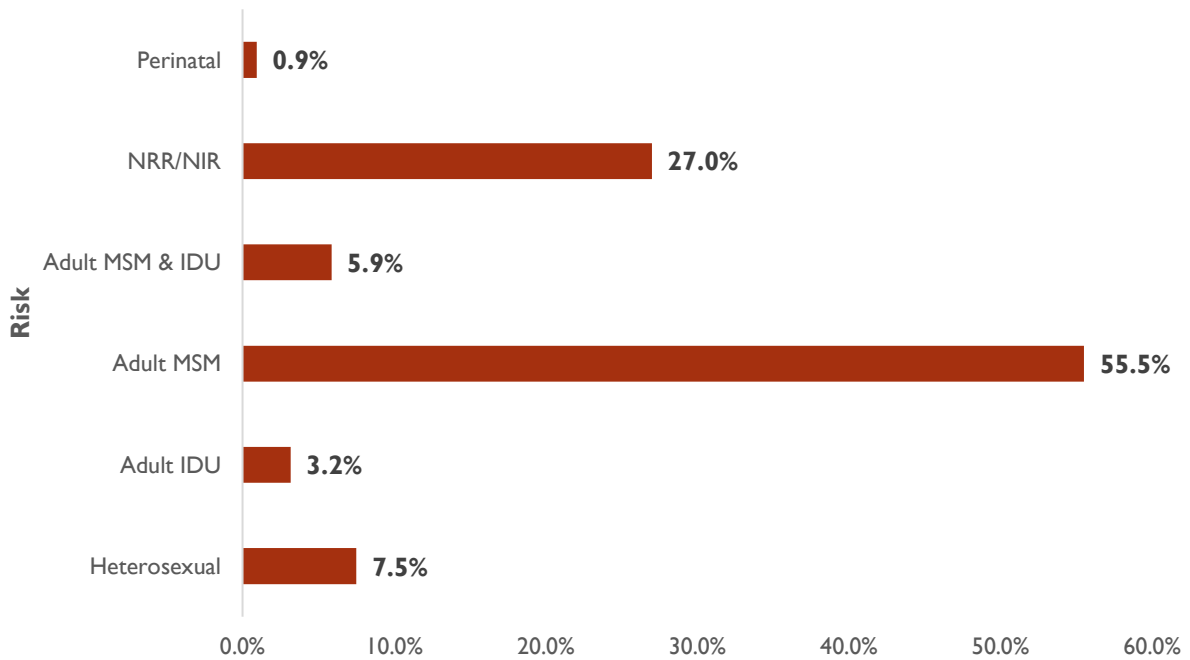
### Arizona Incidence Rate Per 100,000 by Age, 2021



### Arizona HIV/AIDS Incidence Count by Risk, 2021

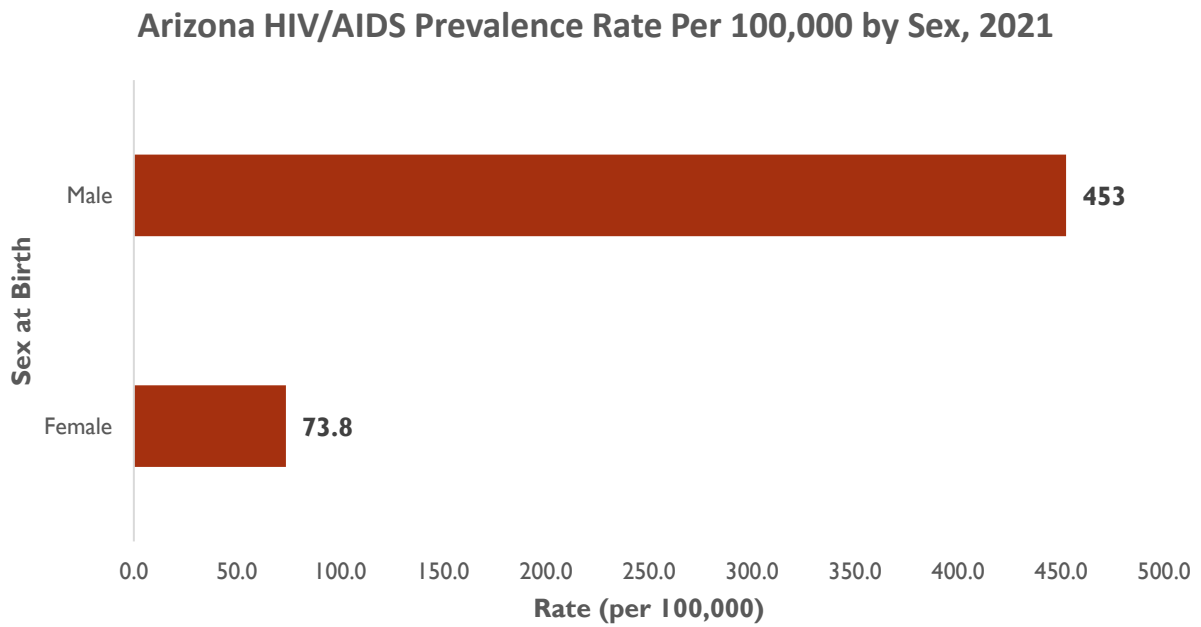
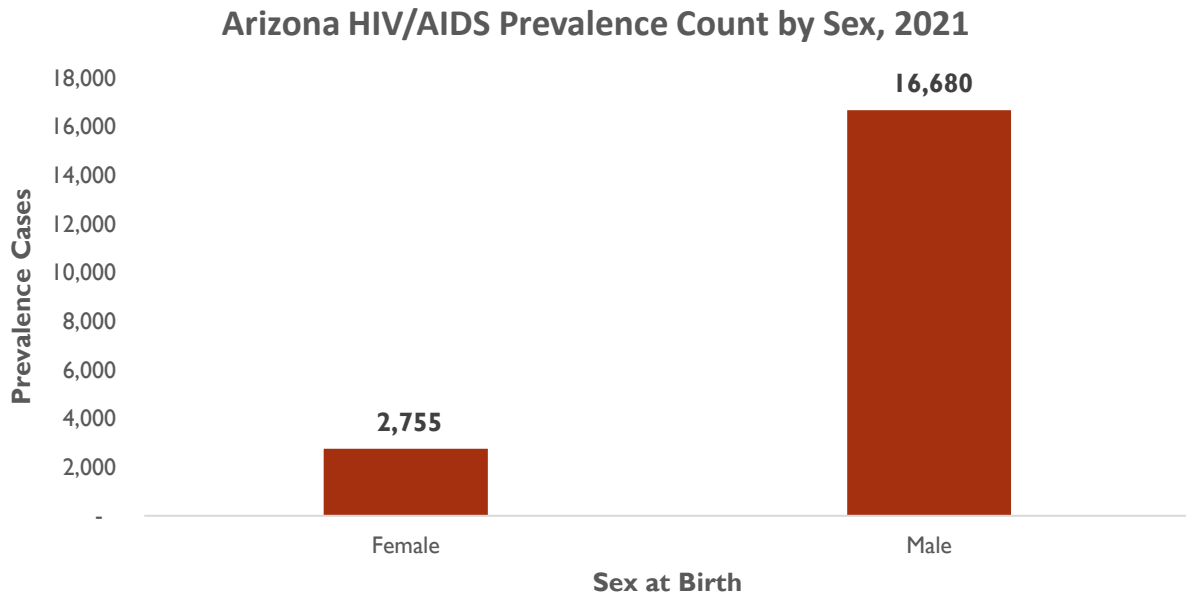


### Arizona HIV/AIDS Incidence Risk Percent, 2021

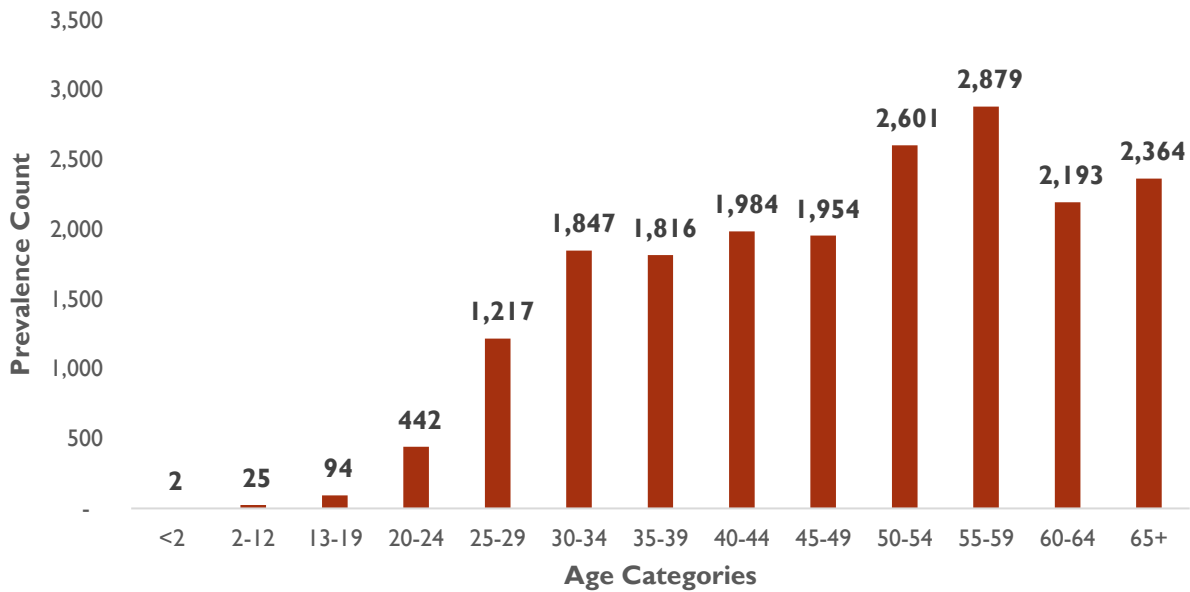


## APPENDIX 2: STATEWIDE PREVALENCE DEMOGRAPHICS

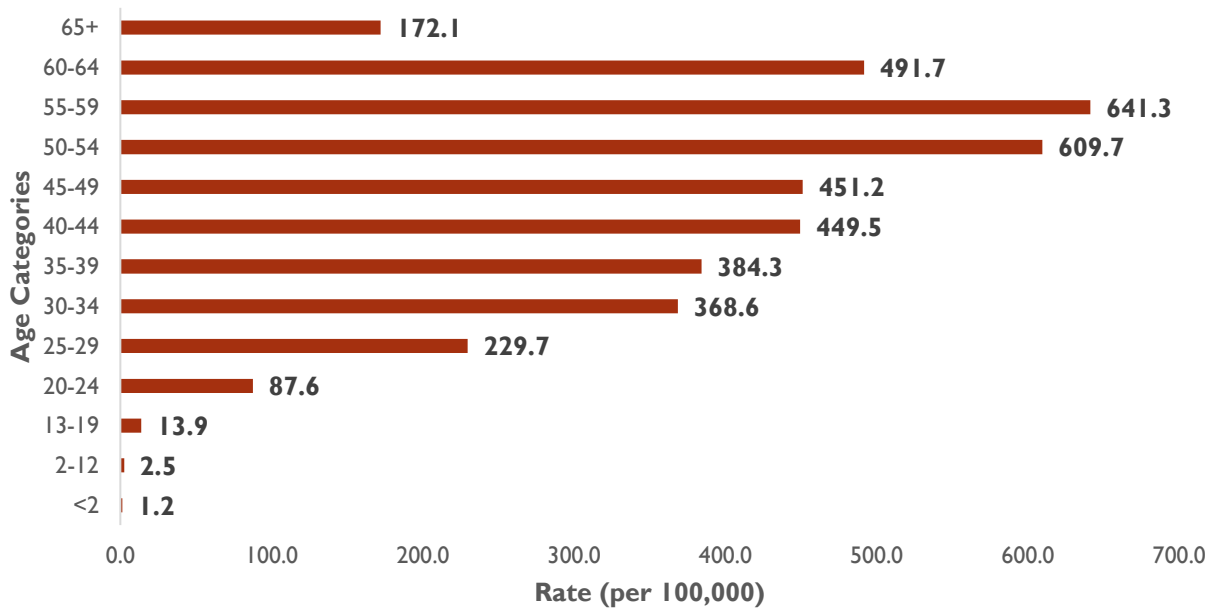
---



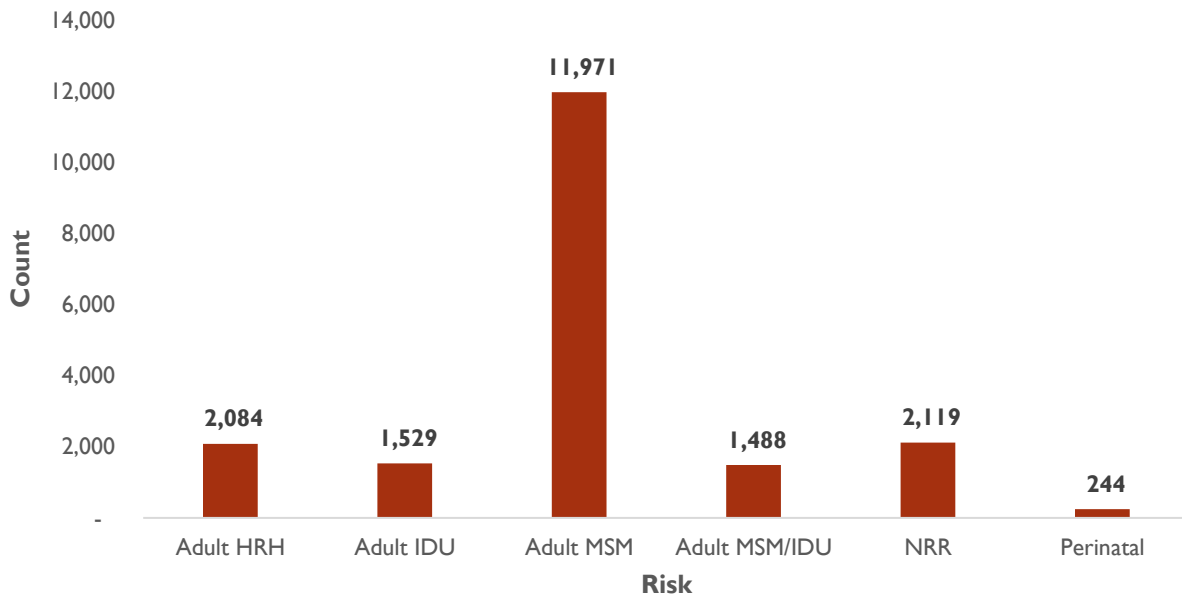
### Arizona HIV/AIDS Prevalence Count by Age, 2021



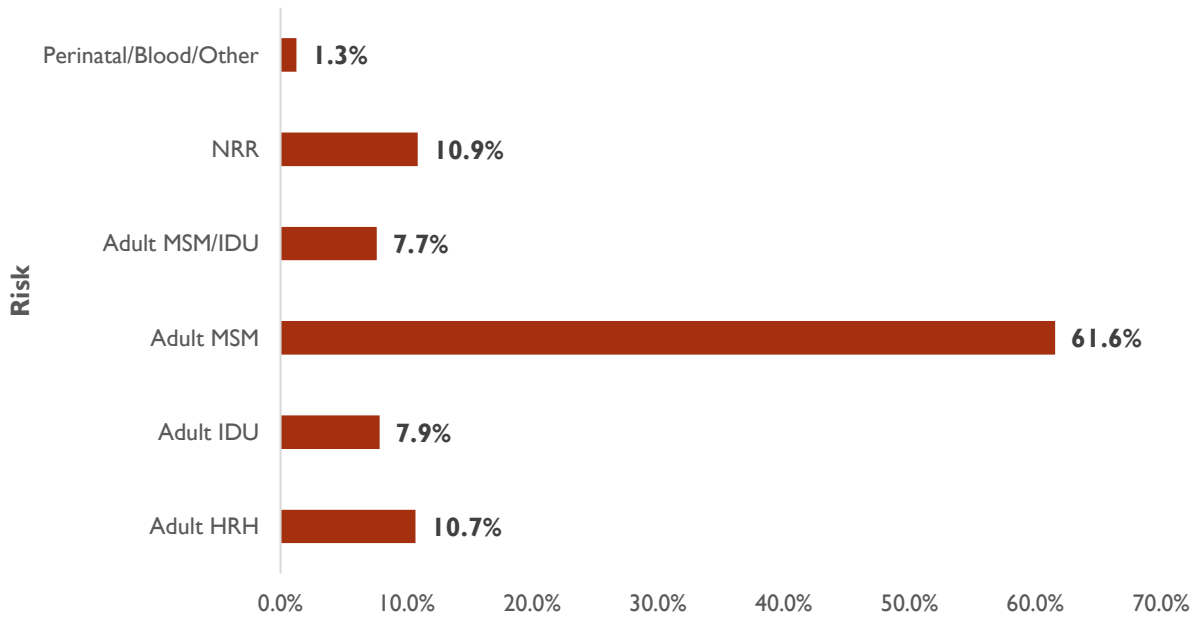
### Arizona HIV/AIDS Prevalence Rate Per 100,000 by Age, 2021



### Arizona HIV/AIDS Prevalence Count by Risk, 2021



### Arizona HIV/AIDS Prevalence Risk Percent, 2021



APPENDIX 3: STATEWIDE & COUNTY TABLES

2021 Arizona Statewide (Population: 7,421,401)

Arizona	N	Rate											
Incidence	852	11.5											
Prevalence	19,435	264.9											
Age categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	1	3	26	103	175	164	101	81	57	51	47	27	16
Prevalence	2	25	94	442	1217	1847	1816	1984	1954	2601	2879	2193	2364
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	133	42	368	9	258	42							
Prevalence	2869	801	6029	314	8971	451							
Risk categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	473	27	50	64	230	4	4						
Prevalence	11971	1529	1488	2084	2119	244	0						
Sex	Male	Female											
Incidence	743	109											
Prevalence	16680	2755											

2021 Apache County (Population: 71,875)

Apache County	N	Rate											
Incidence	9	12.5											
Prevalence	134	186.4											
Age categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	0	0	1	3	1	1	1	1	1	0	0
Prevalence	0	1	0	1	16	15	17	21	11	18	15	12	7
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	*	8	*	*	*	*							
Prevalence	*	117	*	*	10	*							
Risk categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	5	0	0	0	4	0	0						
Prevalence	67	16	19	17	13	2	0						
Sex	Male	Female											
Incidence	9	0											
Prevalence	116	18											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

2021 Cochise County (Population: 127,450)

<b>Cochise County</b>	<b>N</b>	<b>Rate</b>											
Incidence	7	5.5											
Prevalence	239	187.5											
<b>Age categories</b>	<b>&lt;2</b>	<b>2-12</b>	<b>13-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30-34</b>	<b>35-39</b>	<b>40-44</b>	<b>45-49</b>	<b>50-54</b>	<b>55-59</b>	<b>60-64</b>	<b>65+</b>
Incidence	0	0	0	2	1	3	0	1	0	0	0	0	0
Prevalence	0	0	1	7	8	10	18	20	22	30	42	33	48
<b>Race/ Ethnicity</b>	<b>Black</b>	<b>AI/AN</b>	<b>Hispanic</b>	<b>A/NH/PI</b>	<b>White</b>	<b>Other</b>							
Incidence	*	*	*	*	*	*							
Prevalence	27	11	55	*	133	*							
<b>Risk categories</b>	<b>MSM</b>	<b>IDU</b>	<b>MSM/IDU</b>	<b>HRH</b>	<b>NRR</b>	<b>Perinatal</b>	<b>Blood/Other</b>						
Incidence	5	1	1	0	0	0	0						
Prevalence	137	23	20	34	22	3	0						
<b>Sex</b>	<b>Male</b>	<b>Female</b>											
Incidence	5	0											
Prevalence	197	42											

2021 Coconino County (Population: 142,481)

<b>Coconino County</b>	<b>N</b>	<b>Rate</b>											
Incidence	10	7.0											
Prevalence	196	137.6											
<b>Age categories</b>	<b>&lt;2</b>	<b>2-12</b>	<b>13-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30-34</b>	<b>35-39</b>	<b>40-44</b>	<b>45-49</b>	<b>50-54</b>	<b>55-59</b>	<b>60-64</b>	<b>65+</b>
Incidence	0	0	0	3	3	1	0	0	0	1	1	0	1
Prevalence	0	0	1	9	18	26	17	20	14	27	14	23	27
<b>Race/ Ethnicity</b>	<b>Black</b>	<b>AI/AN</b>	<b>Hispanic</b>	<b>A/NH/PI</b>	<b>White</b>	<b>Other</b>							
Incidence	*	*	*	*	4	*							
Prevalence	11	73	34	5	67	6							
<b>Risk categories</b>	<b>MSM</b>	<b>IDU</b>	<b>MSM/IDU</b>	<b>HRH</b>	<b>NRR</b>	<b>Perinatal</b>	<b>Blood/Other</b>						
Incidence	6	0	0	1	3	0	0						
Prevalence	120	17	18	14	25	2	0						
<b>Sex</b>	<b>Male</b>	<b>Female</b>											
Incidence	10	0											
Prevalence	174	22											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

2021 Gila County (Population: 54,303)

<b>Gila County</b>	<b>N</b>	<b>Rate</b>											
Incidence	1	1.8											
Prevalence	61	112.3											
<b>Age categories</b>	<b>&lt;2</b>	<b>2-12</b>	<b>13-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30-34</b>	<b>35-39</b>	<b>40-44</b>	<b>45-49</b>	<b>50-54</b>	<b>55-59</b>	<b>60-64</b>	<b>65+</b>
Incidence	0	0	0	0	0	0	0	1	0	0	0	0	0
Prevalence	0	0	1	1	1	5	9	9	5	10	7	7	6
<b>Race/ Ethnicity</b>	<b>Black</b>	<b>AI/AN</b>	<b>Hispanic</b>	<b>A/NH/PI</b>	<b>White</b>	<b>Other</b>							
Incidence	*	*	*	*	*	*							
Prevalence	*	10	8	*	38	*							
<b>Risk categories</b>	<b>MSM</b>	<b>IDU</b>	<b>MSM/IDU</b>	<b>HRH</b>	<b>NRR</b>	<b>Perinatal</b>	<b>Blood/Other</b>						
Incidence	0	0	0	0	1	0	0						
Prevalence	31	7	7	7	8	0	1						
<b>Sex</b>	<b>Male</b>	<b>Female</b>											
Incidence	1	0											
Prevalence	47	14											

2021 Graham County (Population: 39,211)

<b>Graham County</b>	<b>N</b>	<b>Rate</b>											
Incidence	3	7.6											
Prevalence	29	73.9											
<b>Age categories</b>	<b>&lt;2</b>	<b>2-12</b>	<b>13-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30-34</b>	<b>35-39</b>	<b>40-44</b>	<b>45-49</b>	<b>50-54</b>	<b>55-59</b>	<b>60-64</b>	<b>65+</b>
Incidence	0	0	0	0	1	0	1	0	1	0	0	0	0
Prevalence	0	0	0	0	0	6	1	2	3	7	4	1	5
<b>Race/ Ethnicity</b>	<b>Black</b>	<b>AI/AN</b>	<b>Hispanic</b>	<b>A/NH/PI</b>	<b>White</b>	<b>Other</b>							
Incidence	*	*	*	*	*	*							
Prevalence	*	*	11	*	16	*							
<b>Risk categories</b>	<b>MSM</b>	<b>IDU</b>	<b>MSM/IDU</b>	<b>HRH</b>	<b>NRR</b>	<b>Perinatal</b>	<b>Blood/Other</b>						
Incidence	2	0	0	0	1	0	0						
Prevalence	11	8	4	2	4	0	0						
<b>Sex</b>	<b>Male</b>	<b>Female</b>											
Incidence	2	1											
Prevalence	28	1											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.



2021 Greenlee County (Population: 9,341)

Greenlee County	N	Rate											
Incidence	0	0											
Prevalence	4	42.8											
Age categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	0	0	0	0	0	0	0	0	0	0	0
Prevalence	0	0	0	0	2	0	1	0	0	0	1	0	0
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	0	0	0	0	0	0							
Prevalence	*	*	*	*	*	*							
Risk categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	0	0	0	0	0	0	0						
Prevalence	2	0	0	0	1	1	0						
Sex	Male	Female											
Incidence	0	0											
Prevalence	4	0											

2021 La Paz County (Population: 21,480)

La Paz County	N	Rate											
Incidence	0	0											
Prevalence	23	107.1											
Age categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	0	0	0	0	0	0	0	0	0	0	0
Prevalence	0	0	0	0	1	0	3	2	2	4	1	6	4
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	0	0	0	0	0	0							
Prevalence	*	*	4	*	16	*							
Risk categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	0	0	0	0	0	0	0						
Prevalence	13	5	3	2	0	0	0						
Sex	Male	Female											
Incidence	0	0											
Prevalence	18	5											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

2021 Maricopa County (Population: 4,579,081)

Maricopa County	N	Rate											
Incidence	552	12.1											
Prevalence	13315	290.7											
Age Categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	1	0	15	66	119	106	65	55	36	34	26	19	10
Prevalence	1	16	64	305	890	1379	1298	1405	1350	1809	1940	1392	1455
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	96	23	223	3	173	23							
Prevalence	2274	373	3880	239	6229	320							
Risk categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	321	12	29	37	150	3							
Prevalence	8548	836	889	1360	1524	158							
Sex	Male	Female											
Incidence	481	71											
Prevalence	11407	1908											

2021 Mohave County (Population: 217,206)

Mohave County	N	Rate											
Incidence	15	6.9											
Prevalence	323	148.7											
Age categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	0	0	2	2	2	1	0	2	4	2	0
Prevalence	0	0	0	5	13	20	31	22	29	43	73	50	49
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	*	*	*	*	8	*							
Prevalence	15	10	46	5	251	8							
Risk categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	3	3	1	1	7	0							
Prevalence	158	62	46	43	22	4							
Sex	Male	Female											
Incidence	11	4											
Prevalence	279	56											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

2021 Navajo County (Population: 112,112)

Navajo County	N	Rate											
Incidence	4	3.6											
Prevalence	139	123.9											
Age Categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	0	0	0	2	1	0	0	0	1	0	0
Prevalence	0	0	0	3	4	11	18	15	10	22	22	16	18
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	*	*	*	*	*	*							
Prevalence	*	89	10	*	32	*							
Risk Categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	0	0	1	0	3	0							
Prevalence	65	25	21	18	9	1							
Sex	Male	Female											
Incidence	4	0											
Prevalence	112	27											

2021 Pima County (Population: 1,061,175)

Pima County	N	Rate											
Incidence	145	13.6											
Prevalence	2978	280.6											
Age Categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	3	8	18	27	23	20	14	10	7	9	3	3
Prevalence	0	8	23	61	139	228	214	242	262	359	479	431	532
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	21	4	69	0	42	7							
Prevalence	359	66	989	35	1465	64							
Risk Categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	81	6	14	16	23	5							
Prevalence	1852	233	261	325	254	53							
Sex	Male	Female											
Incidence	123	22											
Prevalence	2574	404											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

2021 Pinal County (Population: 480,828)

<b>Pinal County</b>	<b>N</b>	<b>Rate</b>											
Incidence	***64	13.3											
Prevalence	1201	249.7											
<b>Age Categories</b>	<b>&lt;2</b>	<b>2-12</b>	<b>13-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30-34</b>	<b>35-39</b>	<b>40-44</b>	<b>45-49</b>	<b>50-54</b>	<b>55-59</b>	<b>60-64</b>	<b>65+</b>
Incidence	0	0	1	11	15	12	8	4	8	4	0	0	1
Prevalence	0	0	1	33	78	100	121	164	180	178	154	105	87
<b>Race/ Ethnicity</b>	<b>Black</b>	<b>AI/AN</b>	<b>Hispanic</b>	<b>A/NH/PI</b>	<b>White</b>	<b>Other</b>							
Incidence	6	*	45	*	11	*							
Prevalence	139	34	671	12	327	18							
<b>Risk Categories</b>	<b>MSM</b>	<b>IDU</b>	<b>MSM/IDU</b>	<b>HRH</b>	<b>NRR</b>	<b>Perinatal</b>	<b>Blood/Other</b>						
Incidence	32	2	2	7	21	0							
Prevalence	536	212	122	148	173	10							
<b>Sex</b>	<b>Male</b>	<b>Female</b>											
Incidence	57	7											
Prevalence	1061	140											

\*\*\*Pinal County incidence count included 40 correctional cases and 24 community cases.

2021 Santa Cruz County (Population: 46,808)

<b>Santa Cruz County</b>	<b>N</b>	<b>Rate</b>											
Incidence	6	12.8											
Prevalence	78	166.6											
<b>Age Categories</b>	<b>&lt;2</b>	<b>2-12</b>	<b>13-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30-34</b>	<b>35-39</b>	<b>40-44</b>	<b>45-49</b>	<b>50-54</b>	<b>55-59</b>	<b>60-64</b>	<b>65+</b>
Incidence	0	0	0	0	1	0	0	1	1	2	0	1	0
Prevalence	0	0	0	4	7	6	3	9	8	6	9	8	18
<b>Race/ Ethnicity</b>	<b>Black</b>	<b>AI/AN</b>	<b>Hispanic</b>	<b>A/NH/PI</b>	<b>White</b>	<b>Other</b>							
Incidence	*	*	5	*	*	*							
Prevalence	*	*	61	*	13	*							
<b>Risk Categories</b>	<b>MSM</b>	<b>IDU</b>	<b>MSM/IDU</b>	<b>HRH</b>	<b>NRR</b>	<b>Perinatal</b>	<b>Blood/Other</b>						
Incidence	3	0	0	0	3	0							
Prevalence	51	3	7	9	7	1							
<b>Sex</b>	<b>Male</b>	<b>Female</b>											
Incidence	6	0											
Prevalence	72	6											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

2021 Yavapai County (Population: 240,226)

Yavapai County	N	Rate											
Incidence	12	4.9											
Prevalence	346	144.0											
Age Categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	1	2	1	4	2	0	0	0	2	0	0
Prevalence	0	0	0	6	10	21	21	23	25	45	66	62	67
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	*	*	5	*	5	*							
Prevalence	8	11	52	7	260	8							
Risk Categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	5	1	2	0	4	0							
Prevalence	195	41	37	48	23	2							
Sex	Male	Female											
Incidence	12	0											
Prevalence	283	63											

2021 Yuma County (Population: 217,824)

Yuma County	N	Rate											
Incidence	24	11.0											
Prevalence	345	158.3											
Age Categories	<2	2-12	13-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Incidence	0	0	1	1	4	8	1	3	0	0	3	2	1
Prevalence	1	0	3	7	29	20	42	28	33	43	52	45	42
Race/ Ethnicity	Black	AI/AN	Hispanic	A/NH/PI	White	Other							
Incidence	*	*	14	*	7	*							
Prevalence	25	4	198	4	107	7							
Risk Categories	MSM	IDU	MSM/IDU	HRH	NRR	Perinatal	Blood/Other						
Incidence	10	2	0	2	10	0							
Prevalence	175	41	32	57	34	6							
Sex	Male	Female											
Incidence	20	4											
Prevalence	296	49											

\*Data for Race/Ethnicity are suppressed based on suppression criteria\*\*to protect privacy and confidentiality.

\*\*All suppression for counties for race/ethnicity were done based on the following criteria: For Incidence, a total incidence case count of three or less or individual race/ethnicity values are suppressed for privacy if possible identification due to makeup of the county population. For prevalence, a race/ethnicity value is suppressed if the value is less than four and the total county population is less than 140,000.

All Denominators and population data are from the CDC's National Center of Health Statistics.<sup>8</sup>

## REFERENCES

---

1. Lau, C., Shu, S., Mayer, J., Towns, M., Farris, A., Washington, F., Prichard, P., & Shukla, V. (2021). COVID-19 Trends in the Phoenix Metropolitan Area from a Mobile Testing Program: Last Quarter of 2020. *Journal of community health, 46*(6), 1078–1082. <https://doi.org/10.1007/s10900-021-00991-4>
2. Sperling R. (1998). Zidovudine. *Infectious diseases in obstetrics and gynecology, 6*(5), 197–203. [https://doi.org/10.1002/\(SICI\)1098-0997\(1998\)6:5<197::AID-IDOG2>3.0.CO;2-1](https://doi.org/10.1002/(SICI)1098-0997(1998)6:5<197::AID-IDOG2>3.0.CO;2-1)
3. Eggleton JS, Nagalli S. Highly Active Antiretroviral Therapy (HAART) [Updated 2022 Jul 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK554533/>
4. Centers for Disease Control and Prevention. HIV Surveillance Report, 2018 (Updated); vol. 31. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published May 2020. Accessed September 13, 2022.
5. Centers for Disease Control and Prevention. Revision of the case definition of acquired immunodeficiency syndrome for national reporting—United States. *MMWR 1985; 34*:373–5.
6. Centers for Disease Control and Prevention. (2018). HIV Surveillance Report, 2018 (Preliminary). *HIV Surveillance Report, 30*, 1–129. [http://www.cdc.gov/hiv/library/reports/surveillance/2011/surveillance\\_report\\_vol\\_23.html](http://www.cdc.gov/hiv/library/reports/surveillance/2011/surveillance_report_vol_23.html)
7. Marsh, K. J., & Rothenberger, M. (2019). A Young Black MSM on PrEP Is Lost to Follow-Up and Acquires HIV Infection: A Case to Call for Improved Strategies to Support Youth Adherence and Engagement in HIV Prevention. *Journal of the International Association of Providers of AIDS Care, 18*, 1–4. <https://doi.org/10.1177/2325958219853834>
8. National Center for Health Statistics. Vintage 2019 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010–July 1, 2019), by year, county, single year of age (0, 1, 2, ..., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: [/nchs/nvss/bridged\\_race.htm](/nchs/nvss/bridged_race.htm) as of July 9, 2020, following release by the U.S. Census Bureau of the unbridged Vintage 2019 postcensal estimates by 5-year age group on June 25, 2020.