

EXECUTIVE SUMMARY

HIV/AIDS Annual Report – August 2014
State of Arizona

General Comments

In Arizona's HIV/AIDS reporting, estimates of incidence are based upon the sum of new HIV cases, and new AIDS cases not diagnosed as HIV infections in any prior calendar year. These cases are referred to as *emergent* cases and are used as an estimate of incidence. Cases of HIV/AIDS can only be counted as emergent in the year they were first diagnosed with HIV infection. Persons who were emergent as HIV and diagnosed as AIDS in the same calendar year are counted as emergent AIDS to avoid double counting. This method is the most straightforward method available for estimating incidence. Prevalence, on the other hand, refers to the total summation of infected and alive cases present in the state at the end of the year.

This report includes estimated prevalence and emergence by single year (1990-2013), and the 2013 population estimates for each county/region. Incidence estimates for 5-year reporting time frames (2002-2007 and 2007-2012)¹ are also included for the purposes of valid comparison with the 5-year time frames in prior annual reports. These annualized 5-year rates may be regarded as the average annual rate across the 5 years in the reporting time frame.

¹ Five year rates have a two year delay from year of release.

Table 1 : Arizona Counties' 2012-2013 Population Numbers

County	2012		2013		2012-2013 Growth	
	Count	%	Count	%	Count	%
Apache	73,195	1.1%	71,934	1.1%	-1,261	-1.7%
Cochise	132,088	2.0%	129,473	2.0%	-2,615	-2.0%
Coconino	136,011	2.1%	136,539	2.1%	528	0.4%
Gila	53,144	0.8%	53,053	0.8%	-91	-0.2%
Graham	37,416	0.6%	37,482	0.6%	66	0.2%
Greenlee	8,802	0.1%	9,049	0.1%	247	2.8%
La Paz	20,281	0.3%	20,324	0.3%	43	0.2%
Maricopa	3,942,169	60.2%	4,009,412	60.5%	67,243	1.7%
Mohave	203,334	3.1%	203,030	3.1%	-304	-0.1%
Navajo	107,094	1.6%	107,322	1.6%	228	0.2%
Pima	992,394	15.1%	996,554	15.0%	4,160	0.4%
Pinal	387,365	5.9%	389,350	5.9%	1,985	0.5%
Santa Cruz	47,303	0.7%	46,768	0.7%	-535	-1.1%
Yavapai	212,637	3.2%	215,133	3.2%	2,496	1.2%
Yuma	200,022	3.1%	201,201	3.0%	1,179	0.6%
Arizona Total	6,553,255	100.0%	6,626,624	100.0%	73,369	1.1%

Source : U.S. Census Bureau

Arizona's population has continued to grow as in previous years. Generally, the most populous counties grew at higher rates. The state's population grew by 73,369 from 2012 to 2013 according to the U.S. Census Bureau's estimates (Table 1). This represents an Arizona annual growth rate of 1.1%. The three most populous counties in Arizona, Maricopa (+67,243), Pima (+4,160), and Pinal (1,179) have the largest increases in terms of absolute numbers. Arizona's least populated county, Greenlee (2012: 9,049), has the largest rate of increase, 2.8%. Maricopa, which is Arizona's most populous county, has the second highest rate of increase (1.7%). Maricopa now has a population that is larger than half of Arizona's total (60.2%). Five out of the twelve counties in Arizona (Apache, Cochise, Gila, Mohave, and Santa Cruz), have a population of less than 250,000 and actually had decreases in population.

Current HIV/AIDS Data

Figure 1: Arizona 5-Year Emergent HIV/AIDS Case Rate Trend

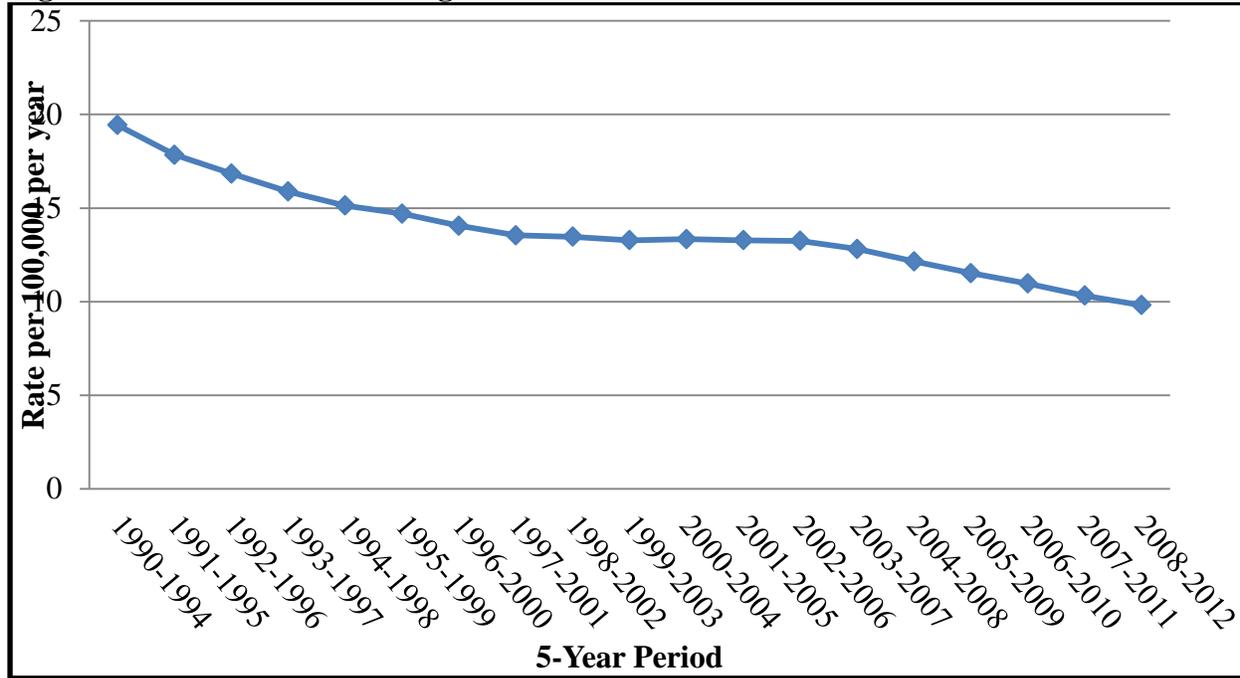


Figure 2: Arizona Emergent HIV/AIDS Case Trend by Single-Year

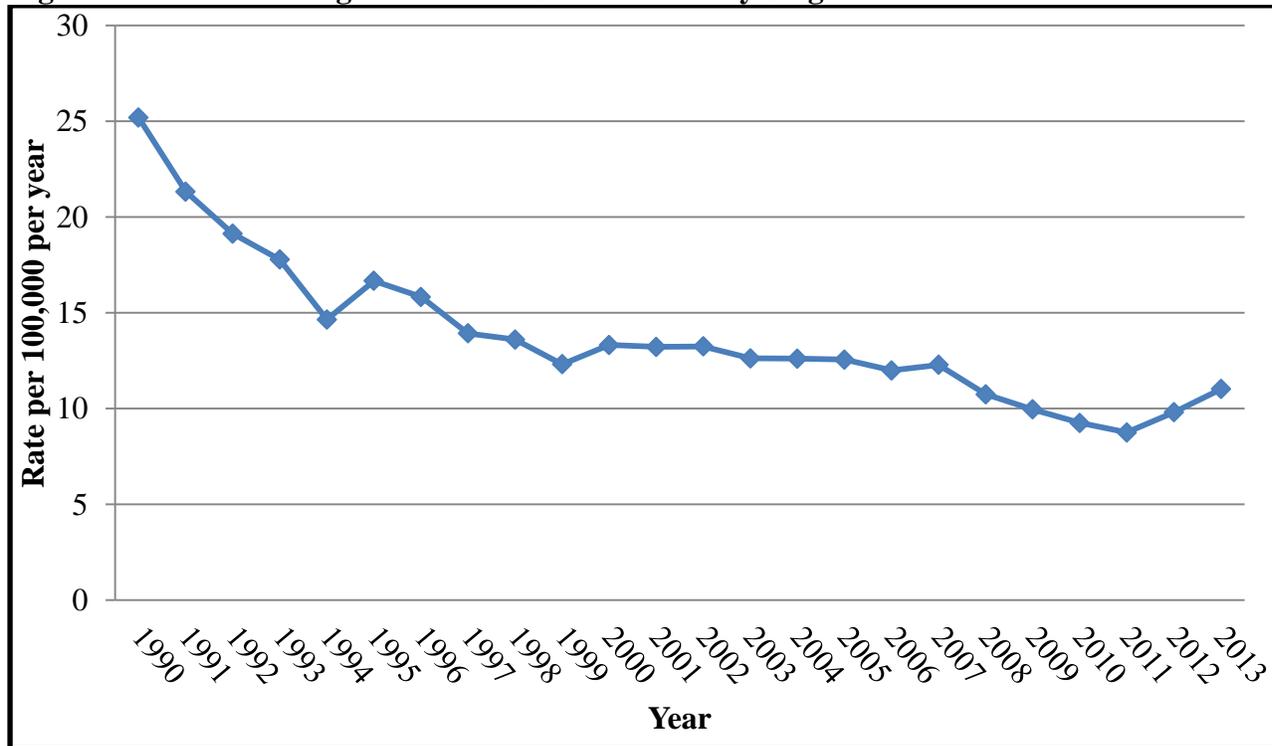


Figure 1 shows the 5-year average rates which have less year-on-year variance than the single-year rates. The five-year emergent HIV/AIDS case rate declined steadily throughout the 1990s, leveling off from the 1998-2002 time period and is beginning to decline slightly again starting with the 2003-2007 time period. The 5-year rates have had an overall decline for the past decade. The 2008-2012 5-year rate is 23% lower than the rate for 2003-2007. The single-year rates have fluctuated more than the 5-year rates, but a similar pattern is present (Figure 2). These rates also declined through the 1990's. By 1999 the rate was 51% lower than in 1990. The 2013 single-year rate is 17% lower than the rate for the year 2000. However, the rate for 2013 (11.02) is slightly higher than in 2012 (9.81)².

Figure 3: Arizona HIV/AIDS Prevalence Trend

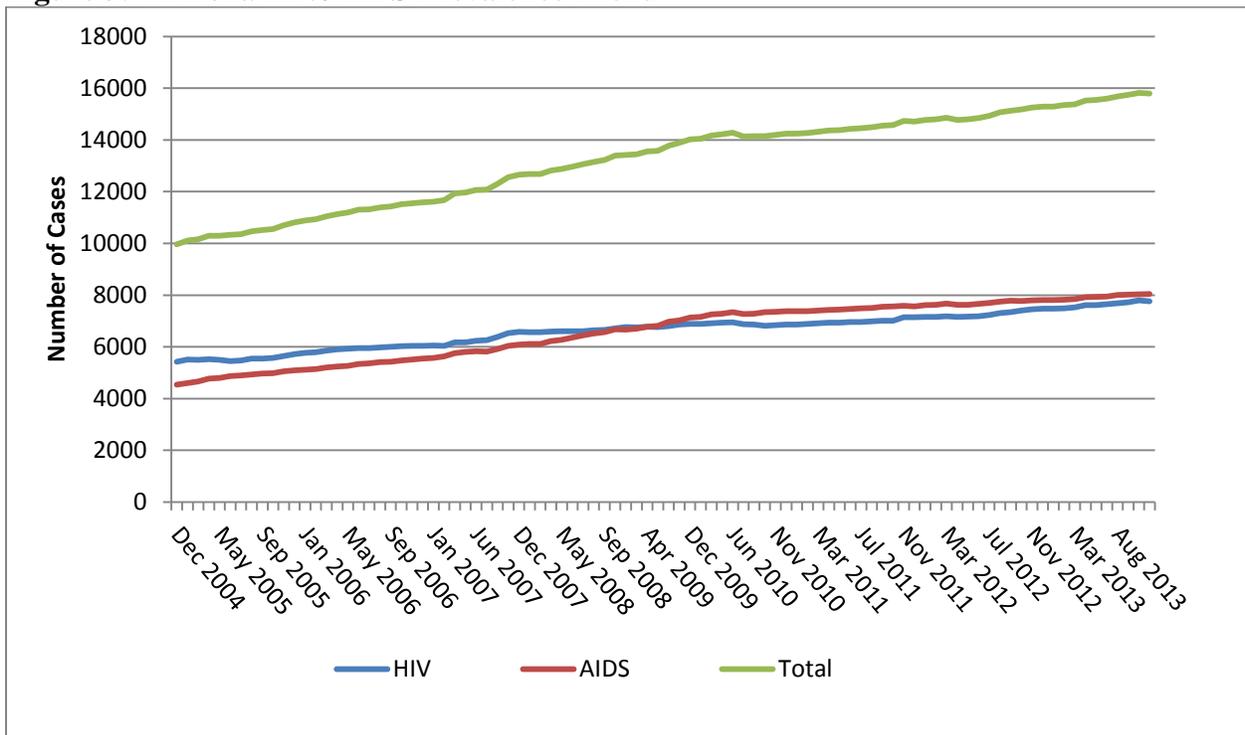


Figure 3 shows the number of HIV/AIDS cases in Arizona. Arizona is currently considered a moderate morbidity state, with CDC-estimated prevalence in the middle rate category among states with well-established confidential name-based HIV reporting. Prevalence numbers have continued to rise in Arizona, but this is expected given that people living with HIV/AIDS taking medication are living longer. At the end of 2013, prevalence of reported HIV infection was 241.07 cases per 100,000 persons. Currently, there are 15,798 persons living with HIV/AIDS in Arizona, a rise of 13% in 5 years. The increase in prevalence rates may be due to the efficacy of multi-drug treatments for HIV infection, which have sharply reduced the number of HIV-related deaths. Of the 13,391 prevalent cases in the state five years ago, only 11.5%

² The Arizona Department of Health Services rates may differ from the rates provided by the Center for Disease Control (CDC) because the CDC applies statistical adjustments on their rates in order to control for underreporting and reporting delay.

currently report residing in another state or died in another state. Among the 2013 prevalent cases, 24.4 % were diagnosed in another state. This suggests that there are more people with HIV/AIDS migrate into Arizona than those migrate out. Increases in prevalence are partially driven by people who migrate from other states in the country.

In June 2009, the number of persons living with AIDS in Arizona surpassed the number of persons with HIV infection who have not been diagnosed with AIDS (Figure 3). Because the burden of HIV-related disease is greater among persons with AIDS, treatment, utilization, and continuity of care are increasingly critical issues. Nevertheless, as of December 2013 the number of people with AIDS and HIV are close to converging again. There are 280 more individuals living with AIDS than with HIV only.

Figure 4: Arizona Proportion of Emergent Cases by Reported Risk Behavior, Five-Year Rates

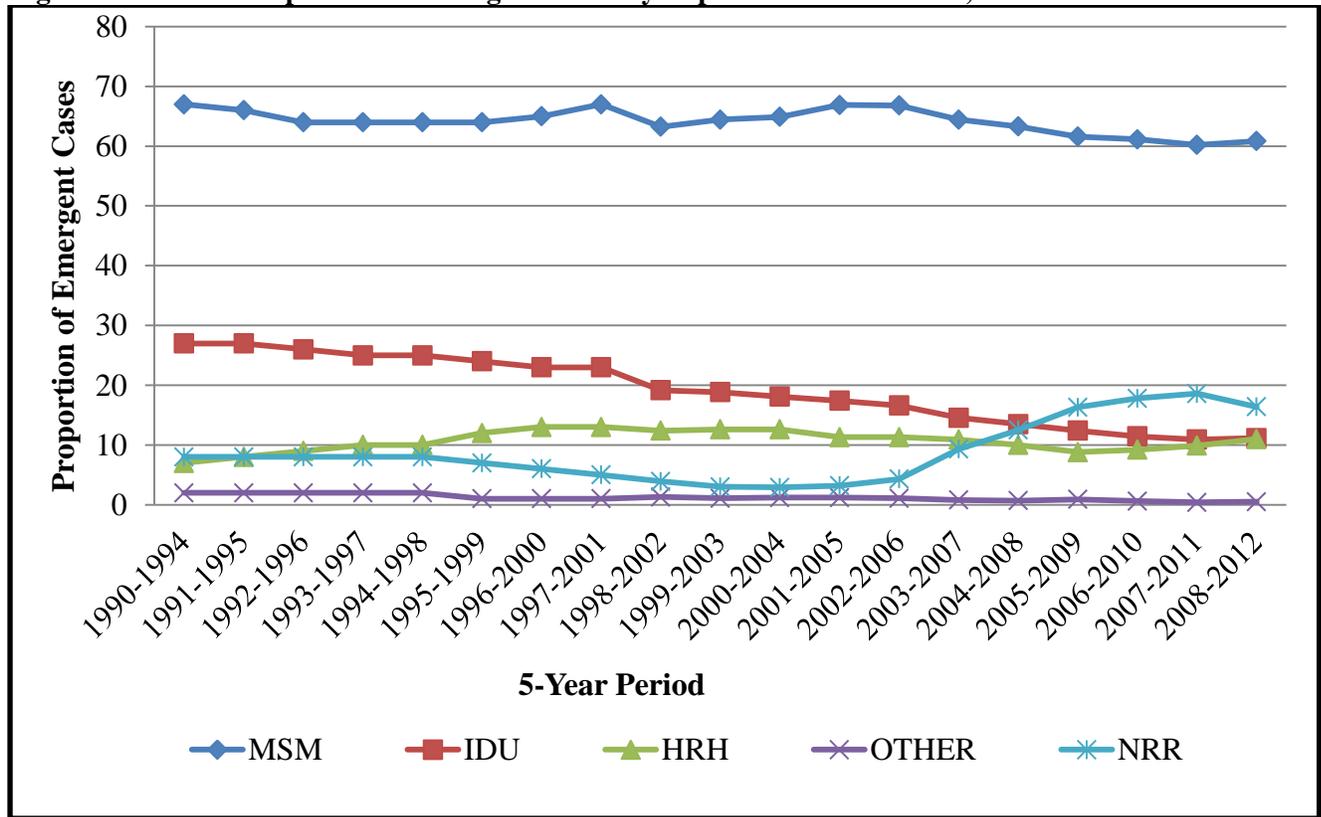
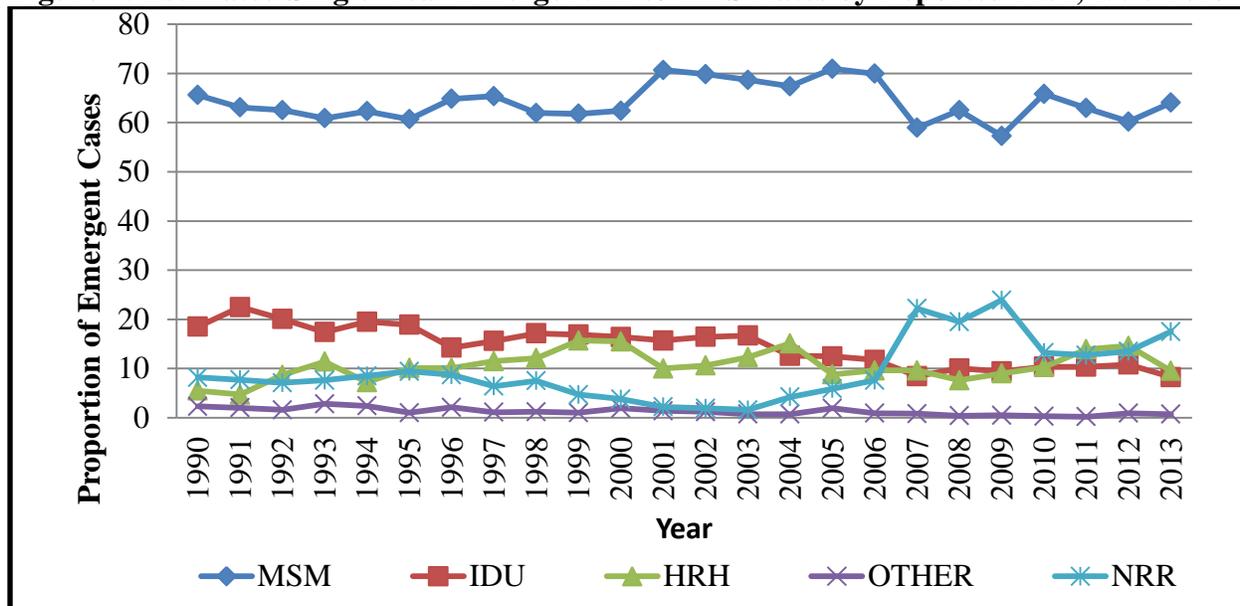


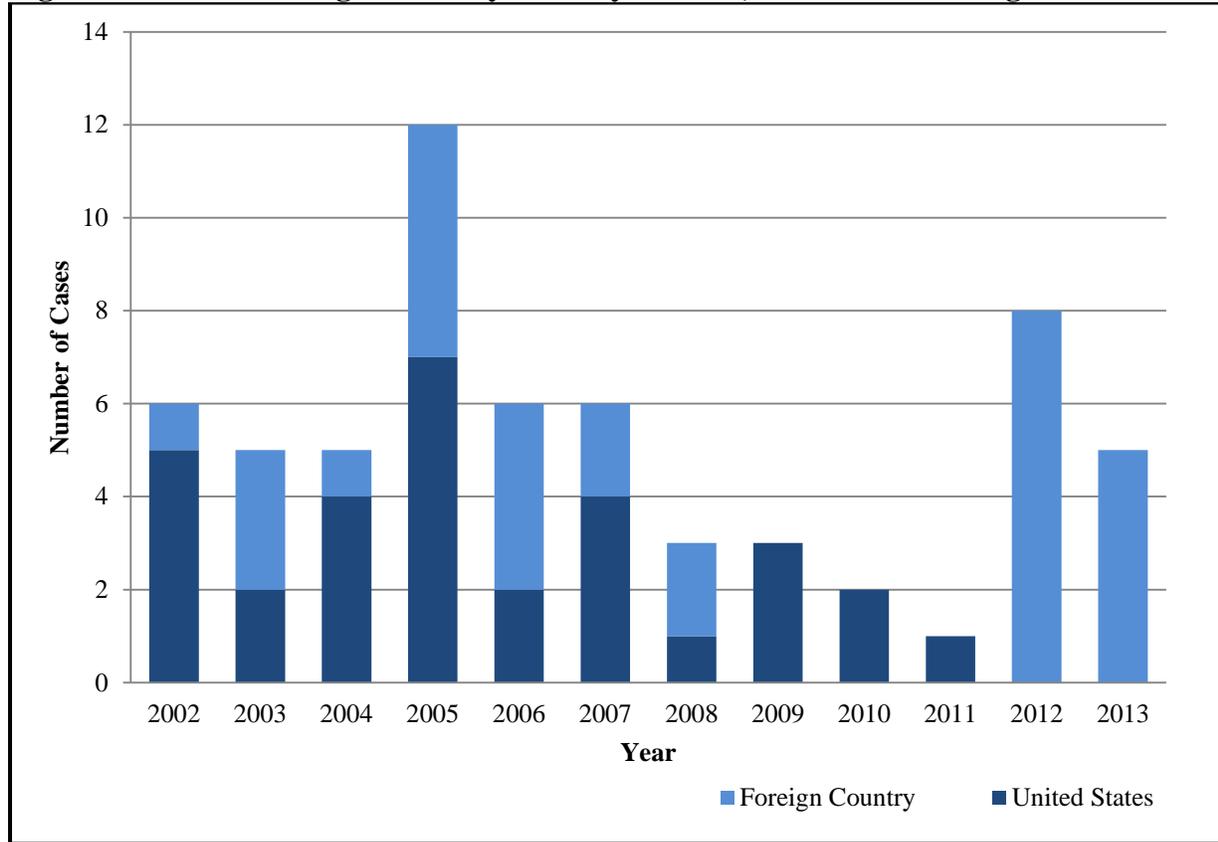
Figure 5: Estimated Single-Year Emergent HIV/AIDS Rates by Reported Risk, 1990-2013



Among all the risk groups in Figure 5, men who have sex with men (MSM) account for the largest proportion of emergent HIV/AIDS cases in Arizona. In 2013, the proportion of emergent cases that were MSM-related was 64.5%, the highest among all risk groups. The 2013 single-year MSM rate increased from 60.2% in 2012 to 64.5% in 2013. The no risk reported (NRR) rate which is now 17.5% has been increasing since 2010 when the rate 13.2%.

Pediatric HIV Infection

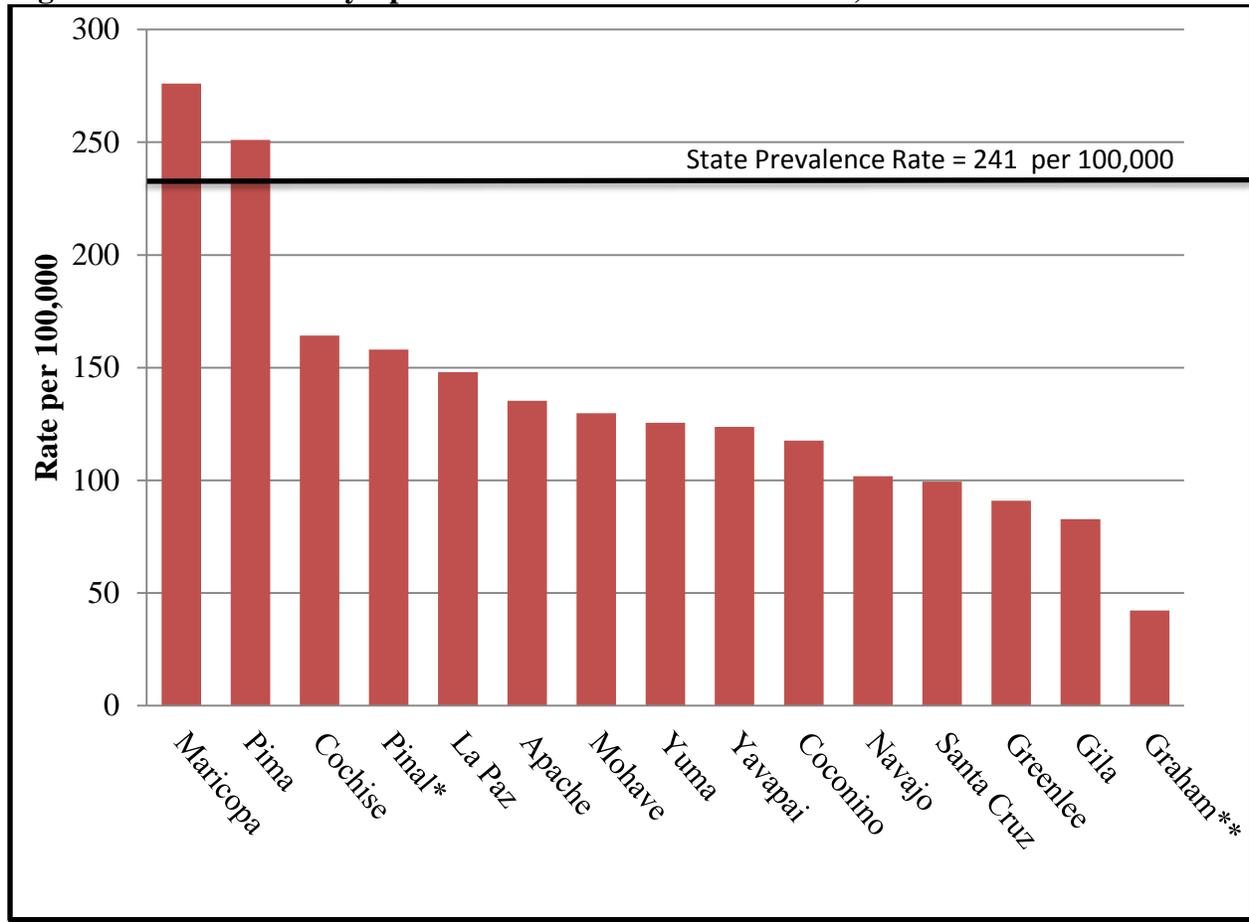
Figure 6: Arizona Emergent HIV by Country of Birth, Children Under Age 13



In 2013, there were five cases of emergent HIV infection among children under age 13 in Arizona, all of whom were foreign born (Figure 6). There were 38% more cases in 2012 than in 2013. In the last decade, 27 out of 51(52.9%) cases under the age of 13 were foreign born.

Urbanization of HIV

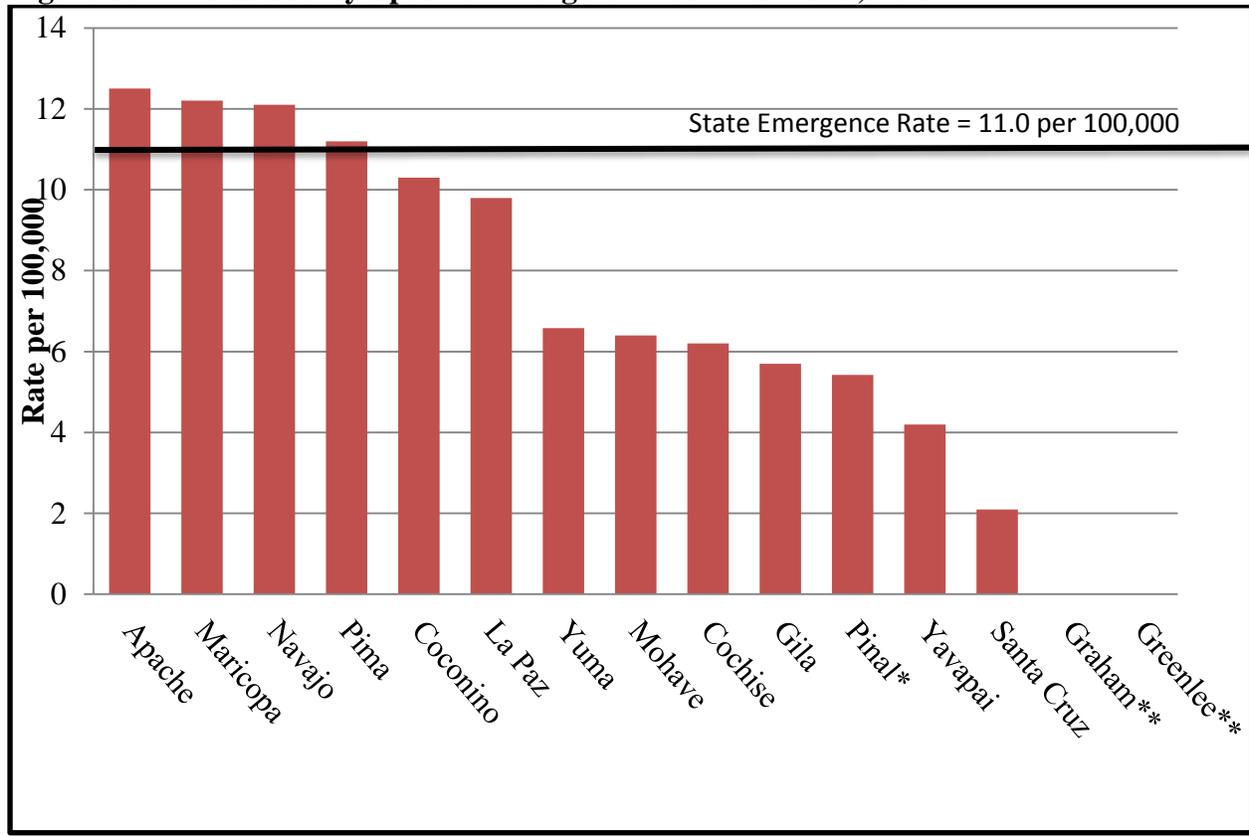
Figure 7: Arizona County-Specific Prevalent HIV/AIDS Rates, 2013



*Incarcerated cases removed. 49% of prevalent cases in Pinal are currently incarcerated, and the rate before removal was 234.

**Incarcerated cases removed. 32% of prevalent cases in Graham County are currently incarcerated, and the rate before removal was 83

Figure 8: Arizona County-Specific Emergent HIV/AIDS Rates, 2013



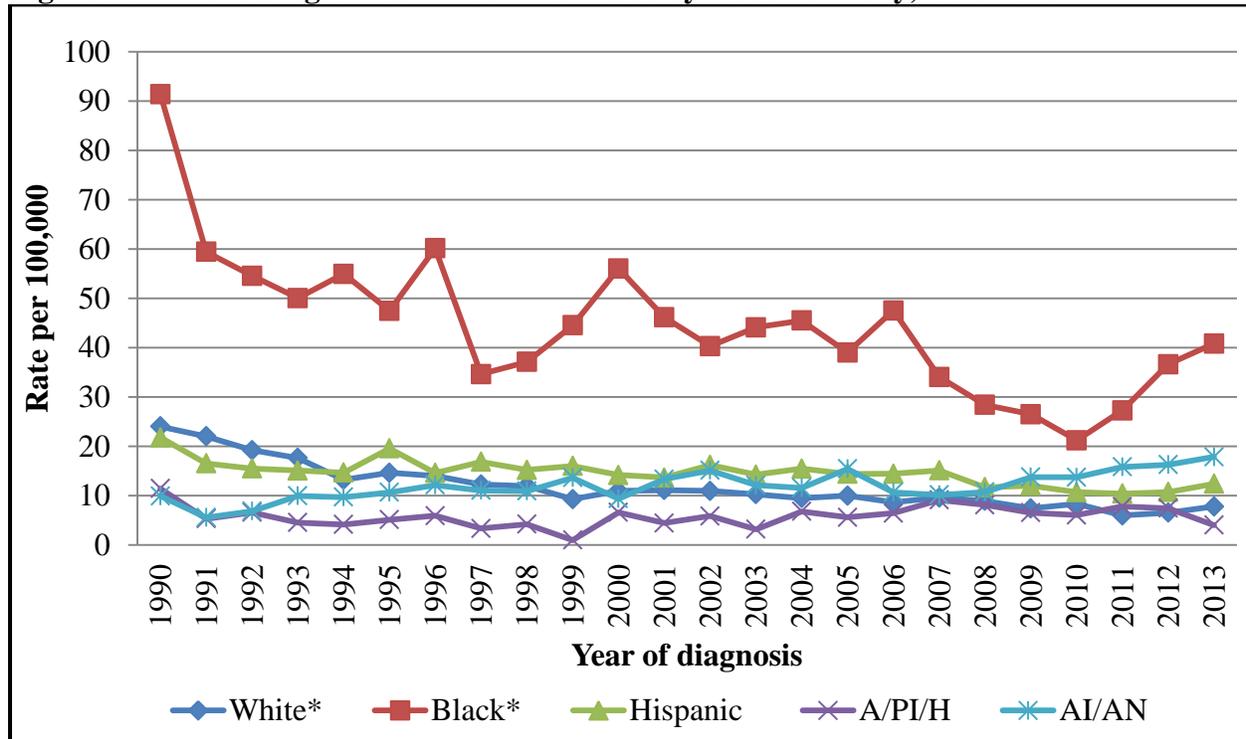
Incarcerated cases removed. 52% of incident cases in Pinal were incarcerated at the time of diagnosis. The rate before removal was 11.3

** These counties had 0 incident cases in 2013.

The majority of the HIV/AIDS prevalence is in the urban counties of Arizona. As of 2013, Maricopa and Pima had the highest prevalence rates, 276.0 and 251.0 per 100,000 respectively (Figure 7). Maricopa and Pima also had the second- and fourth-highest emergence rates, 12.2 and 11.2 per 100,000 respectively. Apache County had the highest emergent rate at 12.5 per 100,000, but it had 9 emergent cases in 2013, compared to 491 cases in Maricopa and 112 in Pima (Figure 8). In 2013, 85% of reported HIV/AIDS prevalence and 83% of emergent infections occurred in urban counties.

Race/Ethnicity Disparities

Figure 9: Arizona Single-Year HIV/AIDS Rates by Race/Ethnicity, 1990-2013



*Non-Hispanic, A/PI/H=Asian/Pacific Islander/Native Hawaiian, AI/AN=American Indian/Alaska Native

Rates of HIV/AIDS prevalence and emergence differ sharply between Black Non-Hispanics and the rest of the racial/ethnic groups in Arizona. Rates among non-Hispanic Blacks have increased 93% from 2010 to 2013. According to the 2013 single-year rates (Figure 9), the rate of HIV/AIDS emergence in Non-Hispanic Blacks was 424% higher than the Non-Hispanic Whites and 229% larger than Hispanics. Non-Hispanic American Indian and Alaskan Natives (AI/AN) had the second highest rate in the state among all the racial/ethnic groups. As of 2013, AI/AN had a rate that was 128% higher than Non-Hispanic White and 43% higher than Hispanics. These results are consistent with national data. According to the most recent published reports, the CDC estimates Black Non-Hispanics made up 46% of new 2011 HIV diagnoses despite composing only 12% of the overall population (CDC slide set, HIV Surveillance by race/ethnicity, through 2011 data.

<http://www.cdc.gov/hiv/topics/surveillance/resources/slides/general/index.htm>).

Spectrum of Care

Figure 10: Spectrum of Care Engagement – Arizona Prevalent Cases 2012

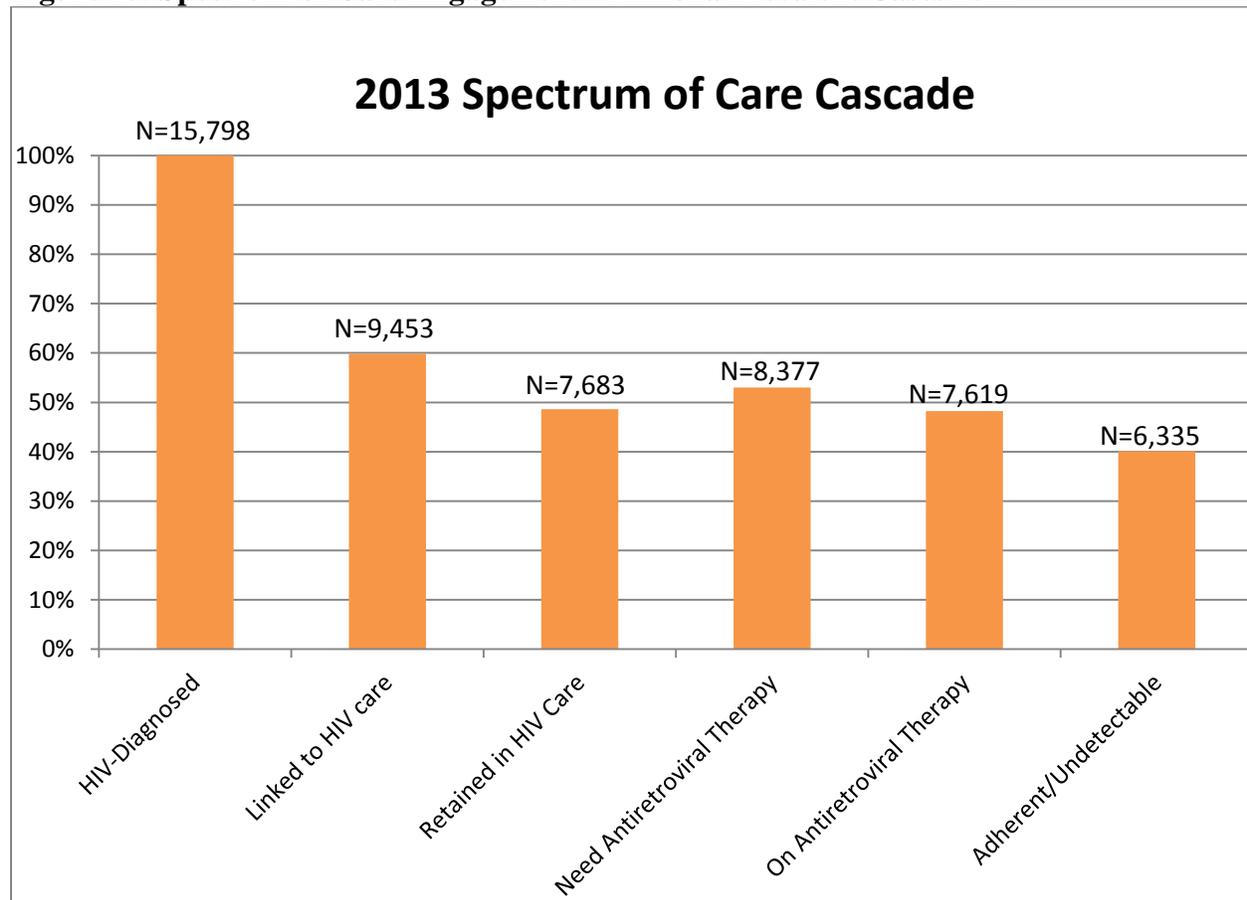


Figure 10 displays the Spectrum of Care Engagement for Arizona’s prevalent cases³. Out of the 15,798 HIV diagnosed cases, 60% were linked to care during the year and 49% were cases retained in care from the previous year. It is estimated that slightly less than half of the cases (48%) are on antiretroviral therapy, and 53% of prevalent cases should be receiving antiretroviral therapy under current treatment guidelines. Cases that have an adherent/undetectable viral load make up 40% of all the HIV diagnosed.

³ Spectrum of Care Definitions

HIV-Diagnosed : Prevalent cases

Linked to HIV Care: Prevalent cases with a documented lab test, doctor visit or medication use in the calendar year

Retained in HIV Care: Prevalent cases with a documented lab test, doctor visit or anti-retroviral (ARV) use in this calendar year and last calendar year

Need ARV Therapy : Prevalent cases whose last CD4 count of the calendar year was less than 350/ μ L, whose last viral load of the calendar year was greater than 100,000 copies/mL, who had a documented opportunistic infection or who had documented ARV use during the calendar year

On ARV Therapy: Prevalent cases with documented ARV use or whose last viral load of the calendar year was undetectable

Adherent/Undetectable: Prevalent cases whose last viral load of the calendar year was undetectable