

Sexually Transmitted Diseases in Arizona: 2010 Annual Report



**Arizona Department of Health Services
Division of Public Health Services
Office of HIV, STD, and Viral Hepatitis Services
Sexually Transmitted Diseases Control Program**



Division of Public Health Services
Office of HIV, STD, and Hepatitis C Services
Sexually Transmitted Disease Control Program
150 N. 18th Avenue, Suite 140
Phoenix, Arizona 85007-3237
Telephone: (602) 364-4666
Fax: (602) 364-2119

JANICE K. BREWER, GOVERNOR
WILL HUMBLE, DIRECTOR

August 25, 2011

Dear Arizona Stakeholder:

The Arizona Department of Health Services (ADHS), Sexually Transmitted Disease (STD) Control Program, is pleased to provide the 2010 Arizona STD Annual Report. The report highlights the impact of sexually transmitted diseases (STDs) among the residents of Arizona. The subsequent information, as depicted in the narrative, graphs, and tables herein, highlights the increasing number of STDs affecting our state. All 2011 data are from the ADHS STD Surveillance system as of July 5, 2011.

Sexually transmitted diseases can cause significant health problems among those who become infected. For instance, untreated chlamydia and gonorrhea can lead to pelvic inflammatory disease (PID). PID can become recurrent among young women and girls often leading to expensive health complications. Other young women may suffer ectopic pregnancies and chronic pelvic pain. Worse still, sexually transmitted diseases can lead to infertility.

Unfortunately, young people, racial/ethnic minorities, and men who have sex with men, bear a disproportionate burden of STDs in Arizona. The ADHS STD Control Program is working to address these health disparities by collaborating with internal partners as well as local/county/tribal health departments, community based organizations, the Indian Health Service, the Centers for Disease Control and Prevention, and countless Arizona medical providers to promote STD prevention and intervention statewide.

Although genital herpes, hepatitis B, human papillomavirus, and trichomoniasis are sexually transmitted diseases, they are not included in this report. These infections continue to impact a majority of the sexually active population. Sexual health is everyone's responsibility. At some time during the lifetime of any sexually active individual, they may be at risk for these infections. It is important to be tested routinely in order to prevent transmission as well as the manifestations of untreated infection. According to CDC studies:

- 1 in 4 teenage girls has a sexually transmitted disease
- 3.2 million female adolescents are estimated to have at least one of the most common STDs, and
- there are 19 million estimated new infections each year, almost half of the infections are among those between the ages of 15 – 24.

Through this report, we hope to disseminate useful and pertinent data to the Arizona public and community leaders. It is our belief that this information can promote dialogue about disease prevention, promote medical treatment and services, and improve the sexual health of all Arizonans. This is in keeping with our program mission:

Strengthening Sexually Transmitted Disease prevention, intervention, and control in Arizona through education, surveillance, collaboration, and program development.

Please do not hesitate to contact us with further questions regarding STD education, prevention, and screening opportunities.

Sincerely,

Roxanne Ereth, MPH
STD Control Program Manager

TABLE OF CONTENTS

OVERVIEW 5

 Chlamydia 6

 Gonorrhea 7

 Syphilis 9

 Congenital Syphilis 13

FIGURES 14

Figure 1. Reported Chlamydia Cases and Case Rates per 100,000 Population, Arizona
 2005-2010 14

Figure 2. Reported Chlamydia Rates per 100,000 Population by Age Group, Arizona 2010
 14

Figure 3. Reported Chlamydia Case Rates per 100,000 Population by Gender, Arizona
 2005-2010 15

Figure 4. Reported Chlamydia Case Rates per 100,000 Population by Race/Ethnicity,
 Arizona 2005-2010 15

Figure 5. Reported Gonorrhea Cases and Case Rates per 100,000 Population, Arizona
 2005-2010 16

Figure 6. Reported Gonorrhea Rates per 100,000 Population by Age Group, Arizona 2010
 16

Figure 7. Reported Gonorrhea Case Rates per 100,000 Population by Gender, Arizona
 2005-2010 17

Figure 8. Reported Gonorrhea Case Rates per 100,000 Population by Race/Ethnicity,
 Arizona 2005-2010 17

Figure 9. Reported Primary and Secondary Syphilis Cases and Case Rates per 100,000
 Population, Arizona 2005-2010 18

Figure 10. Reported Early Syphilis Cases and Case Rates by Stage per 100,000 Population,
 Arizona 2005-2010 18

Figure 11. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population by County of Residence, Arizona 2005-2010.....	19
Figure 12. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population by Race/Ethnicity, Arizona 2005-2010.....	19
Figure 12a. Reported Primary and Secondary Rates per 100,000 Population by Age Group, Arizona 2010.....	20
Figure 13. Reported Early Syphilis Case Rates per 100,000 Population by Race/Ethnicity, Arizona 2005-2010	20
Figure 14. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population by Gender, Arizona 2005-2010.....	21
Figure 15. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population Among All males and Percentage of Male Cases that Self-Identify as Men Who Have Sex With Men (MSM), Maricopa and Pima Counties, 2005-2010	21
Figure 16. Reported Primary and Secondary Syphilis Cases by Gender and Sexual Preference, Maricopa County 2005-2010	22
Figure 17. Reported Primary and Secondary Syphilis Cases by Gender and Sexual Preference, Pima County 2005-2010	22
Figure 18. Reported and Matched Congenital Syphilis Cases (by Birth Year) in Arizona by Live Birth and Stillbirth, 2005-2010.....	23

OVERVIEW

All data presented in this report are derived from the ADHS STD database (NATP) as of July 5, 2011. The national 2010 Census numbers (www.census.gov) were utilized as population denominators, where available. Some differences in rates of disease between 2009 and 2010 might be attributable to the difference between the estimated denominators of 2009 and the counted denominators of 2010. The racial/ethnic group in Arizona most affected by the difference is the American Indian population where the 2009 estimated statewide population was 346,080 and the Census 2010 counted population was 257,426. As a result, true differences in rates between 2009 and 2010 reported here, particularly by racial/ethnic group, may not be as pronounced as they appear here. In addition, as of the date of analysis, the 2010 reported live birth number used to calculate congenital syphilis rates was preliminary.

Of note, the number of unknown race/ethnicity cases steadily increased between 2004 and 2007 from 2,920 to 8,072, decreasing the reliability of chlamydia analysis by race. The ADHS STDCP began, in early 2009, to actively contact providers to complete missing race/ethnicity information in historic cases to improve the completeness of these data. As a result, the number of reported cases missing race has decreased each year since implementation. In 2010, there were 4,501 cases with missing race data. This represents a decrease in the percent of reported cases with missing race from 33% in 2007 to 17% in 2010.

CHLAMYDIA

Reported chlamydia cases and case rates in Arizona increased significantly from 2004 to 2006. Specifically, the number of cases reported in Arizona increased from 15,558 cases reported in 2003 to 24,292 cases in 2006, a nearly 10,000 reported case increase during three years. Since 2006, reported chlamydia cases have increased yearly, but at a much slower rate (Figure 1). The number of chlamydia cases reported in 2010 was nearly 900 cases higher than 2009 with 26,861 cases reported and an annual case rate of 420.2 cases per 100,000 population.

Similar to nationwide trends, adolescents in Arizona are disproportionately affected by chlamydia (Figure 2). Chlamydia rates among young people ages 15-24 reveal extremely high values. At 2,016.7 cases per 100,000, this rate is nearly 5 times the rate for the state as a whole. In 2010 among 15-19 year olds, the chlamydia case rate remained very high at 1,799.0 cases per 100,000 population and was 2,243.6 per 100,000 population for 20-24 year olds. Previously, the rates for each of these age groups increased each year. However, in 2010, the rate for the 15-19 year age group decreased approximately 3 percent from 1,853 cases per 100,000 in 2009, while the rate for the 20-24 year olds increased 11 percent from 2,020.3 per 100,000 in 2009. The reduction in case rate for the 15-19 year olds amounts to an approximate three percent reduction. The STDCP will continue to monitor these rates, but they may be influenced by the new census data used for the 2010 denominators.

From 2005 to 2010, Arizona chlamydia case rates have tended to be around three times higher in females than in males (Figure 3). In 2010, the female chlamydia case rate was 2.6 times that of males. This was similar to the male to female rate ratio of 2.8 in 2009. Divergent case rates by gender may be attributed to the Infertility Prevention Project (which provides for chlamydia screening for women under the age of 26 in specific clinics statewide), the presence of national screening guidelines for females and the lack of similar guidelines for males, as well as the differences between males and females in their healthcare access behaviors and their chlamydia symptom experience.

There is a clear health disparity when looking at chlamydia rates in Arizona by race/ethnicity. African Americans and American Indians have maintained disproportionately higher rates of chlamydia from 2005-2010. The chlamydia rates among African Americans in Arizona have been increasing steadily since 2006 (Figure 4).

Between 2009 and 2010, the chlamydia rates among African Americans continued to rise from 938.8 to 1148.5 cases per 100,000 population. In 2010, the chlamydia case rate among the African American population living in Arizona was 6.6 times higher than that of non-Hispanic whites (174.8 cases per 100,000 population). The degree of this disparity increased from 2009 when the rate among African Americans was 5.9 times higher than that among non-Hispanic whites. The American Indian population living in Arizona also experiences a disproportionately higher rate of chlamydia. For example, the American Indian 2010 chlamydia rate was 6 times higher than the non-Hispanic white rate for the same year. After a year of declining rates between 2008 and 2009, the American Indian population in Arizona experienced an increase in rates of reported chlamydia from 690.3 to 1042.2 cases per 100,000 population from 2009 to 2010. The number of chlamydia cases reported among American Indians increased from 2,389 in 2009 to 2,683 in 2010. While the number of cases did increase, the large rate increase can be attributed mainly to the difference between the estimated American Indian population in 2009 (346,080 persons) and the counted Census 2010 population in 2010 (257,426).

Because partner services interviews are either not being done or are abbreviated for chlamydia and gonorrhea, the Arizona surveillance database is generally incomplete in terms of sexual orientation and HIV co-morbidity analyses for these two diseases. During 2010, however, the ADHS STDCP partnered with the ADHS HIV Surveillance Program to undertake a large co-morbidity analysis that included chlamydia/gonorrhea/syphilis and HIV co-morbidity as well as sexual preference among cases that are co-morbid.

For chlamydia, the analysis found that 2.2% of all reported HIV/AIDS cases from 1998-2008 had a history of a chlamydia infection. As well, 0.9% of males and 0.1% of females in Arizona who are reported with an infection of chlamydia had an HIV infection at some point in the studied time period. These odds of HIV infection are similar to the general population in Arizona [HIV Integrated Epidemic Profile]. Complete results of this analysis can be located on at http://www.azdhs.gov/phs/hiv/pdf/EpidemicProf/integrated_epi_prof_2010.pdf.

GONORRHEA

In 2010 there were 3,249 gonorrhea cases reported in Arizona, with a corresponding case rate of 50.8 per 100,000 population. This rate is almost the same as the rate in 2009. This is the first year since 2006 that the state has not experienced a decline in gonorrhea rates. The Arizona

gonorrhea rate decreased 46% between 2006 and 2009. The largest annual decrease within this four year time period occurred between 2007 and 2008. Between 2008 and 2009, however, the decrease in annual case numbers and case rates was slower than in previous years. For example, the annual case rate decrease between 2007 and 2008 was 30% as compared to a nearly 7% decrease between 2008 and 2009. This overall decrease in reported gonorrhea cases is noteworthy since the incidence of gonorrhea had exhibited a modest increase from 2004 to 2006 (Figure 5).

In response to reports of particular locations of the state experiencing an increase in diagnosed gonorrhea cases, the STDCP staff developed and implemented in early 2010 a Historical Limits Method based gonorrhea outbreak detection system monitoring selected surveillance sites throughout the state. In addition, the Program is in the process of developing a monitoring program to be implemented in mid-2012 that will allow state epidemiologists to detect possible cases of resistant gonorrhea by identifying individuals who test positive for gonorrhea twice within a 30 to 60 day time period.

Similar to chlamydia, the general gonorrhea case rate for 2010 may not reflect the population specific burden of disease in the state. Indeed, the case rates among younger people, especially those between the ages of 15-24, show a much higher burden of disease. Figure 6 presents gonorrhea case rates by age group for 2010 and demonstrates the impact of gonorrhea among Arizona adolescents and young adults. The 2010 rates of gonorrhea by age group were slightly higher than the 2009 rates. For example, the 2010 rate per 100,000 population for 20-24 year olds in 2010 was 244.0 whereas, for 2009, it was 232.7 per 100,000 population.

In general, gonorrhea morbidity in Arizona is higher in males than in females. In 2010, the gonorrhea case rate for males stood at 53.4 per 100,000 and 48.3 per 100,000 for females. As depicted in Figure 7, 2010 was the first year that the rate of gonorrhea reported in men slightly decreased while the rate in women slightly increased.

As is depicted in Figure 8, race-specific rates in Arizona show a general decline for gonorrhea, except among the American Indian population. Morbidity among African Americans declined from a high of 405.9 cases per 100,000 population in 2005 to 266.5 cases per 100,000 population in 2008. Unlike most of the remaining racial and ethnic groups in Arizona, the African American population did not continue to experience a decline in gonorrhea rates in 2009. Instead, the annual gonorrhea rates among African Americans increased by 21%.

In 2010, the rates Among African Americans again decreased slightly. Nonetheless, gonorrhea rates among African Americans in Arizona are disproportionately higher than those among all other racial and ethnic groups. In fact, the 2010 rates for African Americans were 14.2 times higher than those of non-Hispanic whites.

Gonorrhea rates among American Indians had been steadily decreasing since 2004. However, they were the only racial/ethnic group to experience an increase in gonorrhea rates during 2010 from 51.1 to 85.1 cases per 100,000 population (Figure 8). The number of reported gonorrhea cases among American Indians in Arizona increased from 177 in 2009 to 219 in 2010. Similar to what was noted in the Chlamydia section, while the number of gonorrhea cases did increase, the large increase in rate can be attributed mainly to the difference between the estimated American Indian population in 2009 (346,080 persons) and the counted Census 2010 population (257,426). The Arizona STDCP is working closely with several American Indian representatives to carefully monitor this trend.

The recently completed HIV/AIDS co-morbidity analysis identified an important connection between gonorrhea diagnoses and HIV in Arizona. That is, the odds of infection with HIV at some time during the study period of 1998-2008 in those who were diagnosed with gonorrhea were 6 times higher than the general population for males and 3 times higher than the general population for females [ADHS HIV/AIDS Integrated Epidemic Profile]. Males who were diagnosed with both gonorrhea and HIV were more likely to have been identified as men who have sex with men (MSM) as compared to men who were diagnosed with HIV alone (81.0% and 66.6%, respectively). The full ADHS HIV/AIDS Integrated Epidemic Profile can be accessed at http://www.azdhs.gov/phs/hiv/pdf/EpidemicProf/integrated_epi_prof_2010.pdf.

SYPHILIS

In 2010, the total number of reported primary and secondary cases of syphilis (P&S), 230, was similar to that reported in 2009: 236 cases (Figure 9). Over the past seven years, the number of reported cases and case rates were at their lowest points in 2004. In 2005, both the number of cases and the case rate increased slightly. This trend continued into 2006. Yet, by 2007, both the number of P&S cases as well as the case rate increased dramatically from the previous year representing a 63% increase in cases from 2006 to 2007. This increase was attributed to three significant syphilis outbreaks among American Indians in the state, endemic

syphilis among men who have sex with men (MSM) in Maricopa County, and a rise in the number of cases in rural Arizona counties. The decrease in cases, particularly between 2008 and 2010, reflects improved control in all three areas.

Arizona's reported early syphilis cases are shown in Figure 10. The sharp increase in all stages of early syphilis shown in 2007 is primarily associated with outbreaks occurring in three American Indian reservations. As those outbreaks were brought under control, by 2010, overall cases and rates returned to the pre-outbreak level seen in 2006.

For P&S syphilis, Maricopa and Pima Counties continue to account for a majority of Arizona's morbidity (Figure 11). The remainder of the state had a relatively low reported P&S syphilis case rate for most of the decade up to 2006. But by 2008, the rate in the remaining 13 counties of Arizona more than tripled to 2.1 per 100,000, which mirrors the increasing trend in Maricopa and Pima counties. In 2009, however, the case rate for these 13 smaller counties combined had returned to previously low levels and increased slightly during 2010. However, the number of cases is low, so the rates may not be reliable.

Maricopa County was designated as a High Morbidity Area (HMA) at the outset of the Syphilis Elimination Project in 1999 and continues to be classified as such. The 2010 annual case rate for Maricopa County reported primary and secondary syphilis was 4.1 cases per 100,000 population. This has not changed from the 2009 rate.

In 2009, Pima County reported a case rate of 5.3 cases of P & S syphilis per 100,000 population. This rate was a large decrease from the decade's highest rate in 2007 of 8.1 cases per 100,000 population. The 2010 Pima County rate for P & S syphilis (5.2 cases per 100,000 population) is similar but slightly lower than the 2009 rate.

As with chlamydia and gonorrhea, the rate of P & S syphilis among African Americans in Arizona is disproportionately higher than that of any other racial/ethnic group in the state (Figure 12). After having decreased by nearly 49% between 2008 and 2009, the rate of primary and secondary syphilis in Arizona diagnosed among African Americans increased in 2010 to 8.8 cases per 100,000 population. This was an increase from 15 to 21 cases statewide between 2009 and 2010. The American Indian population in Arizona also experienced a large decrease in primary and secondary syphilis rates between 2007 and 2008. These rates remained steady through 2009 but increased to 8.5 per 100,000 American Indian population in 2010. This was an increase from 16 reported cases in 2009 to 22 reported cases in 2010. An upcoming evaluation

of early syphilis (Figure 13) will show a continued decreasing trend of reported early syphilis cases among American Indians in Arizona between 2009 and 2010. The reported 2010 primary and secondary syphilis rates for African Americans and American Indians in Arizona are 3.6 and 3.5 times higher than non-Hispanic whites, respectively.

In contrast to chlamydia and gonorrhea, the age distribution for reported cases of primary and secondary syphilis in 2010 was distributed across several age groups and not so focused. From previous years, the age group breakdown has shifted moderately towards the younger groups with the two highest rates among the 20-24 and 25-29 year old age groups (Figure 12a). This is in contrast to 2009 when the age groups with the highest rates were the 25-29 year olds and the 40-44 year olds.

An analysis of the annual case rate trends of early syphilis by race and ethnicity shows a similar decrease in the annual case rate among African Americans in Arizona between 2008 and 2009, the rate then increased during 2010 (Figure 13). American Indians in Arizona had the second highest rate of early syphilis by race/ethnicity in 2010. This population experienced a very large increase in both the number of reported P & S cases as well as early syphilis cases between 2006 and 2007. This coincides with several outbreaks among American Indians in Arizona that occurred during that time period. As control of those outbreaks improved, the cases and rates of early syphilis returned to pre-outbreak levels. In spite of the higher rates among African Americans and American Indians, as previously noted in Figure 10, there was an overall decrease in the rates of early syphilis between 2009 and 2010.

Of note, any evaluation of P&S syphilis in Arizona by race is limited by the number of cases with unknown race recorded in the database. The percentage of total P&S cases with unknown race from 2005 – 2010 is as follows; 1.1%, 5.7%, 6.9%, 1.8%, 0.0%, and 2.6%, respectively. The Arizona STDCP is working with the counties to retrospectively complete the race/ethnicity field in the database for all reported sexually transmitted diseases.

As has been the case for most of the decade, more male cases of P&S syphilis were reported than female cases in 2010. In fact, in 2010, males accounted for 90% of P&S cases. This trend was maintained across all ethnic groups, except for Native Americans in 2004 and 2007, where more cases occurred among females. The ratio of male to female cases in Arizona has increased quite dramatically from 2.7 in 2005 to 11.0 in 2010 (Figure 14).

The endemic nature of syphilis among men who have sex with men (MSM) likely contributes significantly to this phenomenon. On the other hand, in 2007, the case rate among females almost doubled, from 1.1 in 2006 to 2.1 in 2007. Several syphilis outbreaks among American Indians in 2007 included sizable numbers of infected females and accounts for this marked increase in the female rate. The decrease in the reported case rate among Arizona women in 2008 and again in 2009 reflects the decrease in case rate that occurred among American Indians that year as well. The 2010 rates among women were the lowest of the six year time frame, at 0.6 cases per 100,000, while the rates among men remained stable.

Figure 15 depicts the P&S case rates among all males residing in Maricopa and Pima counties from 2005 to 2010 and the percentage of those male cases that self-identified as men who have sex with men. In 2010, 79% of the male primary and secondary syphilis cases residing in Maricopa and Pima Counties, combined, self-identified as men who have sex with men. This percentage is similar to 2009 when 77% of male cases self-identified as MSM. In Maricopa County, alone, males that self-identify as MSM account for the majority of P&S syphilis cases among males since 2004.

Figure 16 highlights that MSM accounted for about 82.5% of all P&S syphilis cases in Maricopa County in 2010 and 87.7 % of all male cases of P&S syphilis. Notably, P&S syphilis cases among females in Maricopa County remained relatively unchanged from 2005 to 2008, decreased by 67% in 2009 and remained stable in 2010.

Conversely, Figure 17 shows that in Pima County, the number of cases among MSM has varied between 18% and 35% of the male cases for the county until 2010 when the percentage of cases among MSM increased to 68% of the cases among males. This increase in percentage of P&S cases among MSM in Pima County represents a return to similar levels prior to 2005. In 2004, for example, MSM represented nearly 60% of the male cases for that year.

Overall, Arizona experienced a nearly 30% decrease in the number of primary and secondary syphilis cases between 2008 and 2009 and remained stable in 2010. The ADHS Integrated Epidemic Profile outlined an important relationship between syphilis and HIV in Arizona. That is, “the odds of HIV infection among persons with a history of syphilis are approximately 19 times higher than the general population for males and 14 times higher than the general population for females.” The full Integrated Epidemic Profile report location can be found at: http://www.azdhs.gov/phs/hiv/pdf/EpidemicProf/integrated_epi_prof_2010.pdf.

CONGENITAL SYPHILIS

The preliminary 2010 number of reported congenital syphilis cases for Arizona is lower than in previous years. In order to be certain that we have a complete picture of congenital syphilis in the state, the Arizona STD Control Program has undertaken a cross match analysis to identify any unreported cases since 2006. This cross match analysis involves matching the women with syphilis related lab tests in the state database to the fetal live birth and stillbirth records for each year. The methods for this analysis were published in the April 2010 issue of *Sexually Transmitted Diseases*. That analysis identified 6 unreported cases for infants delivered in 2006 (4 live births and 2 stillbirths), 10 infants delivered in 2007 (10 live births), 11 infants delivered in 2008 (9 live births and 2 stillbirths), and 2 infants delivered in 2009 (2 live births, 0 stillbirths). In total, therefore, Arizona had 40 congenital syphilis cases in 2007, 44 cases in 2008, and 28 cases in 2009.

The total number of reported congenital syphilis cases in 2010 is the lowest of the past several years (Figure 18). This decrease mirrors the decrease seen statewide in both P&S and early syphilis, as well as a decrease in the number of infants delivered in the state. The decrease may also reflect increased local and statewide awareness and prevention activities related to congenital syphilis secondary to several activities including the congenital syphilis case match analysis, an epidemiologic aid analysis and a rapid community assessment completed in conjunction with the Centers for Disease Control and Prevention, and multiple educational programs including a Congenital Syphilis Conference held in conjunction with the Maricopa Public Health Department in November 2009. The Arizona STD Control Program will continue to closely monitor congenital syphilis throughout the state.

FIGURES

Figure 1. Reported Chlamydia Cases and Case Rates per 100,000 Population, Arizona 2005-2010

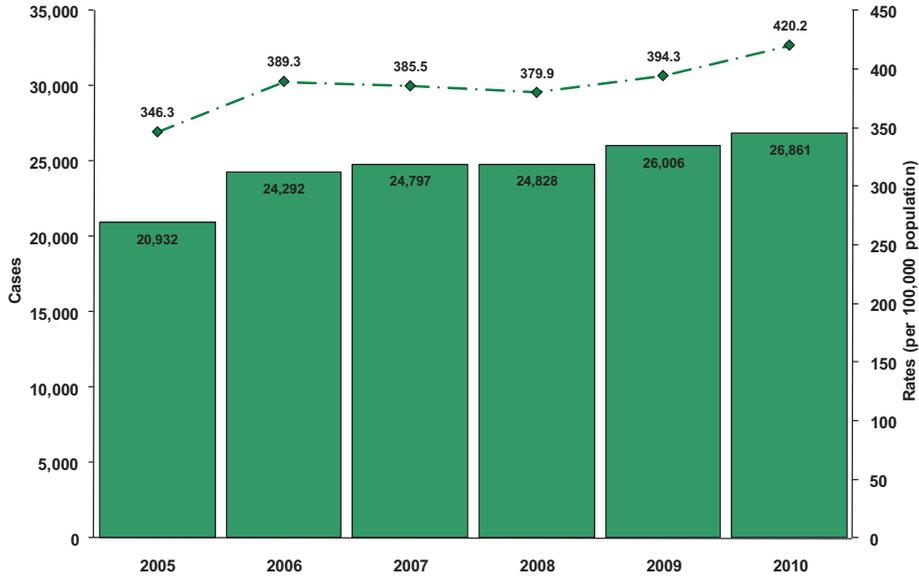


Figure 2. Reported Chlamydia Rates per 100,000 Population by Age Group, Arizona 2010

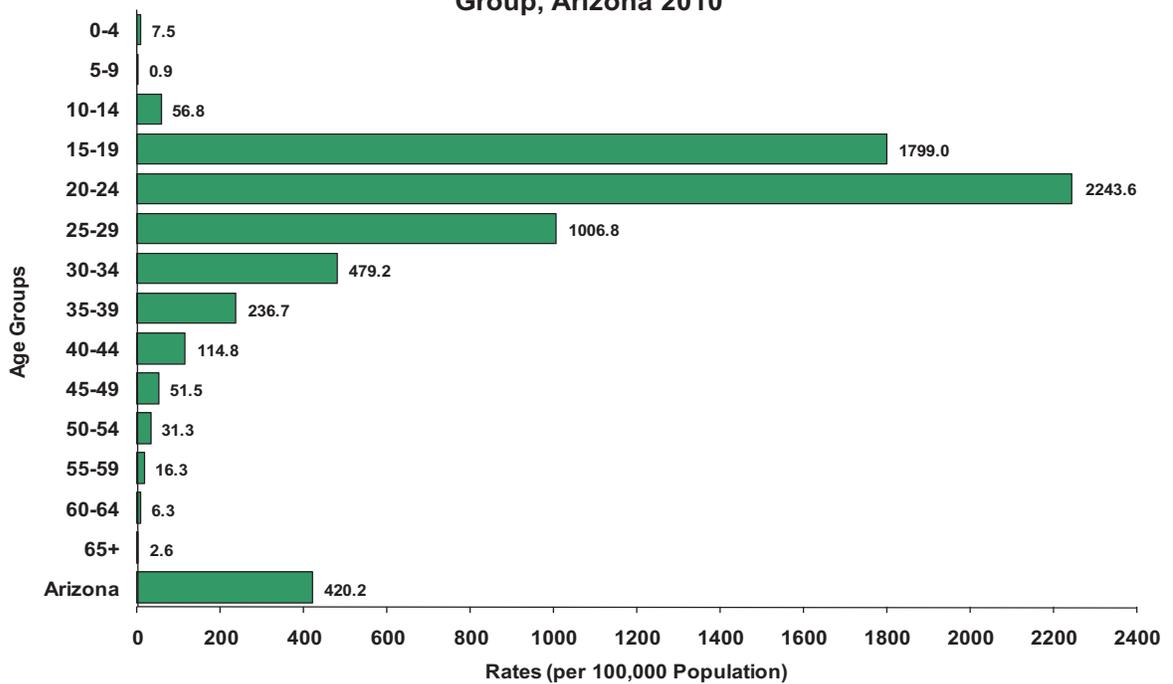


Figure 3. Reported Chlamydia Case Rates per 100,000 Population by Gender, Arizona 2005-2010

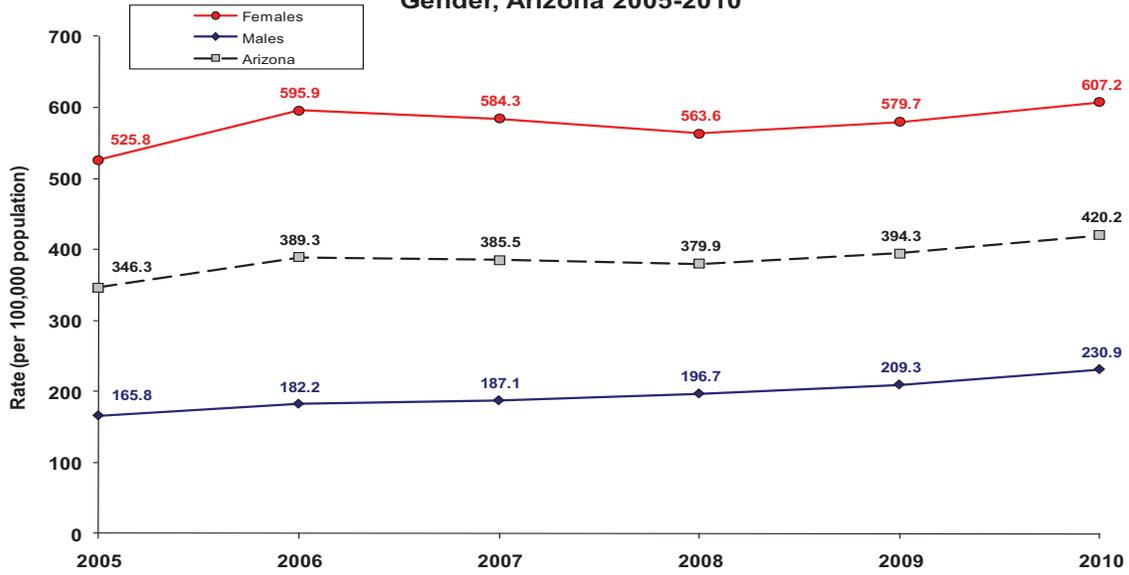


Figure 4. Reported Chlamydia Case Rates per 100,000 Population by Race/Ethnicity, Arizona 2005-2010

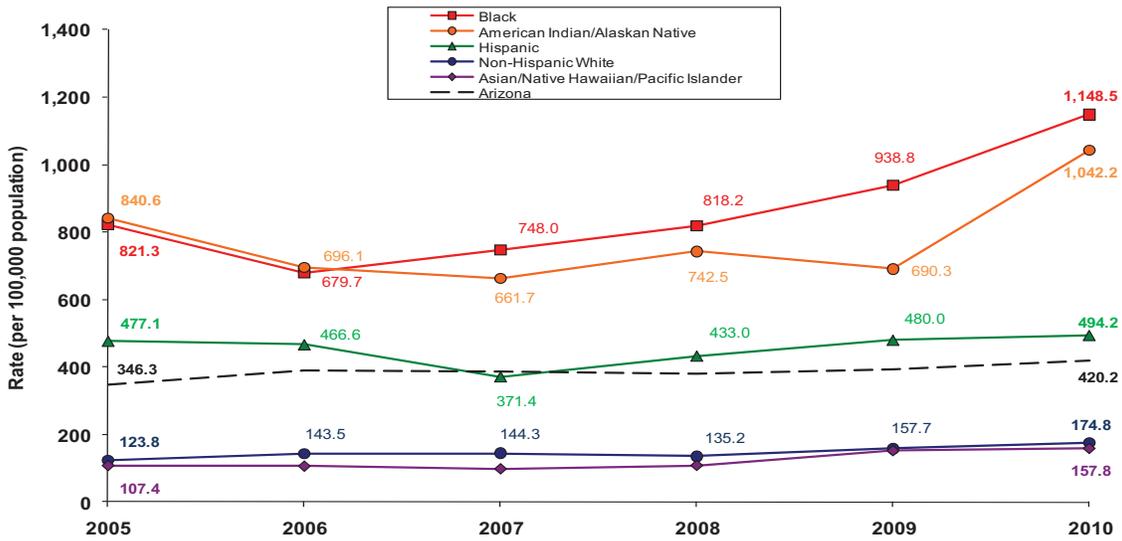


Figure 5. Reported Gonorrhea Cases and Case Rates per 100,000 Population, Arizona 2005-2010

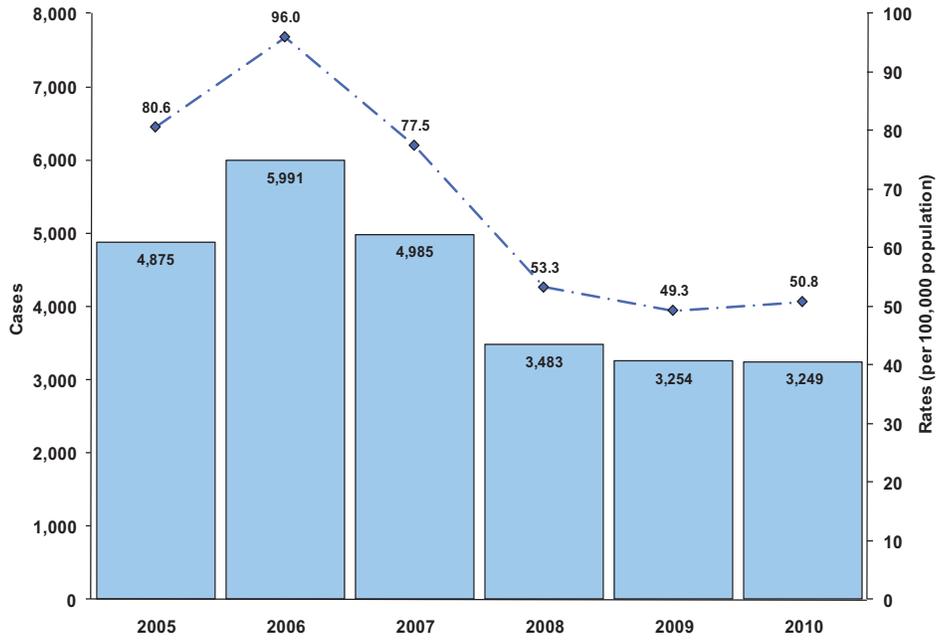


Figure 6. Reported Gonorrhea Rates per 100,000 Population by Age Group, Arizona 2010

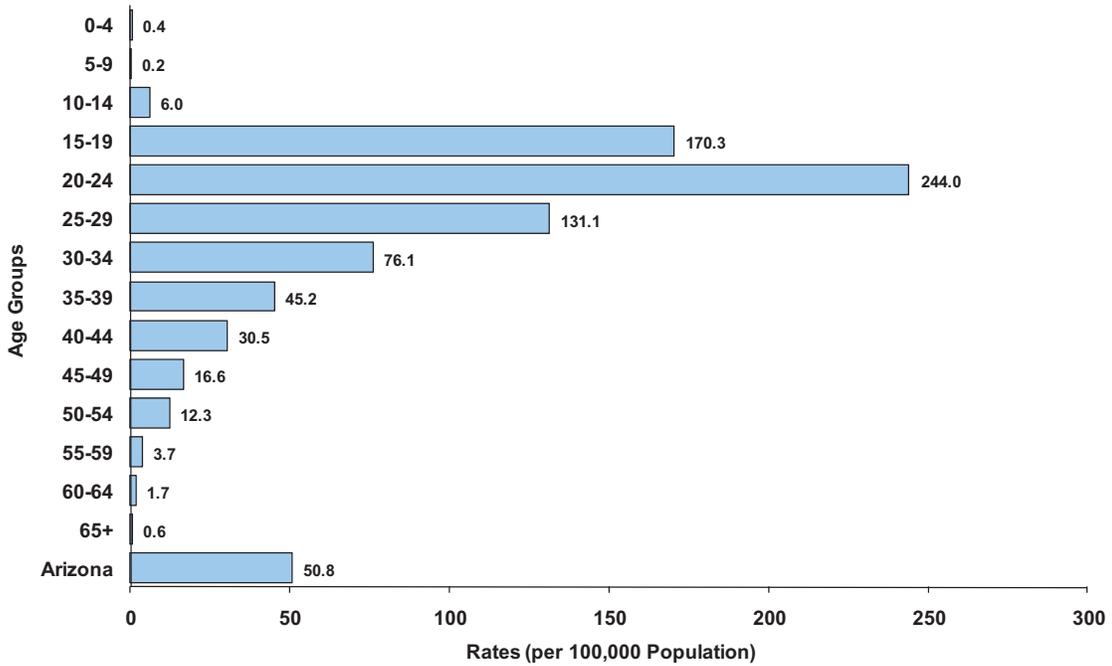


Figure 7. Reported Gonorrhea Case Rates per 100,000 Population by Gender, Arizona 2005-2010

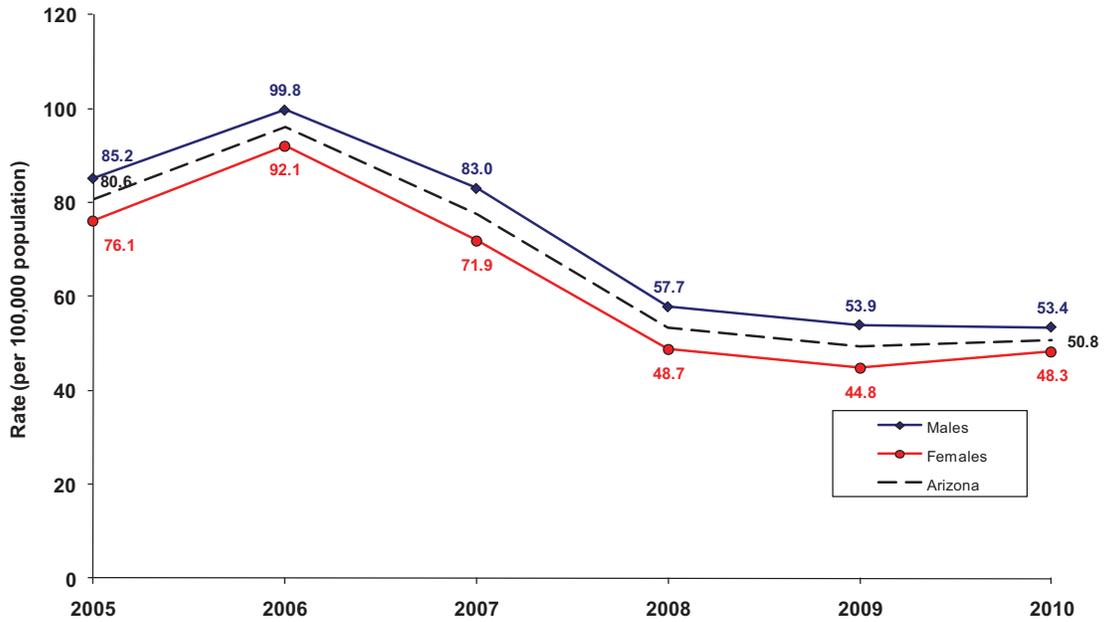


Figure 8. Reported Gonorrhea Case Rates per 100,000 Population by Race/Ethnicity, Arizona 2005-2010

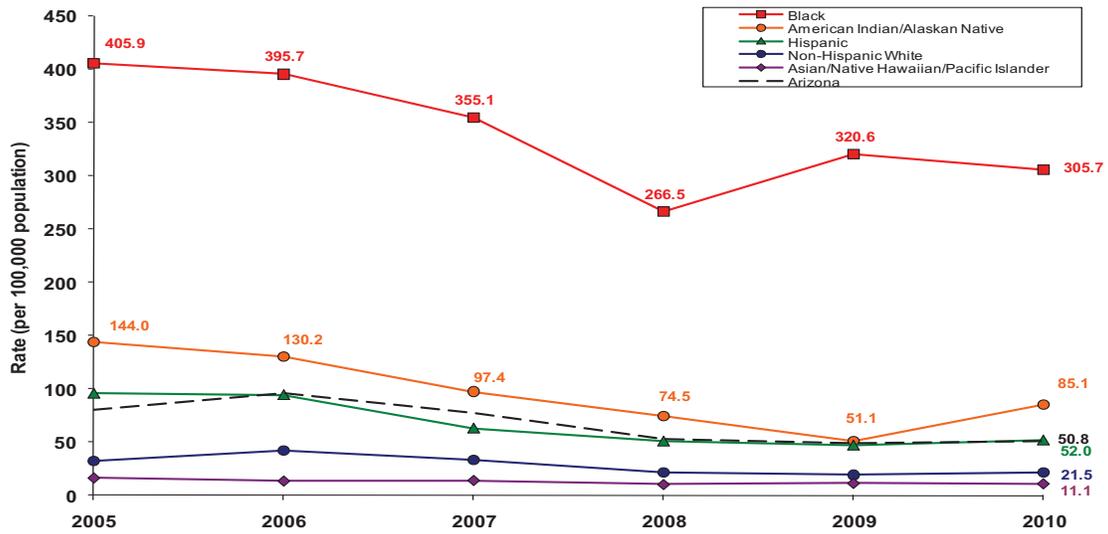


Figure 9. Reported Primary and Secondary Syphilis Cases and Case Rates per 100,000 Population, Arizona 2005-2010

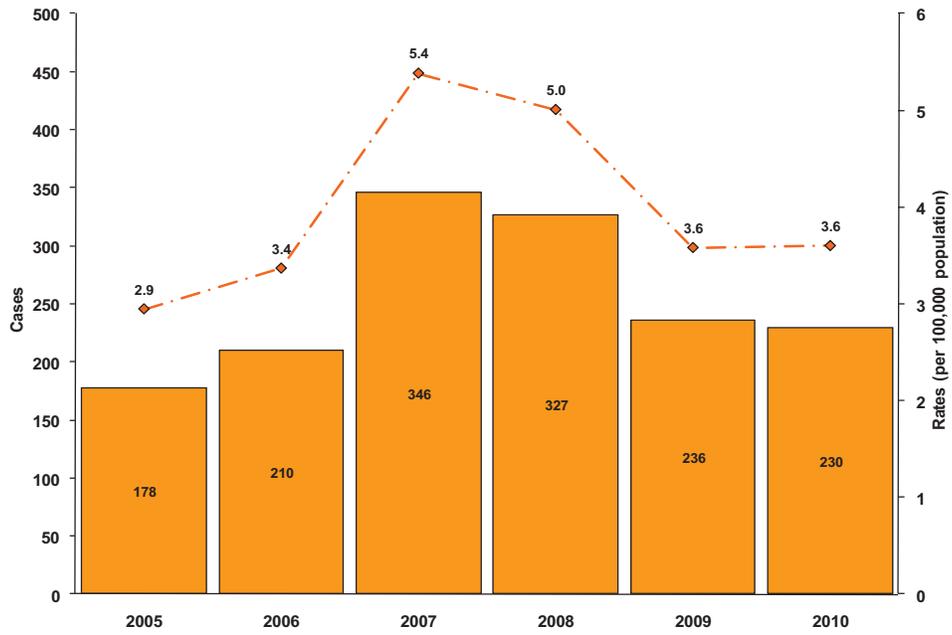


Figure 10. Reported Early Syphilis Cases and Case Rates by Stage per 100,000 Population, Arizona 2005-2010

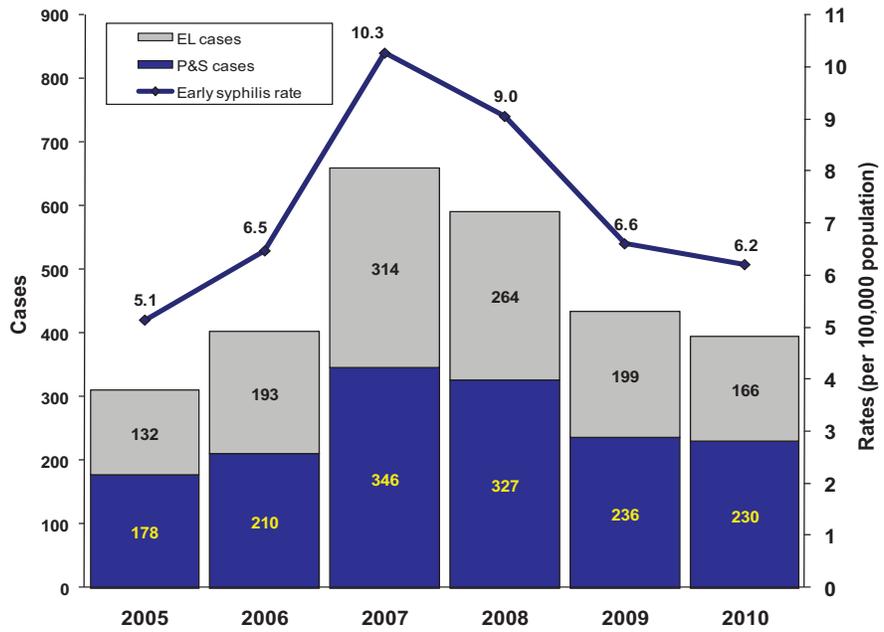


Figure 11. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population by County of Residence, Arizona 2005-2010

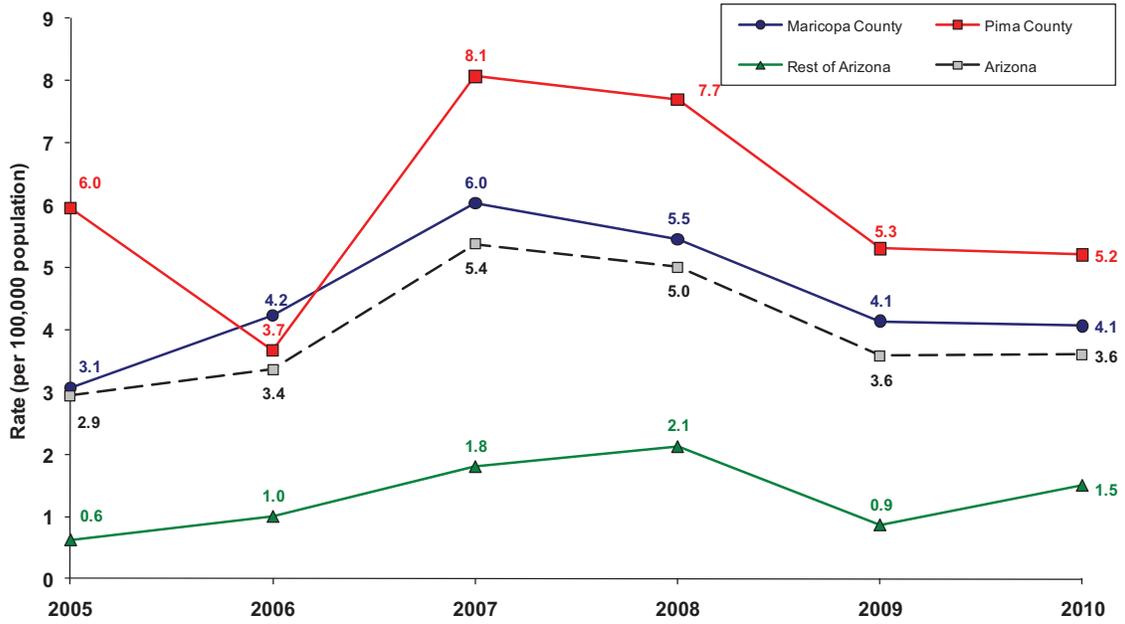


Figure 12. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population by Race/ Ethnicity, Arizona 2005-2010

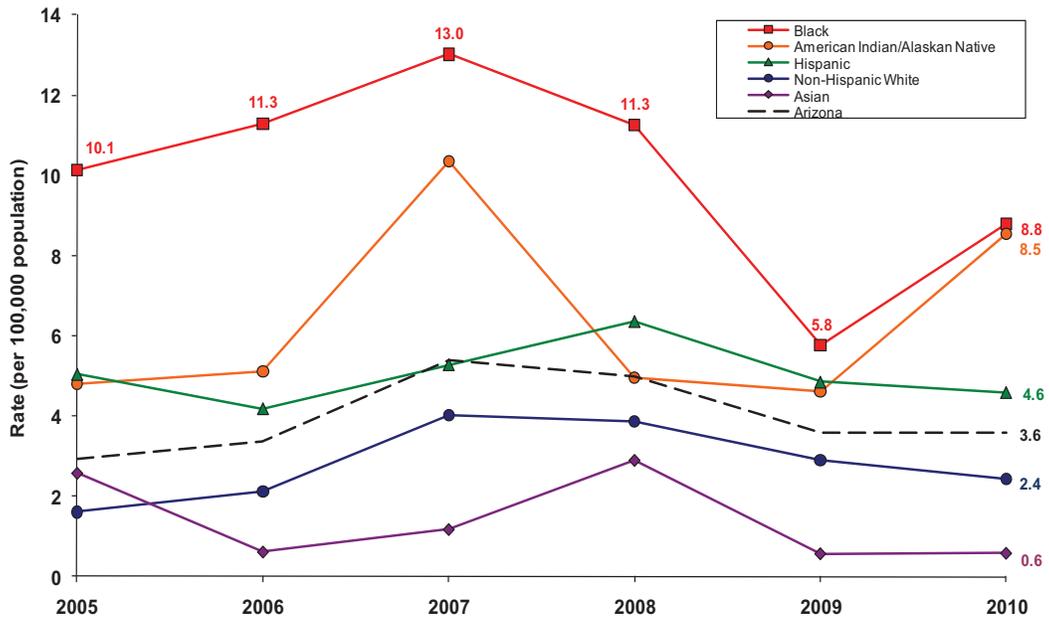


Figure 12a. Reported Primary and Secondary Syphilis Rates per 100,000 Population by Age Group, Arizona 2010

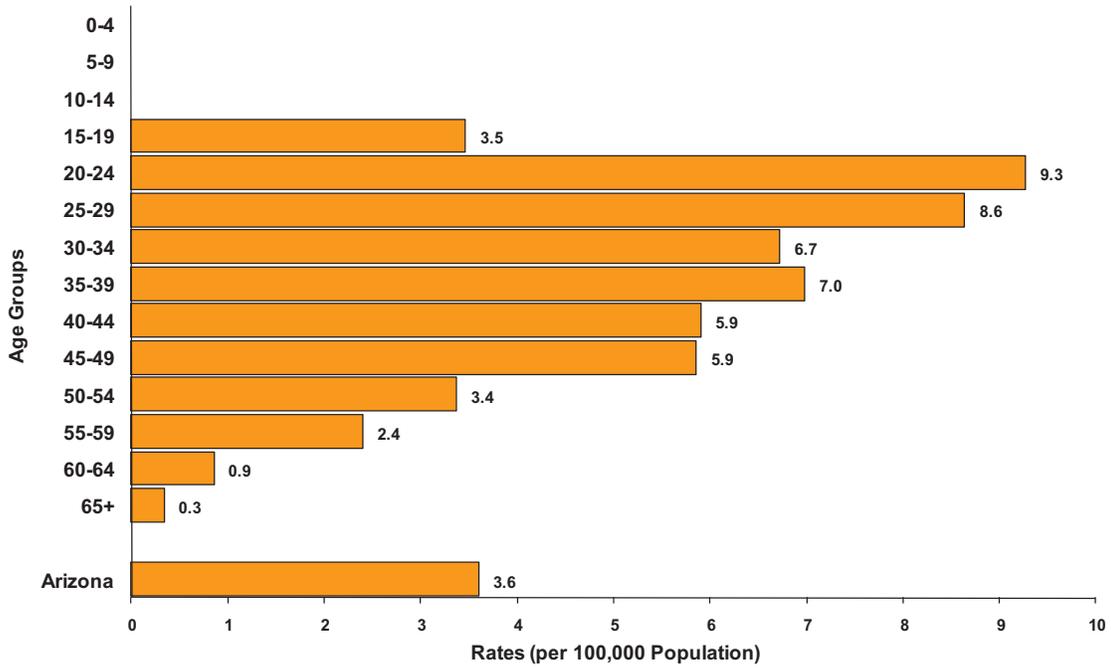


Figure 13. Reported Early Syphilis Case Rates per 100,000 Population by Race/Ethnicity, Arizona 2005-2010

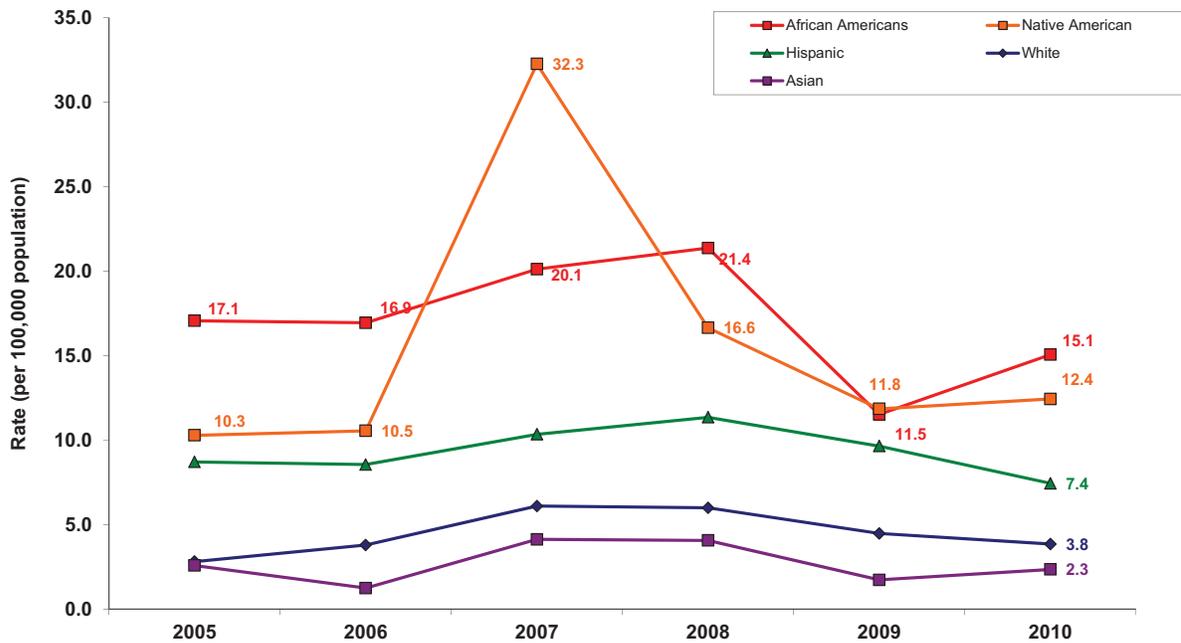


Figure 14. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population by Gender, Arizona 2005-2010

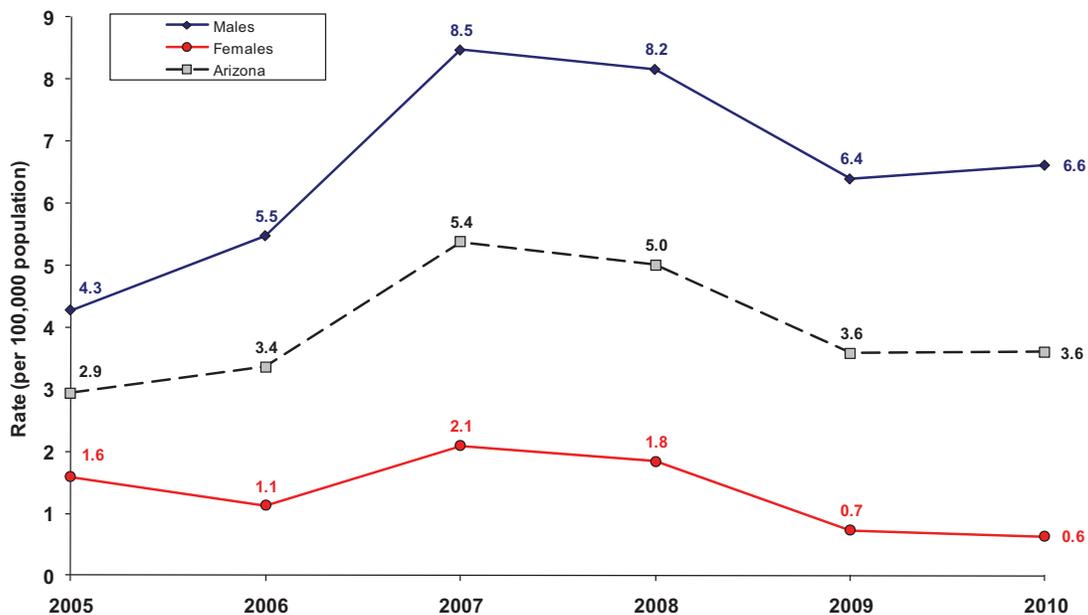


Figure 15. Reported Primary and Secondary Syphilis Case Rates per 100,000 Population among All Males and the Percentage of Male Cases that Self-Identify as Men who Have Sex with Men (MSM), Maricopa and Pima Counties, 2005-2010

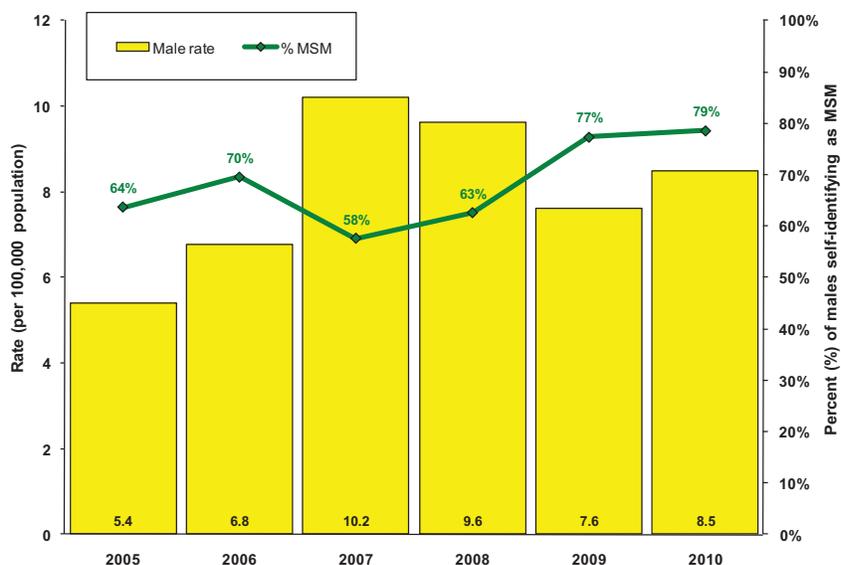


Figure 16. Reported Primary and Secondary Syphilis Cases by Gender and Sexual Preference, Maricopa County 2005-2010

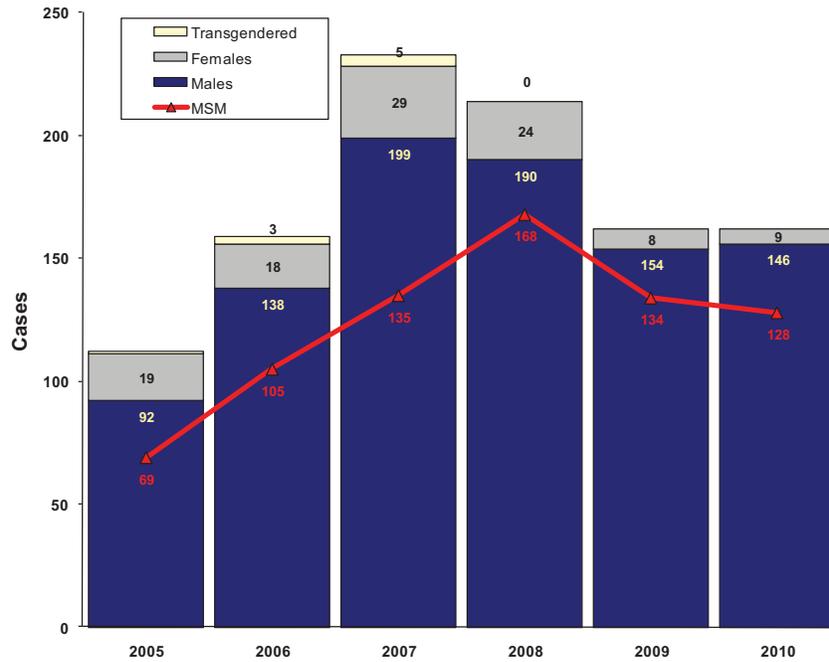


Figure 17. Reported Primary and Secondary Syphilis Cases by Gender and Sexual Preference, Pima County 2005-2010

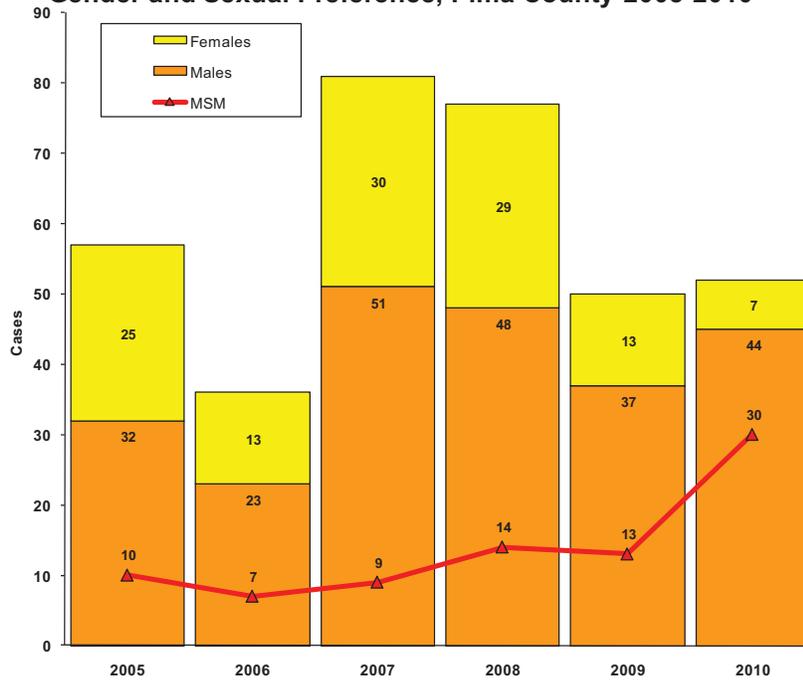


Figure 18. Reported and Matched Congenital Syphilis Cases (by Birth Year) in Arizona by Live Birth and Stillbirth, 2005-2010

