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January 2014

Dear Arizonans:

The Arizona Department of Health Services (ADHS), Sexually Transmitted Disease Control Program (STDPCP) is pleased to provide the 2012 Arizona STD Annual Report. This report highlights the impact of sexually transmitted diseases (STDs) among the residents of Arizona by focusing primarily on syphilis, gonorrhea, and chlamydia – the most commonly reported STDs. The following information, as depicted in the narrative, graphs, and tables, details the increasing number of STDs affecting our state. All 2012 data are from the ADHS STDPCP Surveillance system.

STDs affect people of all ages, races, ethnicities, educational levels, and economic status. However, in 2012, young adults ages 15-29 and men who have sex with men bear a disproportionate burden of STDs in Arizona. The ADHS STDPCP is addressing these health disparities by collaborating across ADHS Agency programs and reaching out to county and 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.

In pursuit of the mission of the ADHS STDPCP, through this report, our goal is to disseminate useful and pertinent data to the Arizona public and community leaders to promote dialogue about disease prevention, promote medical treatment and services, and improve the sexual health of all Arizonans. Sexual health is everyone's responsibility.

Please contact us with any further questions regarding STD education, prevention, and screening opportunities.

Sincerely,

Roxanne Ereth, MPH
STD Control Program Manager

Arizona Department of Health Services

Office of Disease Integration and Services

STD Control Program

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Office of Disease Integration and Services

STD Control Program

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I. Executive Summary

A. Program Mission and Goals

The Mission of the Arizona STD Control Program (ADHS STDCP) is to:

Improve the sexual health of all Arizonans by strengthening the prevention and control of Sexually Transmitted Disease in Arizona through education, surveillance, collaboration, and program development.

B. Program Organizational Structure

The STDCP has been a part of Arizona Department Health Services since 1919. The STDCP is under the ADHS Public Health Services Division, Bureau of Epidemiology and Disease Control, Office of Disease Integration Services (ODIS) under Ms. Carla Chee, MHS. ODIS is comprised of the HIV Surveillance Program, Tuberculosis Control Program, Refugee Health, HIV/AIDS Care and Services Program, and the STDCP. The STDCP Central Office is located in downtown Phoenix with field staff located in Maricopa and Pima Counties.

The STDCP Central Office Staff:

Roxanne Ereth, MPH, BS, STDCP Manager with nearly 16 years of experience in Public Health. Ms. Ereth's experience includes positions as an Epidemiologist, Manager of the HCV Program for 2 years and manager of the STDCP for the last 5 years. She has a BS in Microbiology and an MPH in Public Health with a Concentration in Community Health Practice.

Anita Betancourt, BS, Chlamydia Surveillance Epidemiologist, has 2 years of experience as the STD Infertility Prevention Project Coordinator, and 7 years as an Epidemiologist. Ms. Betancourt holds a BS in Health Sciences and a Graduate Certificate in Epidemiology

Jose Mireles, MPH, Syphilis Surveillance Epidemiologist holds a BS in Microbiology and a MPH in Public Health. Mr. Mireles has 5 years of experience as an STD epidemiologist.

Lauren Young, MPH, Gonorrhea Surveillance Epidemiologist holds a BA in Chemistry and Spanish, a MPH with a concentration in Epidemiology and Biostatistics, and a Certificate in Interdisciplinary Women's Health. Ms. Young has one year surveillance experience (birth defects), 3 years HPV and Maternal/Infant health research experience.

Arshad Aziz, MD, Data Manager Epidemiologist, has 8 years of experience as the STD Epidemiologist.

Linda Ripley, Data Entry Specialist has been with ADHS since 2006.

The Centers for Disease Control and Prevention has been generous in its support of the ADHS STDCP by providing assistance from the following on-site staff.

Melanie Taylor, MD, MPH, is a CDC Medical Epidemiologist in the Division of STD Prevention at the National Center for HIV, STD, Hepatitis and TB Prevention (NH) since 2002. She is an infectious disease/HIV physician and a Captain in the United States Public Health Service.

Kerry Kenney, BA is a CDC Senior Public Health Advisor with 22 years of experience working in state and local STD Programs (City of Chicago, County of Los Angeles, and State of Arizona). He holds a BA in Economics and a Graduate Certificate in Public Health with emphasis in Public Health Policy.

Katherine Browne, BA is a CDC Public Health Advisor with 23 years of experience working in state and local STD Programs (County of Los Angeles, State of Indiana, and State of Arizona – Maricopa County and Pima County STD Programs). Ms. Browne holds a BA in Human Biology.

C. Purpose of Report

The purpose of this report is to highlight the impact of sexually transmitted diseases (STDs) among the residents of Arizona. The information depicted in the narrative, graphs, and tables herein focus on chlamydia, gonorrhea, and syphilis the most commonly reported STDs affecting our state. Data are from the ADHS STD Surveillance system, 2012 CDC Surveillance Report, and the CDC website, cdc.gov. They include all reported cases of STDs in Arizona during 2012.

D. STDs in Arizona

The STD burden among Arizona residents is high and disproportionately affects certain high risk groups. In 2012, 36,631 total STD infections (excluding HIV), were reported in Arizona:

- 30,571 cases of chlamydia were reported in 2012, a 4.5% increase from 2011
- 204 cases of primary and secondary syphilis were reported in 2012, a 28% decrease from 2011
- 5,856 cases of gonorrhea were reported in 2012, a 28.3% increase from 2011.

II. Epidemiologic Profile

A. Chlamydia

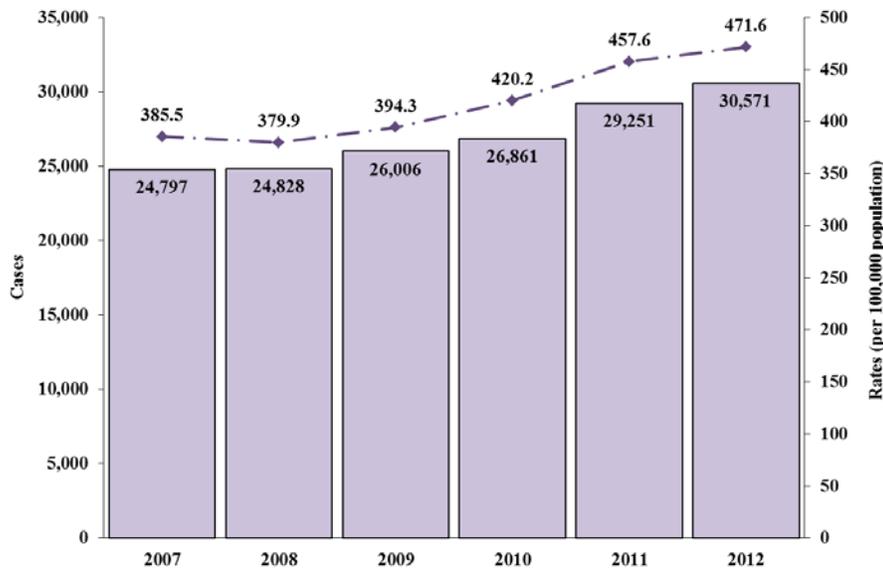
Chlamydia is the most commonly reported bacterial STD in the United States. In 2012, 1,422,976 cases of chlamydia were reported to the CDC. CDC estimates that 2.86 million infections occur annually¹. Chlamydia is known as a “silent” infection because most infected persons have no symptoms, and if they do occur, they may not appear until several weeks after exposure. Symptoms may include an abnormal discharge, painful urination and, for women, pelvic inflammatory disease (PID). PID can cause infertility, ectopic pregnancy, and chronic pelvic pain. Pregnant women with chlamydia may have pre-term deliveries and can pass the infection to their infants during delivery, potentially causing eye infections or pneumonia. Complications for men are rare however untreated infections may cause infertility. The CDC recommends annual screening of all sexually active persons, all pregnant women, and all women under 26 years of age. Anyone sexually active should discuss their risks for acquiring chlamydia with a health care provider who can determine if more frequent testing is necessary.²

In Arizona, 30,571 chlamydia cases were reported in 2012. This represented an increase of 1,320 cases, a 4.5% increase, over the number of cases reported in 2011 (Figure CT1). The 2012 annual rate increased by 3.1% of the 2011 case rate from 457.6 to 471.6 per 100,000 population. From 2008-2012, the Arizona chlamydia case rate increased 24% from 379.9 to 471.6 per 100,000, respectively. Although cases have continued to increase state-wide from year to year over the past decade, 4 of Arizona’s 15 counties showed a decrease in chlamydia cases and rates, from 2011-2012. It should be noted that these are rural counties and 3 of them are the least populated counties in Arizona.

¹<http://www.cdc.gov/std/chlamydia/STDFact-chlamydia-detailed.htm>

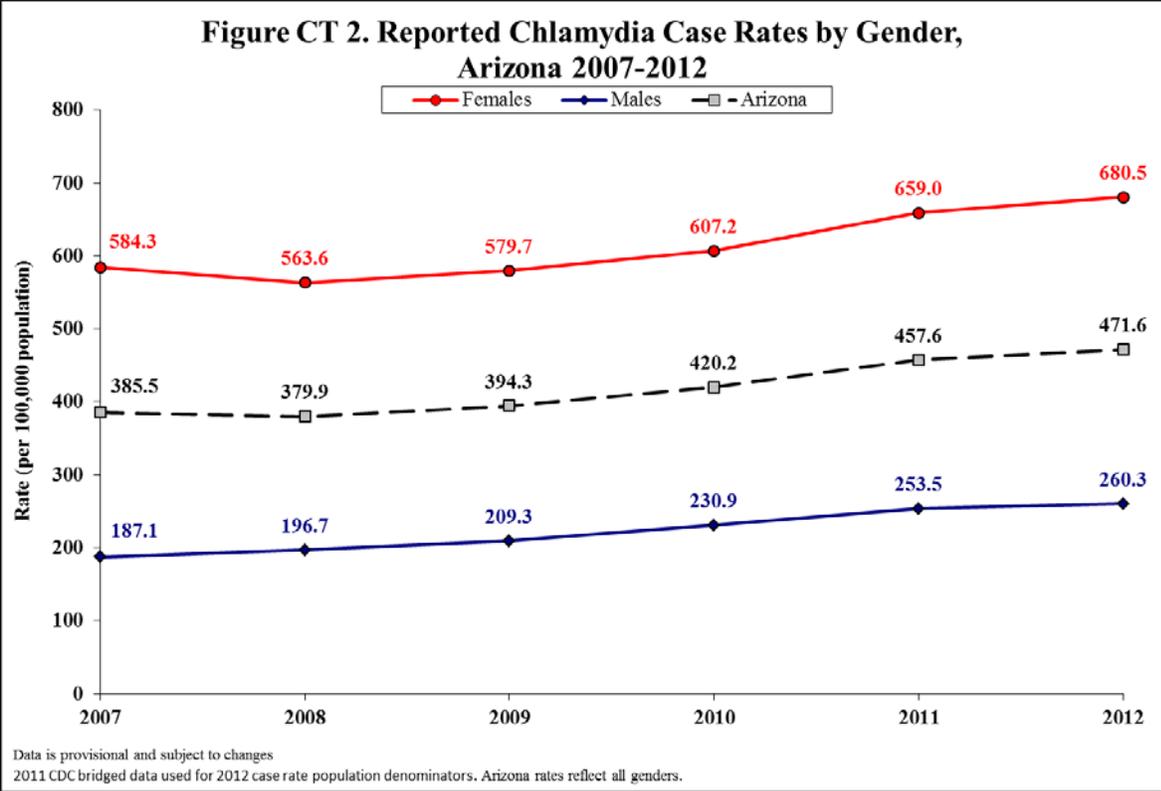
² www.cdc.gov/std/chlamydia

Figure CT 1. Reported Chlamydia Cases and Case Rates, Arizona 2007-2012



Data is provisional and subject to change.
 *2011 CDC bridged data used for 2012 case rate population denominators.

Over the past few years, Arizona chlamydia case rates have remained approximately three times higher in females than in males (Figure CT 2). This disparity mirrors the nationwide trend between chlamydia rates among men and women. The chlamydia rate for women in 2012 increased 3.3% from 659.0 to 680.5; the rate for men increased only 2.7% from 253.5 to 260.3. There are a few reasons that may explain this discrepancy of rate between males and females. Females are more likely to receive asymptomatic screening and generally have better access to healthcare. Males are less likely to seek asymptomatic screening and may be treated without testing if identified as a partner to a female case. ADHS recommends implementation of the national screening guidelines for chlamydia for women under age 26. Currently, there are no national screening guidelines in place to screen males for chlamydia.

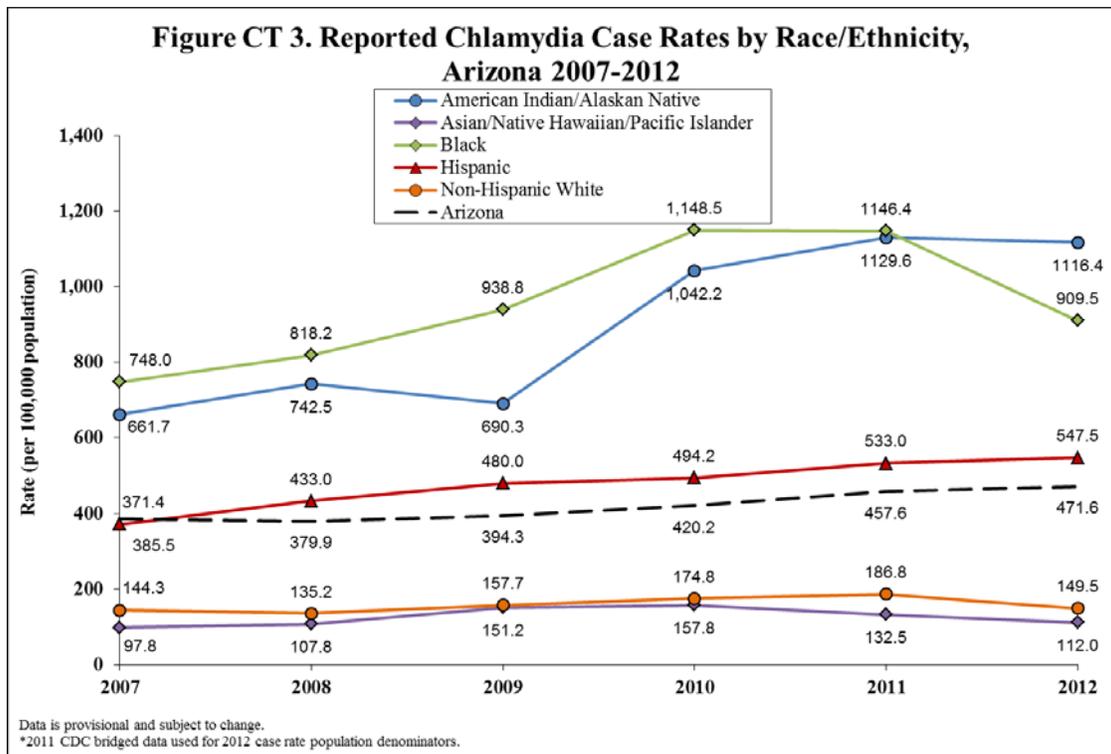


Similar to nationwide trends, young female adolescents and women in Arizona are disproportionately affected by chlamydia. Closer examination of 2012 chlamydia rates among young people ages 15-24 reveal extremely high values, nearly 5 times the rate of the state as a whole (Table CT1). In 2012, individuals under 25 years comprise nearly 67% of all chlamydia cases in Arizona. Among 15-19 year olds, the chlamydia case rate was 1,912.8 cases per 100,000 population. The case rate among 20-24 year olds is the highest rate among any demographic group for chlamydia, at 2,526.2 cases per 100,000 population.

Table CT 1. Reported Chlamydia Cases and Case Rate per 100,000 Population by Age Group, Arizona 2010-2012

	2012		2011		2010	
Age group	N	Rate	N	Rate	N	Rate
0-4	14	3.1	17	3.7	34	7.5
5-9	1	0.2	1	0.2	4	0.9
10-14	224	49.4	241	53.7	255	56.8
15-19	8,621	1,912.8	8,857	1,918.8	8,304	1,799.0
20-24	11,706	2,526.2	11,032	2,492.6	9,930	2,243.6
25-29	5,090	1,147.2	4,726	1,074.1	4,430	1,006.8
30-34	2,348	549.8	2,220	532.8	1,997	479.2
35-39	1,248	307.2	1,085	261.0	984	236.7
40-44	652	157.0	515	126.6	467	114.8
45-54	524	62.2	437	51.6	350	41.4
55-64	111	14.7	92	12.5	83	11.3
65+	32	3.5	28	3.2	23	2.6
Total	30,571	471.6	29,251	457.6	26,861	407.2
Percent under 2	29%		31%		32%	-
Percent under 2	67%		69%		69%	-

There is a clear health disparity when looking at chlamydia rates in Arizona by race/ethnicity. For more than 10 years the Black and American Indian/Alaska Native (AI/AN) populations have maintained disproportionately higher rates of chlamydia than all other races. From 2007-2011, the Black population has maintained the highest rates of chlamydia. However, in 2012, the Black population showed a significant decrease in cases by 7.5% from 2,741 to 2,535. Conversely, the Black population showed a significant growth in population of 16.6% between 2010 and 2011. This could explain the decrease in case rates from 2011 to 2012. This decrease in rate of chlamydia among the Black population left the AI/AN population with the highest reported rate of chlamydia among all races in Arizona at 1,116.4 per 100,000 in 2012. This rate is 1.2 times greater than the Black population rate, and 7.5 times greater than the Non-Hispanic White Population rate. Although the cases counts increased for AI/AN 2011-2012 by 4.2%, the rate decreased from 1,129.6 to 1,116.4. This may be attributed to the slight 2.9% increase in population from 2010-2011.



B. Gonorrhea

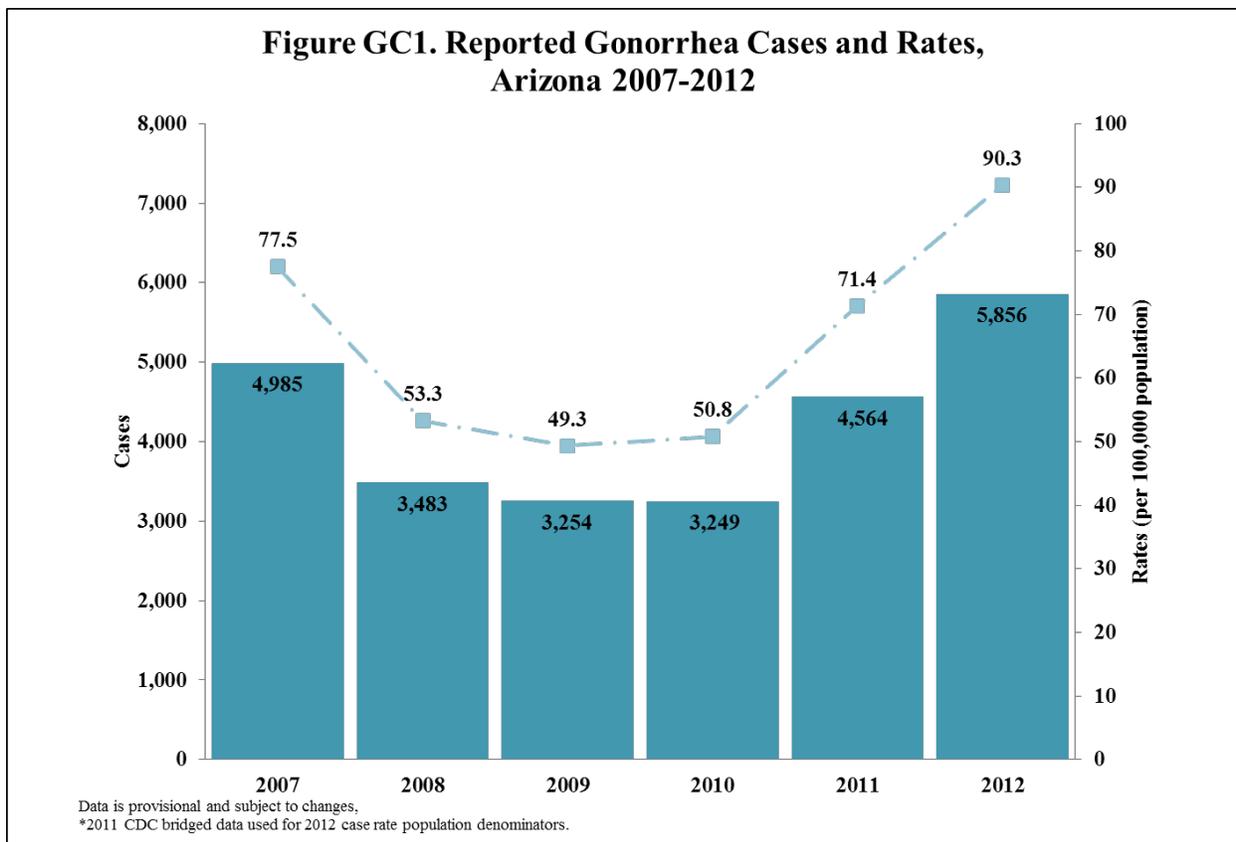
Gonorrhea is the second most frequently reported bacterial STD in the United States. In 2012, 334,826 cases of gonorrhea were reported to CDC. CDC estimates that more than 820,000 persons are infected with gonorrhea infections but less than half are detected and reported. In the United States, the highest reported rates of infection are among sexually active young adults between 15-29 years of age. Symptoms for men and women may include painful urination and/or an abnormal discharge within 1 to 14 days of exposure, while some infected persons may have no symptoms at all. For women, symptoms may be mild or mistaken for bladder or vaginal infections and may lead to PID. A pregnant woman may pass the infection to her baby through delivery, causing blindness, joint infection or blood infection. Untreated gonorrhea may affect fertility in both males and females, increase the risk of HIV infection and transmission, spread through the blood to joints causing other serious health problems and even death. The CDC recommends that any sexually active person with symptoms test immediately. Any sexually active person is at risk for acquiring gonorrhea and should discuss their risks with a health care provider who can recommend testing.³

Reported cases of gonorrhea have steadily increased over the last three years in Arizona. While the state experienced a downward trend in reported infections and infection rates between 2006 and 2010, there was a 40% increase in both case count and rate from 2010 to 2011. In 2012, there were 5,856 reported cases of gonorrhea, surpassing the 2011 case count by 1,292 infections (a 28.3% increase, n=4,654), and the 2010 case count by 2,607

³ www.cdc.gov/std/gonorrhea

infections (a 80.2% increase, n=3,249) (Figure GC1). Despite state-wide population growth, the case rate of gonorrhea in Arizona increased to 90.3 per 100,000 population for 2012, an increase of 26.5% from 2011

The increases in reported gonorrhea infections have prompted several responses from the Centers for Disease Control and Prevention (CDC), as well as the ADHS STDCP. An outbreak surveillance system based on the Historical Limits Method has been implemented to keep close vigilance on counties as well as selected sentinel sites throughout the state. A program monitoring provider adherence to current treatment guidelines is being developed. The STDCP team is also working to identify potential cases of drug resistance among identified cases testing positive for gonorrhea twice within 30 to 60 days of initial treatment.



The age distribution of reported infections in Arizona closely follows national patterns, with the highest number of infections occurring among 20-24 year olds, while 15-29 year olds, in general, consistently share the highest counts and rates each year (Figure GC2). Between 2011 and 2012, all age groups experienced an increase in reported infections, except children and young adolescents aged 0-14, and persons aged 60 and above. While adolescents aged 15-29 continue to represent the majority of reported infections (72.6%), the largest rate increases were seen among adults aged 30-34 and 35-39 (representing 43.7% and 47.7% increases from 2011-2012, respectively) (Table GC1).

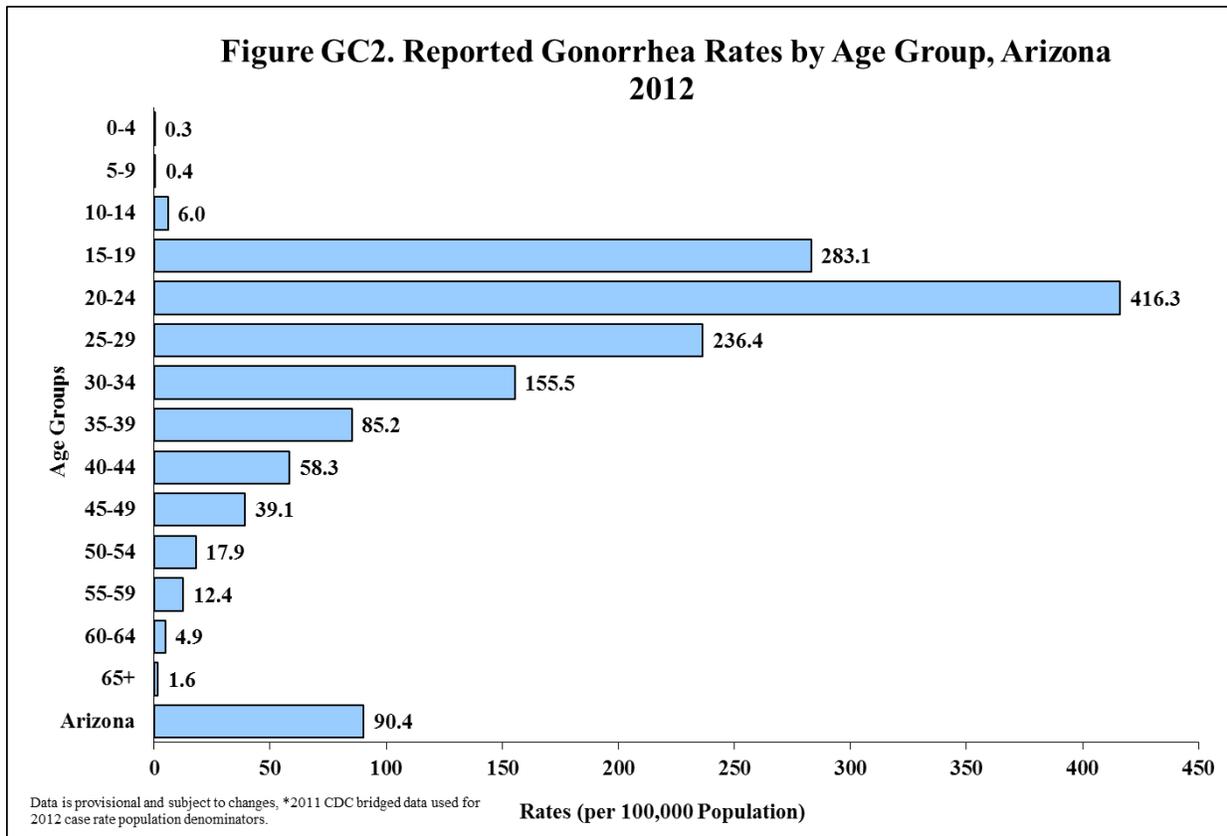
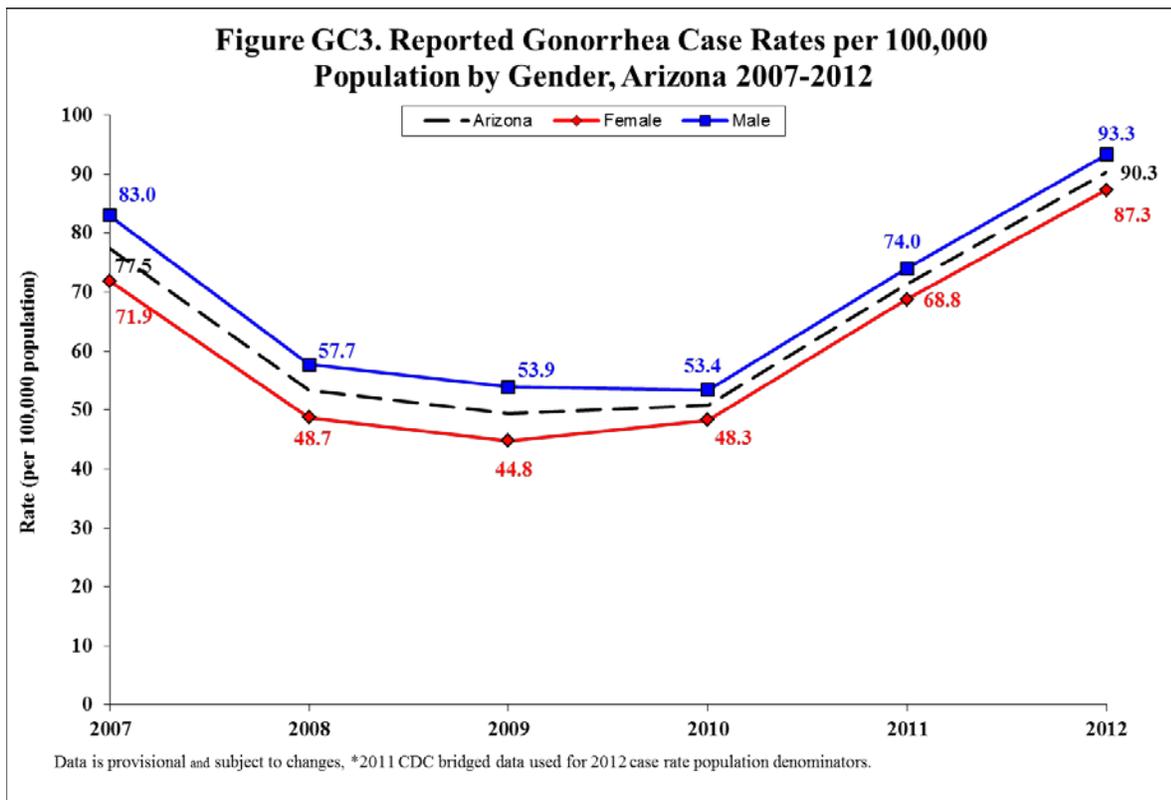


Table GC1. Reported Gonorrhea Cases and Case Rates per 100,000 by Age Group, Arizona 2010-2012

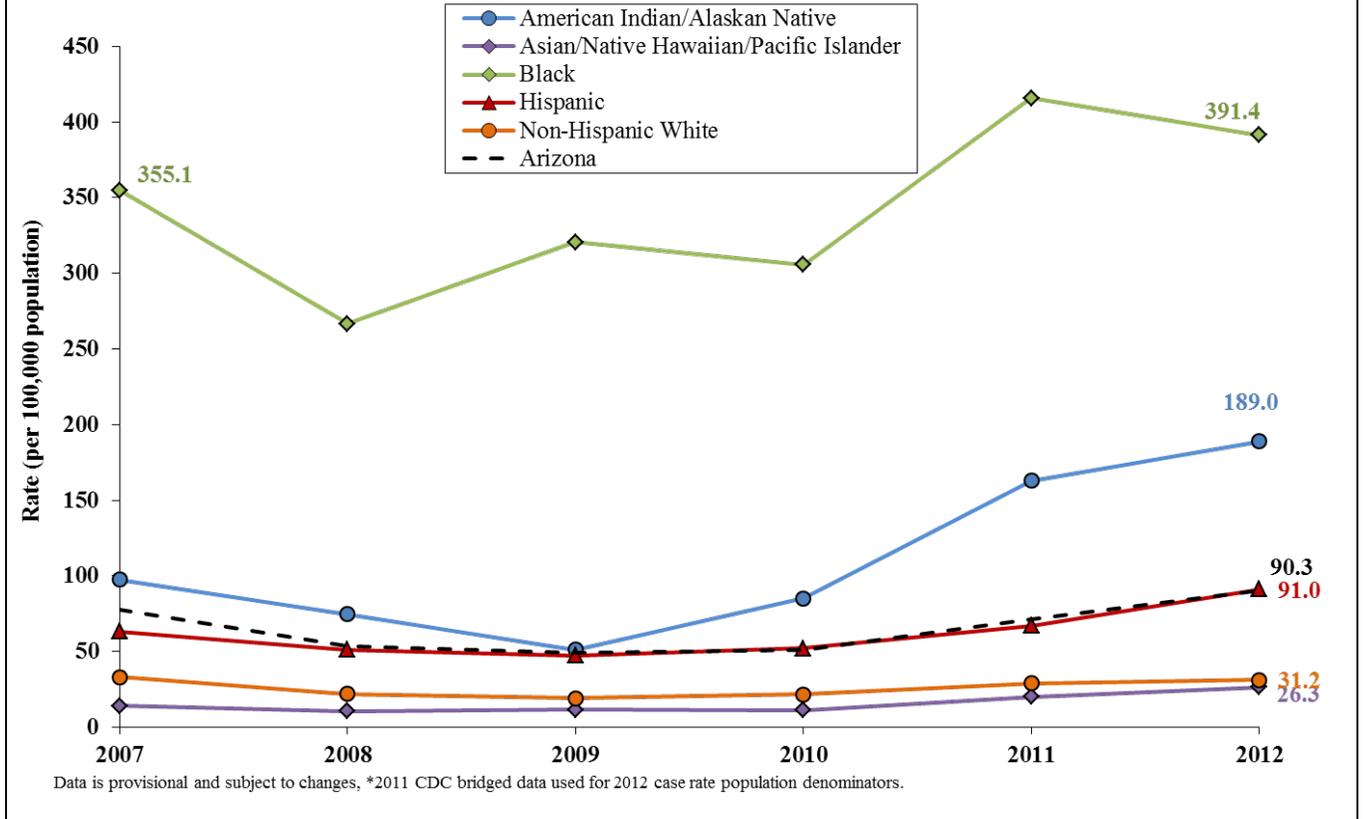
Age Group	2012		2011		2010	
	Number	Rate	Number	Rate	Number	Rate
0 - 4	1	0.3	1	0.2	4	0.9
5—9	2	0.4	2	0.4	1	0.2
10—14	27	6	33	7.4	26	5.8
15 - 19	1272	283.1	1088	235.7	789	170.9
20 - 24	1925	416.3	1550	350.2	1085	245.2
25 - 29	1057	236.4	756	171.8	575	130.7
30 - 34	661	155.5	451	108.2	317	76.1
35 - 39	349	85.2	240	57.7	185	44.5
40 - 44	245	58.3	203	49.9	125	30.7
45 - 49	160	39.1	137	32.1	71	16.6
50 - 54	76	17.9	61	14.7	52	12.5
55 - 59	48	12.4	38	10.1	14	3.7
60 - 64	18	4.9	11	3.1	6	1.7
65 and older	15	1.6	13	1.5	5	0.6
Total	5856	90.4	4584	71.7	3255	50.9
Percentage 15 - 29	72.64%		74.80%	-	76.20%	-
Percentage 30 - 49	24.16%		25.20%	-	23.80%	-

Nationally, males tend to report gonococcal infections more than females, as they are more likely to experience symptoms. In 2012 in Arizona, males represent 51.4% of all reported cases. While the rate difference by gender has been as high as 15% in the last six years, the increase in gonorrhea over the last three years has affected both men and women in a more equivalent fashion. The difference in reported infection rates between males and females has stabilized since 2009, with roughly equivalent percent increases in the number of reported cases among both sexes (~ 28%), as well as in reported case rate (~ 26%) in 2011 and 2012 (Figure GC3). These trends indicate that recent increases in gonorrhea morbidity may not be gender specific in Arizona.



The racial distribution of reported gonorrhea infections highlights the magnitude of sexual health disparities experienced by racial/ethnic minorities across the state of Arizona. Overall, the state saw a 26.5% increase in reported gonorrhea case rate, while the range of rate increases varied by racial/ethnic group (Figure GC4). For instance, the infection rate for Blacks decreased by 6% from 2011-2012, whereas the rate increased by 36% for Hispanics and 32% for Asians in the same time period. The highest rate increases were seen among Hispanics and Asians despite the fact that the highest overall rates were among Blacks and Native Americans. While the proportion of total reported cases that were Hispanic varied from 26 to 30% over the last four years, the percent increase in case count among Hispanics grew from 14% (2009 to 2010) to 40% (2011 to 2012), indicating that Hispanics bear a significant caseload despite having a lower case rate than other racial/ethnic groups. Asians have experienced similar dramatic increases in case count, with a 78% increase from 2010 to 2011, and a 59% increase from 2011 to 2012, although it is important to note that Asians have consistently constituted less than one percent of reported cases over the last four years. The number of cases with no reported race/ethnicity has also steadily grown from 439 in 2010 to 1,245 in 2012 (constituting 21.3% of cases), although the peak occurred in 2006 with 1,314 unknown racial/ethnic cases making up 21.9% of total cases. These cases continue to challenge attempts to identify trends in disease increase along racial/ethnic lines.

Figure GC4. Reported Gonorrhea Case Rates by Race/Ethnicity, Arizona 2007-2012



Further examination of the aforementioned demographic factors highlights disparities among certain groups of Arizonans. As previously stated, gonorrhea affects males at a marginally higher rate than females in Arizona. However, when comparing the number and rate of infections among males and females aged 15-29, the gender trend is not as straightforward. In 2012, females aged 15-19 experienced 1.76 times the number of gonococcal infections that males did (n=812 vs. n=461), with population rates at 372.11 per 100,000 versus 198.28 per 100,000, respectively. Overall, in the high morbidity age range of 15-29 (representing 72.6% of total cases), females make up 54.2% of the 4253 reported cases.

Also, the intersection of gender, race and age greater demonstrates factors driving the decreasing gender gaps in reported gonococcal infections in Arizona. Among racial ethnic groups, American Indian women exhibited the highest gender specific ratio of infections in the high morbidity age range of 15-24. In 2012, there were 2.93 reported gonorrhea infections among American Indian women for every reported infection among American Indian men for 15-19 year olds. The ratios were 1.69 and 1.81 reported female infections for each male infection reported in the 20-24 and 25-29 age groups, respectively, among American Indians. While men constituted 51.4% of all Arizona cases, among Native

Americans, women made up 64.1% of cases. Aside from Hispanic women whom made up 51% of cases in their racial/ethnic group, no other groups experienced higher overall morbidity among women than among men.

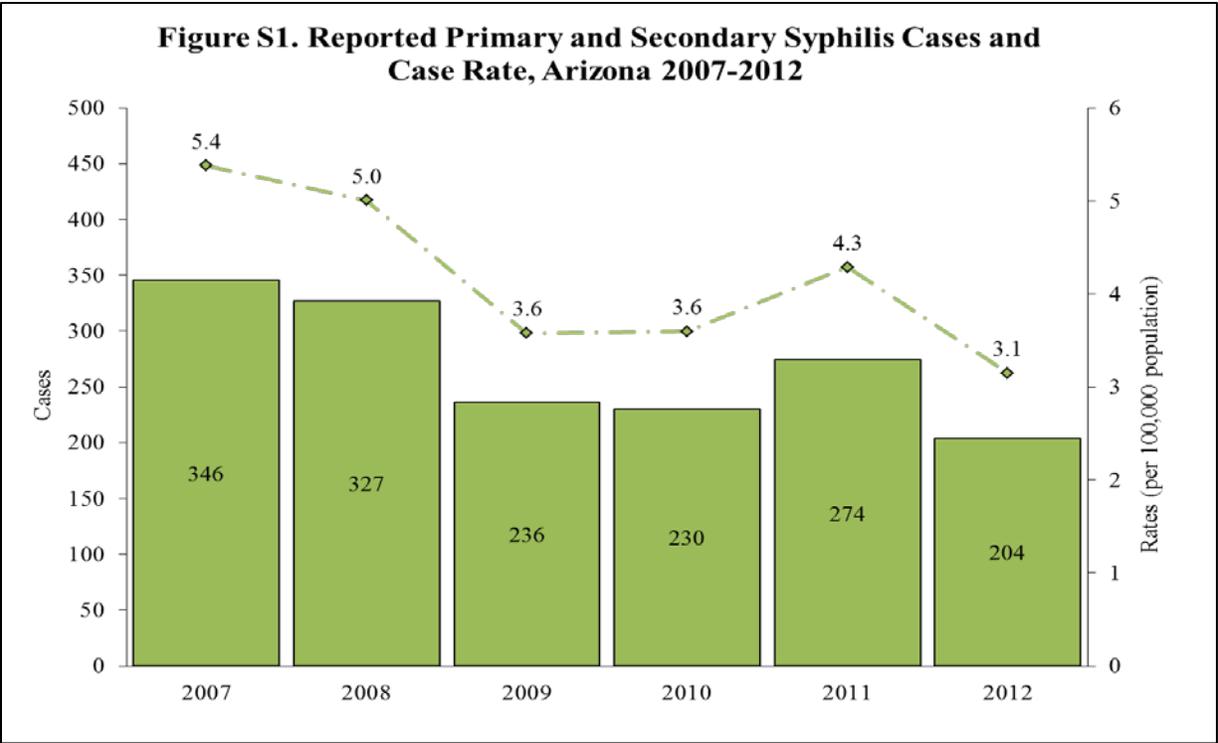
C. Primary and Secondary Syphilis

Syphilis is an STD caused by bacteria which, if left untreated, may result in long-term complications and even death. CDC estimates that 55,400 persons in the United States are infected annually. In 2012, 49,903 cases of syphilis were reported to CDC. 15,667 cases were primary and secondary (P&S) syphilis, the earliest and most infectious stages of syphilis. There were also 322 congenital syphilis cases reported to CDC in 2011.⁴

Symptoms of primary syphilis are characterized by lesions (a sore, an ulcer or chancre) at the site of infection. If left untreated, this sore will be followed by secondary stage symptoms (rashes, mucous membrane lesions, alopecia). Syphilis is often known as the great imitator as the rashes may appear similar to other skin infections including allergic reactions and chicken pox. Failure to treat after the secondary stage of syphilis can lead to late manifestations including blindness, dementia, damage to internal organs and may result in death. A pregnant woman can pass the infection to her unborn baby. The complications of congenital syphilis can include low birth weight, premature delivery and still birth. CDC recommends that all persons with symptoms be examined and all pregnant women be routinely tested. The CDC recommends testing for any sexually active person with symptoms. Any sexually active person at risk for acquiring syphilis should discuss their risks with a health care provider who can determine if testing is recommended.

In 2012, the number of reported primary and secondary (P&S) syphilis cases reached a seven year low at 204 (Figure S1). The decrease in reported cases resulted in a 28% decrease in the statewide P&S syphilis rate; 4.3 cases per 100,000 population in 2011 down to 3.1 in 2012. Since 2007, the number of reported P&S syphilis cases has decreased from 346 to 204 in 2012. This represents a percent decrease of 41% over this time frame.

⁴ www.cdc.gov/std/syphilis



Maricopa County and Pima County, the two most populous of Arizona’s 15 counties, accounted for approximately 95% of all P&S syphilis cases reported in Arizona in 2012. Maricopa County recorded 208 cases of P&S syphilis in 2011 and 162 in 2012. As a result of this decrease, the P&S syphilis rate in Maricopa County decreased by 22% (5.4 cases per 100,000 population in 2011 and 4.2 in 2012). Pima County recorded 45 cases of P&S syphilis in 2011 and 31 in 2012. This decrease marked the 5th consecutive year-to-year decrease in both reported cases and case rate for Pima County beginning from 2007 (Figure S2).

Outside of Maricopa and Pima County, the number of reported P&S syphilis cases dropped from 21 in 2011 to 11 in 2012. The largest decrease was seen in Yuma County where 9 cases were reported in 2011 and 2 cases were reported in 2012.

Figure S2. Reported Primary and Secondary Syphilis Case Rates by County of Residence, Arizona 2007-2012

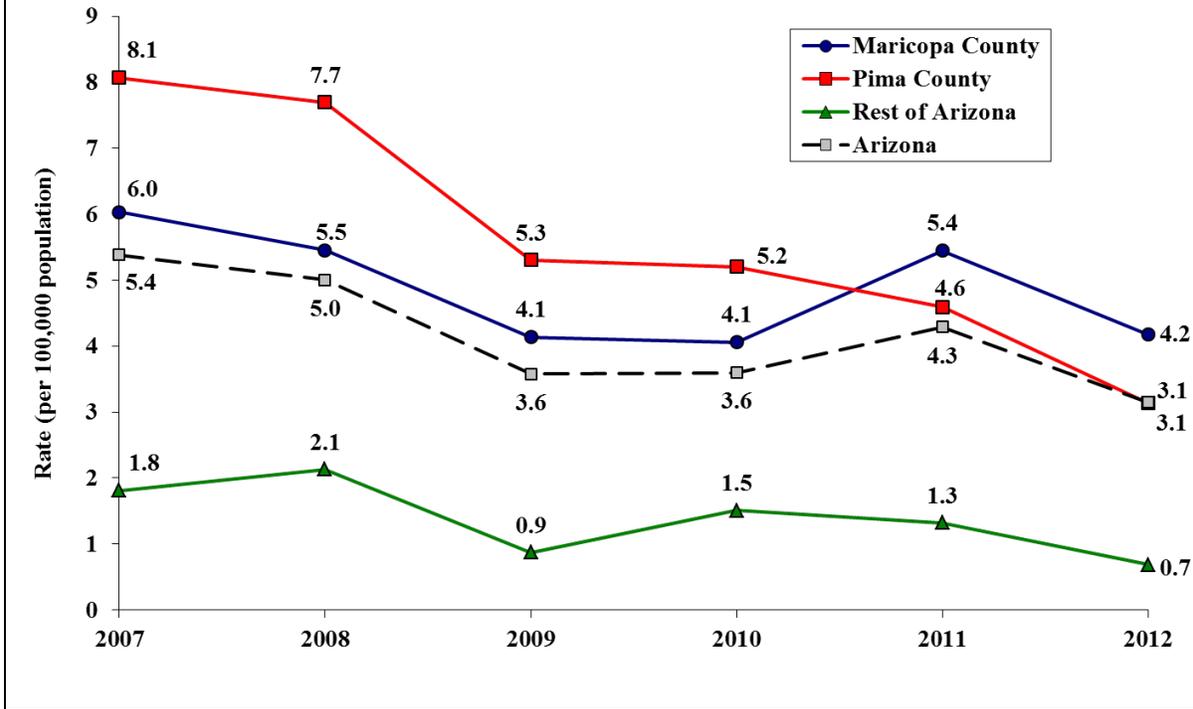
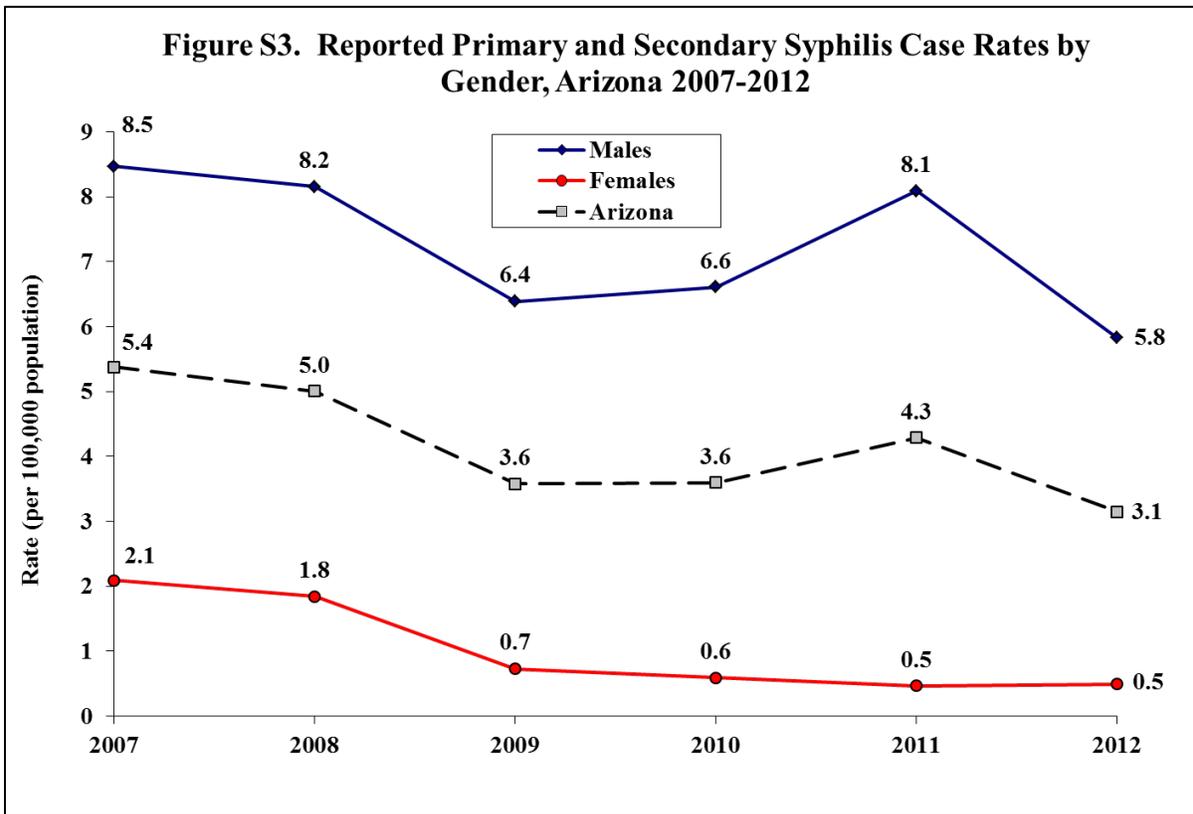


Figure S3. Reported Primary and Secondary Syphilis Case Rates by Gender, Arizona 2007-2012



The large decrease in P&S syphilis cases was seen entirely among males. 257 cases were reported among males in 2011 while 188 were reported in 2012. These numbers correspond to a case rate of 8.1 cases of P&S syphilis per 100,000 in 2011 and 5.8 in 2012 (Figure S3). Among females however, 15 P&S syphilis cases were reported in 2011 and 16 were reported in 2012. The small change in reported cases among women did not lead to a year-to-year difference in the case rate (Figure S3).

Despite the large decrease in cases among males, the rate of P&S syphilis was 11.6 times higher among males compared to females. Since 2010, this P&S syphilis rate disparity between men and women in Arizona has been greater than 10 fold. As the majority of P&S syphilis cases continue to be diagnosed among men who have sex with men, this disparity is likely to persist.

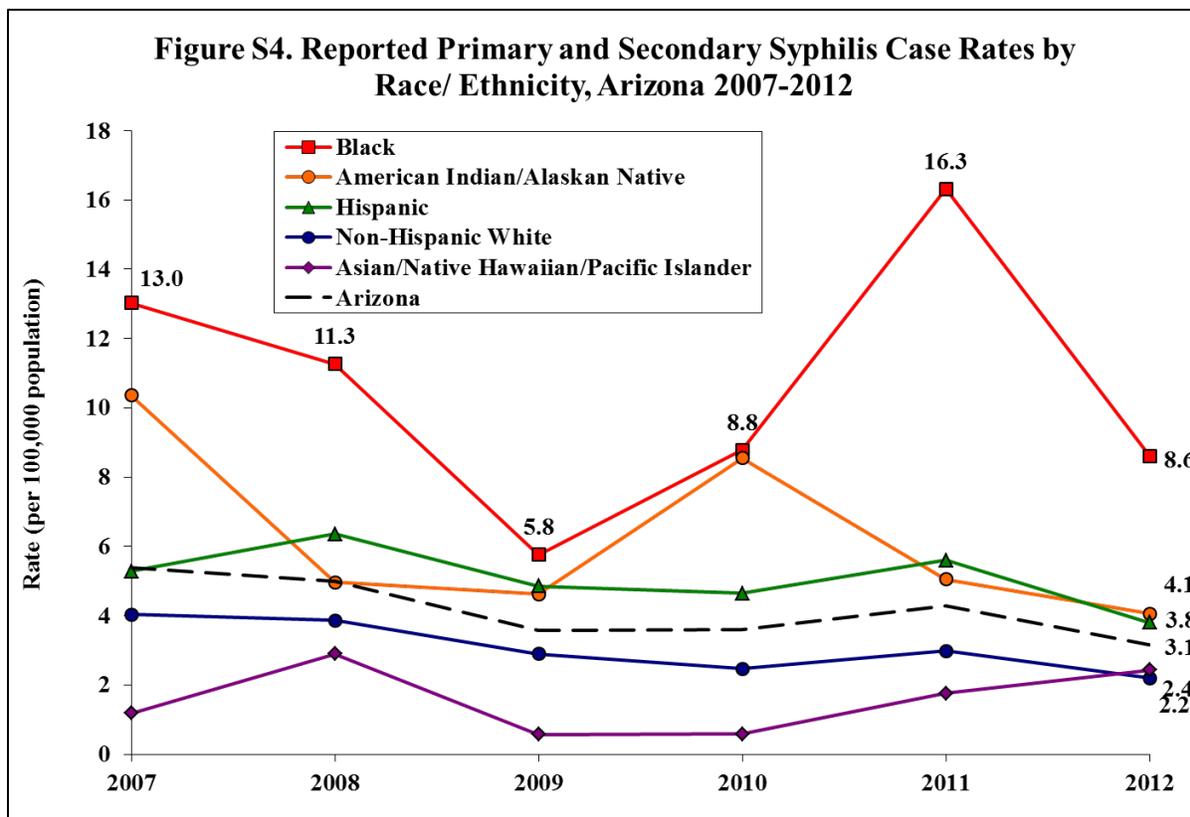
Table S1. Reported Primary and Secondary Cases and Case Rate per 100,000 Population by Age Group, Arizona 2009 - 2012

Age group	2012		2011		2010		2009	
	n	Rate	n	Rate	n	Rate	n	Rate
10-14	0	0.0	0	0.0	0	0.0	0	0.0
15-19	15	3.3	17	3.7	16	3.5	12	2.6
20-24	48	10.4	63	14.0	40	9.3	35	7.7
25-29	26	5.9	55	11.8	39	8.6	44	8.8
30-34	33	7.7	34	8.2	28	6.7	28	6.1
35-39	16	3.9	30	6.5	29	7.0	24	5.3
40-44	16	3.9	31	6.9	24	5.9	40	8.8
45-49	28	6.7	20	4.7	25	5.9	20	4.4
50-54	11	2.6	12	2.6	14	3.4	12	3.0
55-59	8	2.1	3	1.1	9	2.4	9	2.4
59-64	2	0.5	4	0.9	3	0.9	5	1.7
65+	1	0.1	5	0.5	3	0.3	2	0.2
Total	204	3.1	274	4.1	230	3.6	231	3.5
Percent under 30	44%	-	49%	-	41%	-	40%	-
Percent Under 40	68%	-	73%	-	66%	-	61%	-

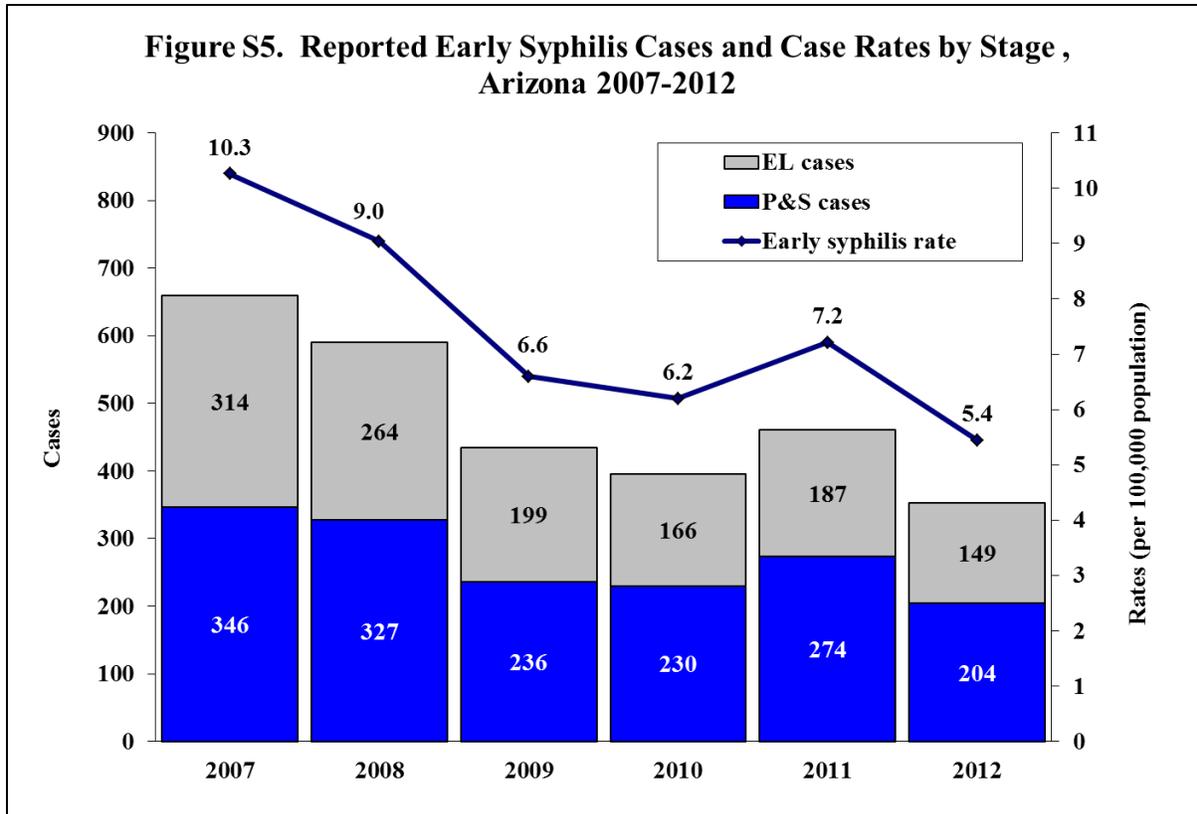
Overall, every age group below 30 years of age experienced a decrease in reported P&S cases in 2012 compared to 2011 (Table S1). Also, individuals less than 30 years of age accounted for approximately 44% of all P&S syphilis cases reported in 2012 compared to 49% in 2011. Previously, those under 30 accounted for 49%, 41% and 40% in 2011, 2010, and 2009, respectively. Since 2010, the age group 20-24 has accounted for both the highest

number of reported P&S syphilis cases as well as the highest P&S syphilis rate among the age groups displayed.

Historically, the highest rates of P&S syphilis in Arizona have been observed among Blacks. Even though this trend continued in 2012, Blacks in Arizona experienced the greatest percent decrease in the rate of P&S syphilis for the years 2011-2012. In 2012 Blacks experienced a case rate of 8.6 cases per 100,000 population compared to 16.3 in 2011 resulting in a 47 percent decrease in the case rate (Figure S4). Among the other age groups, American Indians, Non-Hispanic Whites and Hispanics all experienced small decreases in the rate of P&S syphilis. Only Asians experienced an increase in rate as the number of cases increased from 3 in 2011 to 5 in 2012, while the population remained similar.



The rate of early syphilis (primary, secondary, and early latent) cases in the state of Arizona closely follows the pattern seen for P&S syphilis from 2007 through 2012. This can be seen by comparing Figures S1 and S5 in this section of the report. As of 2007, the rate of early syphilis in Arizona has dropped from 10.3 early syphilis cases per 100,000 population down to 5.4 in 2012 (Figure S5). This represents a 47.5 percent drop in the rate of early syphilis from 2007 through 2012.



Once again, MSM make up a large percentage of reported P&S syphilis cases in Arizona. Since 2009, MSM have accounted for over 75% of the combined male cases reported from Maricopa and Pima County (Figure S6).

Since 2007, at least 65% of male P&S syphilis cases reported from Maricopa County self-reported as MSM. In 2012, 150 cases of P&S syphilis were reported among men in Maricopa County. Of these, 107 (71%) self-reported as MSM (Figure S7).

In Pima County this trend began more recently. In the three years prior to 2010, the percentage of male P&S syphilis cases that self-reported as MSM never exceeded 35% in Pima County. It wasn't until 2010 that MSM accounted for over 65% of reported male cases. Most recently, 93% of reported cases of P&S syphilis among males in Pima County self-reported as MSM (29 male cases, 27 self-reported MSM) (Figure S8).

Figure S6. Reported Primary and Secondary Syphilis Case among All Males and the Percentage of Male Cases that Self-Identify as Men who Have Sex with Men (MSM), Maricopa and Pima Counties, 2007-2012

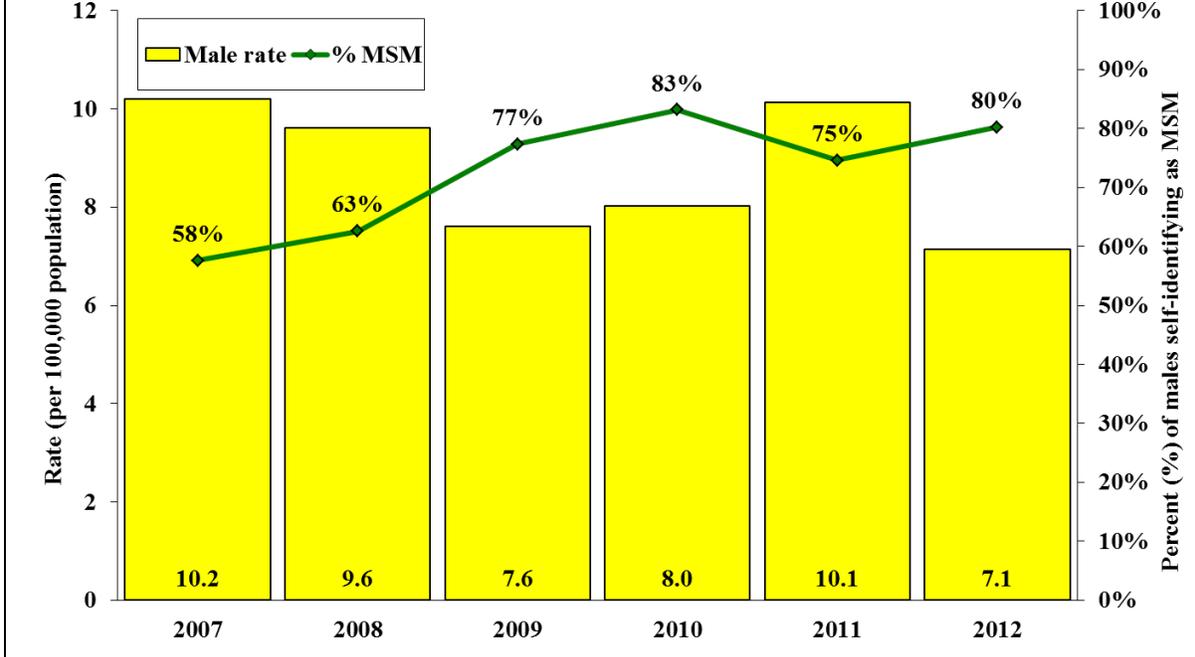


Figure S7. Reported Primary and Secondary Syphilis Cases by Gender and Sexual Preference, Maricopa County 2007-2012

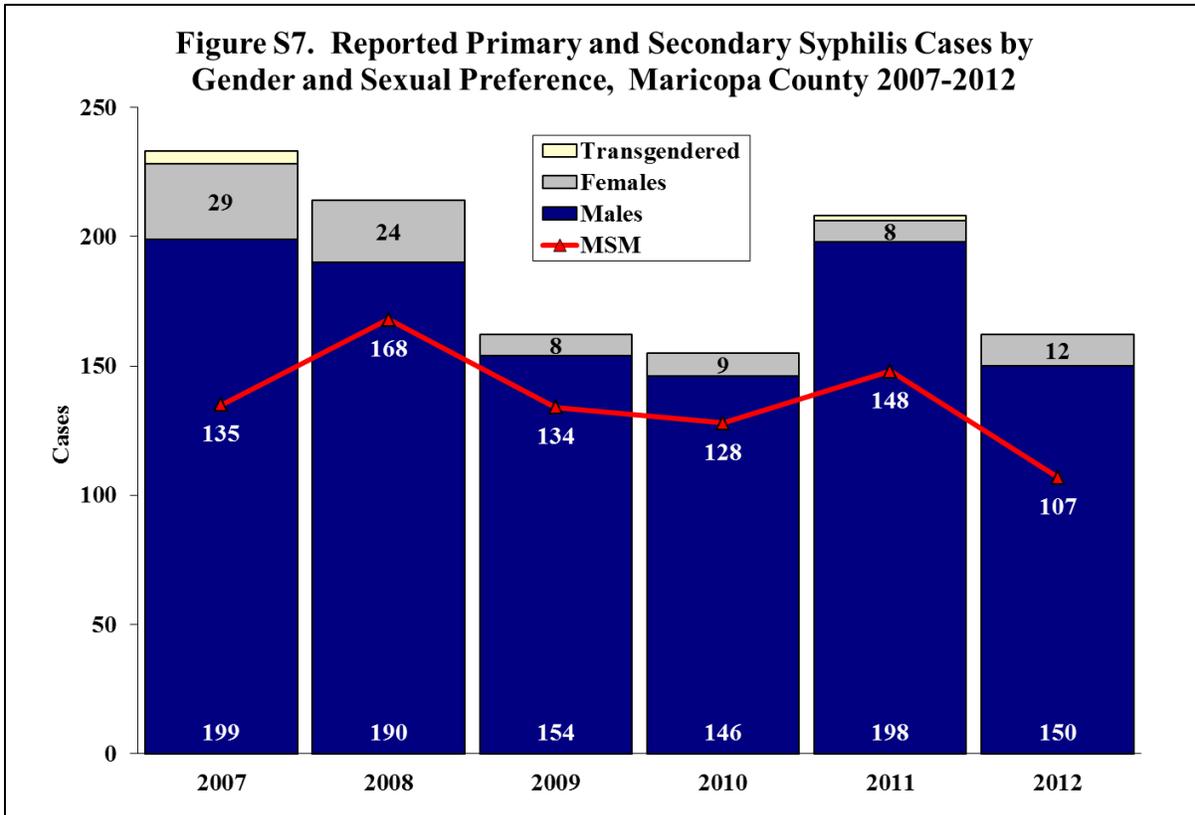
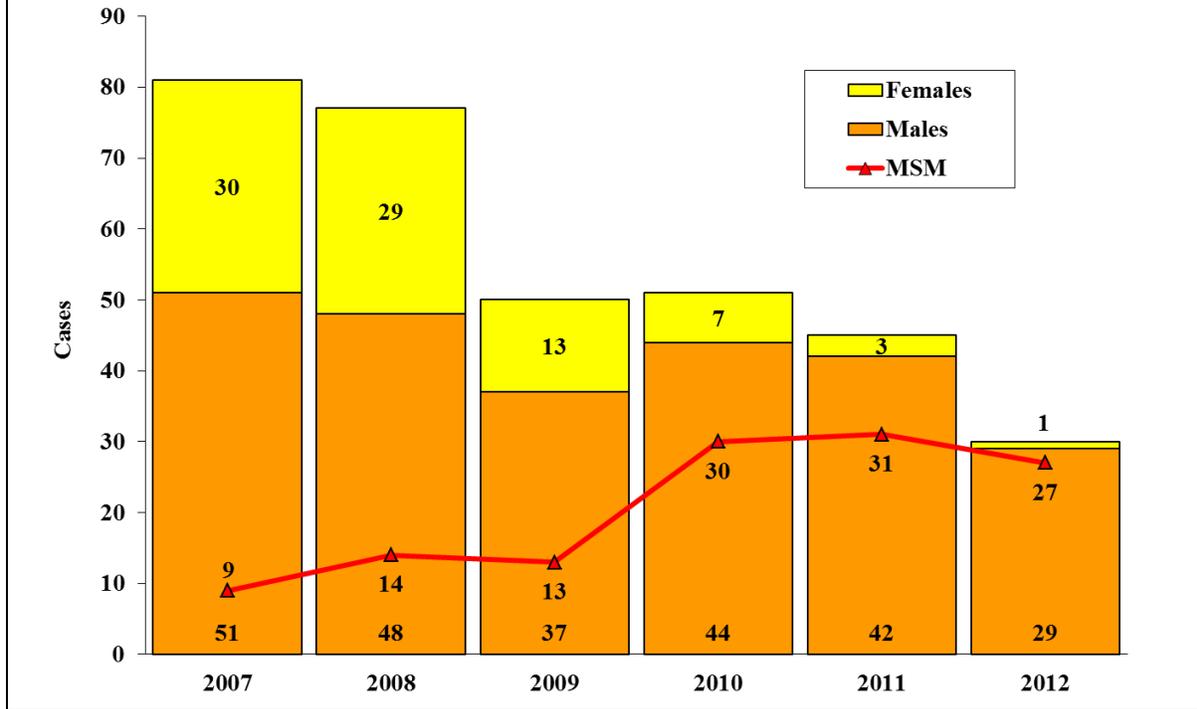


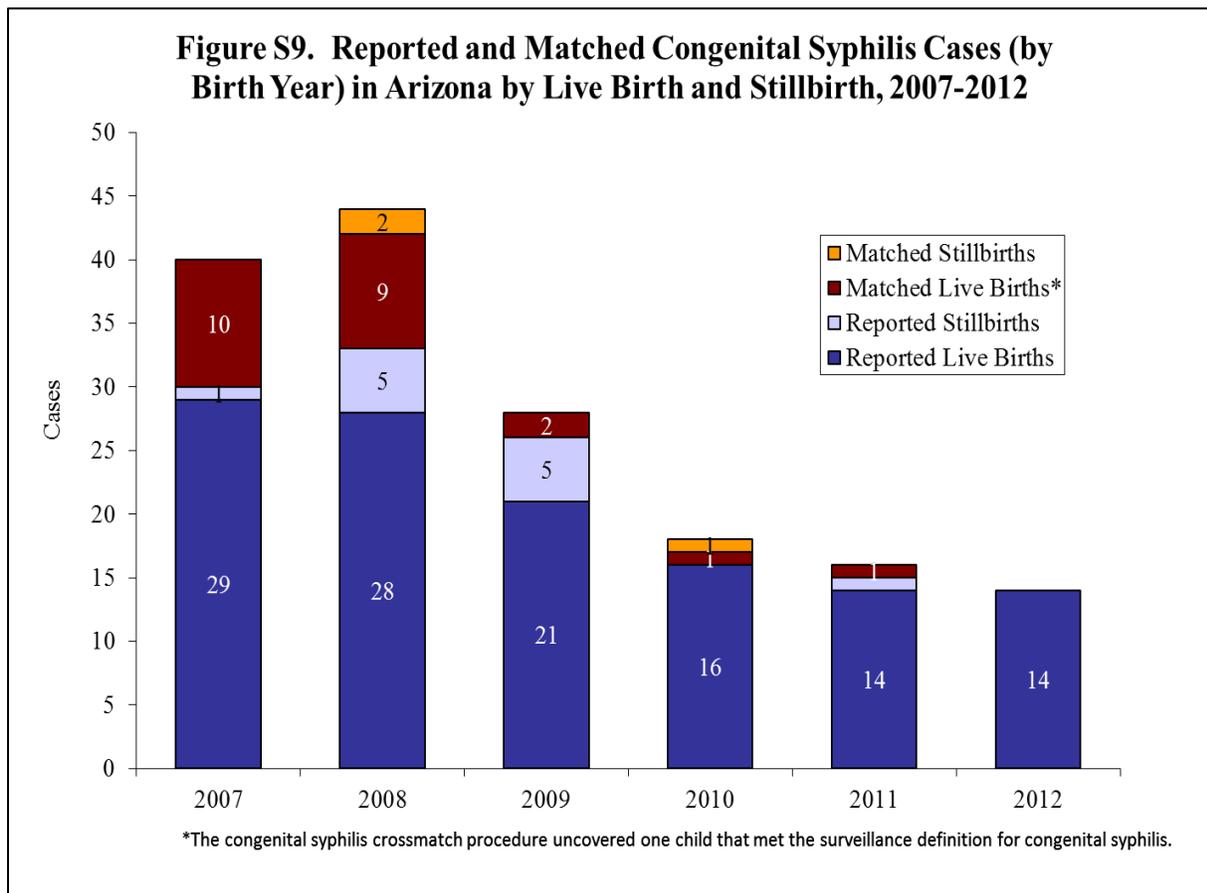
Figure S8. Reported Primary and Secondary Syphilis Cases by Gender and Sexual Preference, Pima County 2007-2012



E. Congenital Syphilis

Congenital syphilis cases occur when a pregnant woman with syphilis passes the infection on to her infant. This can result in stillbirth, death of the newborn, or significant future health and developmental problems. Congenital syphilis can be prevented by early detection of maternal infection and treatment at least 30 days before delivery.⁵

Fourteen cases of congenital syphilis and zero cases of syphilitic stillbirth were reported in 2012 (Figure S9). This marks the first time in 3 years that the combined number of reported congenital syphilis and syphilitic stillbirths did not decrease statewide. Concurrently, 2012 was the first time since 2008 that the reported number of P&S syphilis cases among women in Arizona did not decrease. Despite this occurrence, the combined number of reported congenital syphilis cases and syphilitic stillbirths has decreased by approximately 57% since 2008.



⁵ Centers for Disease Control website, Sexually Transmitted Disease, Fact Sheets, January 2014. www.cdc.gov/std/syphilis

III. Community Collaborations

The major role of the ADHS STDCP is to monitor disease trends throughout the state and to identify common risk factors and disparities among the affected populations. Through this surveillance, outbreaks can be detected early and guidance can be offered to local health departments or Tribes affected. To address identified risk-factors and disparities, the STDCP collaborates with many partners to achieve its mission **to improve the sexual health of all Arizonans by strengthening the prevention and control of Sexually Transmitted Disease in Arizona through education, surveillance, collaboration, and program development.** STDs affect people of all ages, races, ethnicities, educational levels, and economic status. However, in 2012, young adults ages 15-29 and men who have sex with men bore a disproportionate burden of STDs in Arizona.

The STDCP provides case surveillance, assistance in case investigations and partner services, clinical guidance and medical training, prevention training, technical and capacity building assistance, and program updates to all 15 county health departments, IHS, and tribal health departments. Upon request, the STDCP will help to provide direct partner services to counties, Tribes and Arizona IHS sites. To assist in prevention efforts among our targeted population of adolescents and MSM in the Hispanic, African American and Native American communities, the STDCP leverages its resources and collaborates internally with other Arizona Department of Health Services programs serving the same communities, such as the HIV Program; the Office of Women's and Children's Health; the Office of Health Disparities; the Department of Behavioral Health; the Tribal Liaison, and the State Public Health Laboratory. Other state and local agencies that the STDCP partners with on prevention efforts include the Arizona Department of Education, the Arizona Department of Corrections, the Arizona Department of Youth Corrections, and the Maricopa County Correctional Health Services. The STDCP also collaborates with community-based organizations such as the Arizona Family Health Partnership (AFHP) to address issues related to the Infertility Prevention Project and the sexual health of adolescents and young adults and TERROS, to target MSM for testing, education and screening activities.