

Sexually Transmitted Diseases Among Arizona Youth

Arizona Department of Health Services

STD CONTROL PROGRAM

2013 Annual Report



Division of Public Health Services

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DOUGLAS G. DUCEY, GOVERNOR
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January 20, 2015

Dear Arizonans:

The Arizona Department of Health Services (ADHS), Sexually Transmitted Disease Control Program (STDCP) is pleased to provide the Sexually Transmitted Disease Among Youth - 2013 Report. This report highlights the impact of sexually transmitted diseases (STDs) among the youth 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 number of STDs affecting our state. It is noteworthy that the data for 2013 show a decrease in overall STD rates. All 2013 data are from the ADHS STDCP Surveillance system.

STDs affect people of all ages, races, ethnicities, educational levels, and economic status. However, in 2013, young adults ages 15-29 bore a disproportionate burden of STDs in Arizona. The ADHS STDCP 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 STDCP, our goal is to disseminate useful and pertinent data to the Arizona public and community leaders to promote dialogue about disease prevention, to promote medical treatment and services, and to 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

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Mission Statement

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.

Program

The Sexually Transmitted Disease Control Program (STDCP) has been a part of Arizona Department of Health Services (ADHS) 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.

Staff

The STDCP Central Office is located in downtown Phoenix with field staff located in Maricopa and Pima Counties and is staffed by:

Roxanne Ereth, MPH, BS, STDCP Manager
Anita Betancourt, BS, Chlamydia Surveillance Epidemiologist
Jose Mireles, MPH, Syphilis Surveillance Epidemiologist
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Linda Ripley, Data Entry Specialist
Olivia Kitcheyen, ELR Data Entry Specialist

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, CDC Medical Epidemiologist
Kerry Kenney, BA, CDC Senior Public Health Advisor
Katherine Browne, BA, CDC Public Health Advisor
Geri Toyekoyah, MPH, BA, CDC Public Health Advisor

Purpose

This report highlights the impact of sexually transmitted diseases (STDs) among the youth of Arizona. The information depicted in the narrative, graphs, and tables herein include the most commonly reported STDs affecting our state and the youth of Arizona during 2013. Data are compiled from the ADHS STD Surveillance system, 2013 CDC Surveillance Report and the CDC website, www.cdc.gov.

Epidemiologic Profile

The STD burden among Arizonans is large and has had varying effects among certain groups across the state. In 2013, there were a total of 37,716 reported cases of STD infections among Arizonans (excluding HIV, HSV and stages of syphilis other than primary and secondary):

- 30,923 cases of chlamydia were reported in 2013: a 1.2% increase from 2012
- 290 cases of primary and secondary syphilis were reported in 2013: a 42.2% increase from 2012
- 6,503 cases of gonorrhea were reported in 2013: an 11.0% increase from 2012

Chlamydia

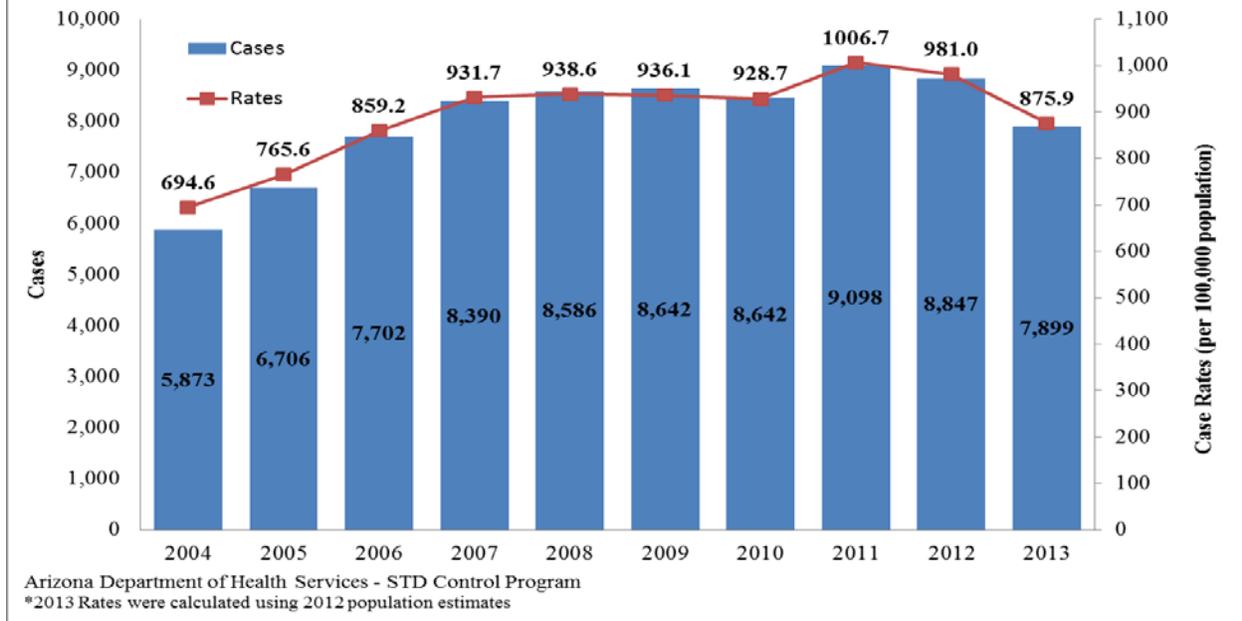
Chlamydia is the most frequently reported sexually transmitted disease, as well as the most frequently reported notifiable infection on both a national and state scale. Chlamydial infection is caused by the bacterium *Chlamydia trachomatis*, which can cause urethral, cervical, anal and ocular infection in males and females.

According to the Centers for Disease Control and Prevention, 1,401,906 cases of chlamydia were reported in 2013, although the agency estimates that 2.86 million infections occur annually. Reported infections are dwarfed by the estimated prevalence of infection due to the large number of asymptomatic cases that are undetected and consequently not reported on an annual basis. Infection site factors heavily into whether or not an individual experiences symptoms (along with other factors), and numerous studies have demonstrated that a concerning proportion of chlamydia infections have gone undetected due to testing that does not account for asymptomatic areas of infection.¹

The prevalence of asymptomatic cases conceals the serious nature of untreated chlamydial infections. When left untreated in females, infection can spread to other reproductive organs such as the uterus, fallopian tubes and ovaries, causing pelvic pain and in some cases, pelvic inflammatory disease (PID). While PID itself is treatable, the damage done to reproductive organs can often be irreversible, causing ectopic pregnancy and in some cases infertility. Pregnant women can pass chlamydial infections to newborns during the birth process, causing ocular infections that can cause blindness when left untreated. Untreated chlamydial infection can also cause inflammation of the testes and prostate among males, and the anus/rectum of both sexes.

The CDC currently recommends that the following groups are regularly screened for chlamydia on at least an annual basis: all sexually active persons, all symptomatic persons, persons with a partner recently diagnosed with an STD, men who have sex with men (MSM), pregnant women and all women aged 25 and under. Persons with multiple and/or anonymous sex partners should be tested more frequently. Persons with HIV should also be tested at least once per year. Providers can assess the appropriate frequency of chlamydia screening by discussing risks and behaviors with patients.²

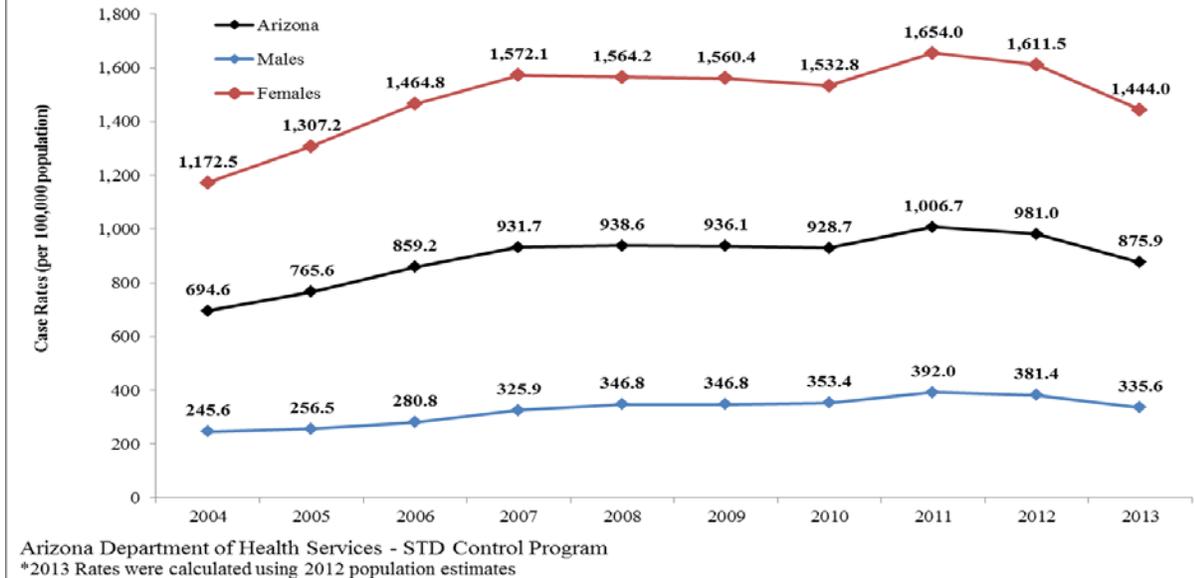
Figure 1. Reported Chlamydia Cases and Case Rates in 10 - 19 Year Olds, Arizona, 2004 - 2013



Statewide cases and case rates, 10-19 year olds, 2013

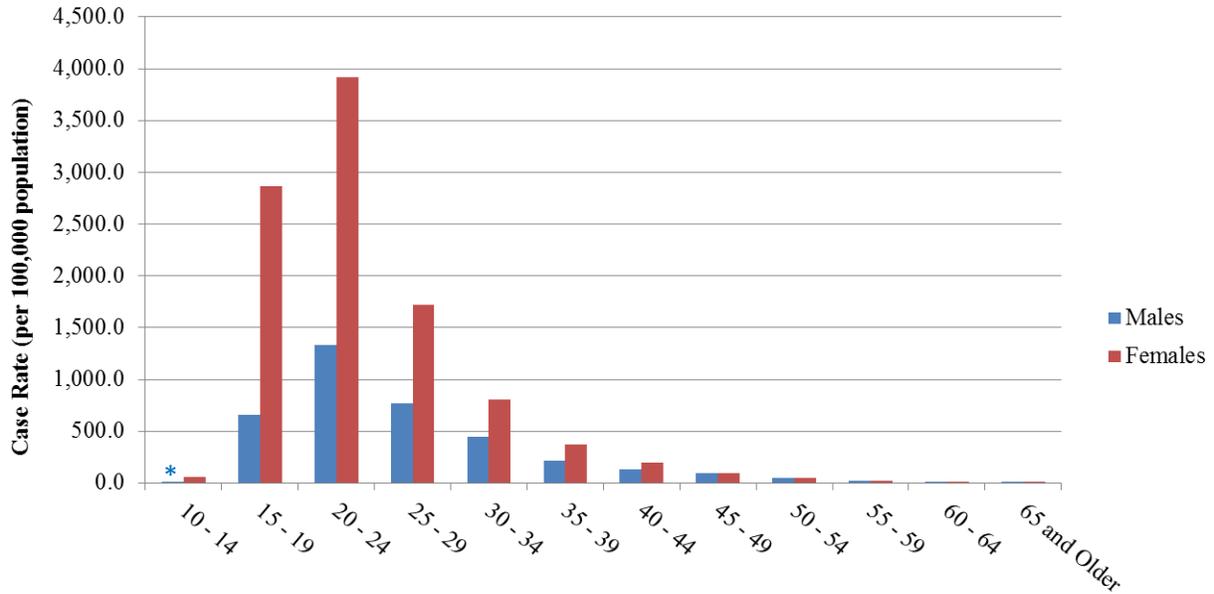
- In 2013, 7,899 chlamydial infections were reported among 10-19 year olds, a decrease of 10.7% from 2012
- The reported case rate for this age group also decreased from 981.0 to 875.9 cases per 100,000 persons, which was a decrease of 10.7%
- Despite the more recent decreases in overall case counts and case rates for 10-19 year olds, the reported number of cases has increased 34.5% from 2004-2013. The peak case count and case rate for this group occurred in 2011, when 10-19 year olds represented 31.1% of all reported Arizona chlamydia cases
- Arizona adolescents have represented fluctuating proportions of all reported chlamydia cases: though the group has averaged 32.1% of all cases from 2004 to 2013, they represented a maximum of 35.0% in 2004 and the current ten year minimum of 25.5% in 2013
- From the decade's high annual case count and case rate observed in 2011, reported chlamydia cases have decreased by 13.2% and the reported case rate has decreased 13.0%

Figure 2. Reported Chlamydia Case Rates by Gender in 10 - 19 Year Olds, Arizona, 2004 - 2013



- Gender-based reported case disparities have remained fairly constant from 2004-2013, with the largest gap in case rates being observed in 2006, when there were 5 reported cases among 10-19 year old females for each single case reported among 10-19 year old males (per 100,000 persons)
- While the case rate among 10-19 year old females was 1.6 times the state rate (1,444.0 vs 875.9 cases per 100,000 persons), males in the same age group had a case rate that was 0.4 times that of the state rate in 2013 (335.6 vs 875.9 cases per 100,000 persons)

Figure 3. Reported Chlamydia Case Rates by Age Group and Gender, Arizona, 2013



Arizona Department of Health Services - STD Control Program
 *Rates are not statistically reliable due to small number size

- Gender based disparities for reported chlamydia cases were observed across several age ranges among Arizonans, but were especially large in the high morbidity range of 15-29 year olds (25,424 cases, 82.2% of all Arizona cases)
- 15-19 year olds contributed the second highest proportion of cases (25.0%)

Table 1. Reported Male Chlamydia Cases by Age Group and County, Arizona, 2013

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0	0	0	1	0	14	1	8	2	1	0	0	27
15 - 19	17	19	48	22	23	952	51	283	64	13	32	0	1,524
20 - 24	36	52	103	35	46	2,077	64	608	136	32	81	0	3,270
25 - 29	32	31	45	10	23	1,158	30	309	70	21	49	0	1,778
30 - 34	21	20	24	12	12	675	16	153	33	10	14	0	990
35 - 39	7	7	12	1	9	313	4	63	20	4	4	0	444
40 - 44	8	3	2	1	2	209	9	37	8	2	6	0	287
45 - 49	4	3	5	1	4	146	3	20	4	0	4	0	194
50 - 54	2	2	5	0	2	67	2	11	7	1	1	0	100
55 - 59	2	1	0	1	0	33	0	9	0	0	0	0	46
60 - 64	0	1	0	0	1	12	1	5	2	0	0	0	22
65 and Older	0	0	0	0	1	14	0	2	0	0	0	0	17
Total	129	139	244	84	123	5,670	181	1,508	346	84	191	0	8,699

Arizona Department of Health Services - STD Control Program

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0.0	0.0	0.0	29.8	0.0	9.7	22.7	25.3	14.5	17.2	0.0	N/A	11.7
15 - 19	518.8	266.1	776.6	630.7	365.5	681.1	1,179.2	848.4	518.6	209.6	377.9	N/A	660.2
20 - 24	1,312.9	775.7	1,174.9	1,048.2	807.9	1,423.5	1,665.8	1,505.6	1,055.9	570.2	802.5	N/A	1,329.5
25 - 29	1,513.0	505.5	887.6	306.7	406.4	810.2	944.9	892.7	469.8	436.6	691.7	N/A	773.9
30 - 34	1,016.0	360.9	564.4	382.3	217.4	484.0	536.6	482.1	208.5	211.4	228.5	N/A	447.2
35 - 39	352.8	142.1	307.1	37.8	177.7	241.0	137.3	219.6	130.7	91.4	74.4	N/A	216.5
40 - 44	381.9	60.5	52.5	33.7	34.6	153.4	315.6	127.5	57.4	39.6	109.5	N/A	135.3
45 - 49	178.5	57.1	130.0	33.3	60.4	113.9	92.1	67.1	32.9	0.0	72.6	N/A	94.3
50 - 54	84.9	35.3	117.3	0.0	25.0	53.4	58.3	34.0	59.8	13.7	18.3	N/A	47.8
55 - 59	95.9	17.5	0.0	29.2	0.0	30.7	0.0	28.8	0.0	0.0	0.0	N/A	24.3
60 - 64	0.0	18.4	0.0	0.0	11.4	12.7	32.6	17.3	18.3	0.0	0.0	N/A	12.6
65 and Older	0.0	0.0	0.0	0.0	3.5	6.1	0.0	2.7	0.0	0.0	0.0	N/A	3.8
Total	374.5	153.6	363.4	164.6	109.2	290.7	338.0	308.8	170.2	80.8	188.3	N/A	267.0

Arizona Department of Health Services - STD Control Program
*Rates are not statistically reliable due to small number size

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	5	1	9	6	0	69	13	25	5	0	2	0	135
15 - 19	110	133	192	95	167	3,691	179	1,091	287	97	171	0	6,213
20 - 24	172	206	262	144	188	5,488	284	1,517	318	101	281	0	8,961
25 - 29	105	65	109	49	59	2,218	134	624	155	31	129	0	3,678
30 - 34	48	23	40	15	34	1,062	71	283	76	13	59	0	1,724
35 - 39	23	7	21	15	13	473	27	14	23	7	19	0	642
40 - 44	16	5	11	4	4	262	19	49	14	6	13	0	403
45 - 49	10	2	10	6	1	118	11	25	5	1	2	0	191
50 - 54	3	0	5	1	0	67	6	12	6	1	4	0	105
55 - 59	4	1	3	1	1	17	6	3	3	0	3	0	42
60 - 64	1	0	0	0	0	4	2	4	1	0	0	0	12
65 and Older	0	0	0	0	0	12	0	1	0	0	0	0	13
Total	497	443	662	336	467	13,481	753	3,648	893	257	683	0	22,120

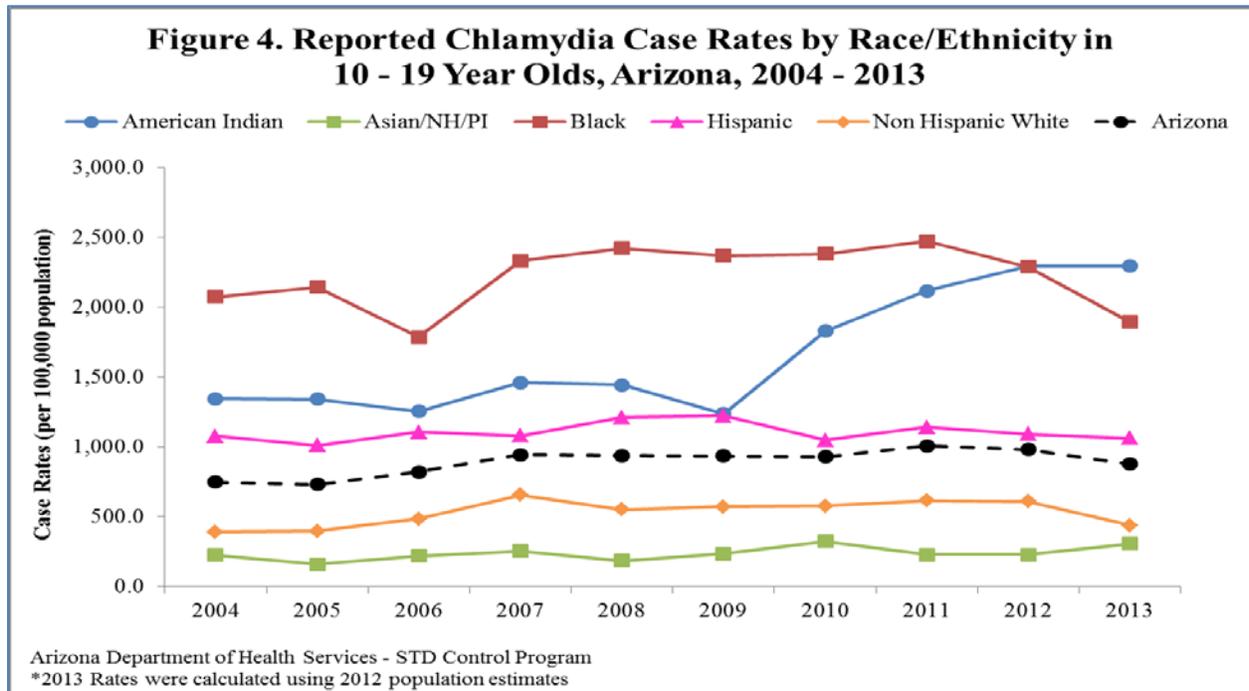
Arizona Department of Health Services - STD Control Program

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	157.0	16.8	218.5	186.2	0.0	49.7	308.6	81.7	37.2	0.0	27.0	N/A	60.6
15 - 19	3,482.1	2,176.0	2,755.8	3,034.2	2,906.9	2,806.2	4,420.8	3,405.4	2,572.6	1,777.2	2,241.4	N/A	2,863.5
20 - 24	7,037.6	3,849.7	2,749.2	4,741.5	3,469.9	3,941.3	8,215.2	3,922.8	3,480.7	2,049.9	3,873.7	N/A	3,922.2
25 - 29	5,089.7	1,279.0	2,397.7	1,952.2	1,187.6	1,610.2	4,741.7	1,906.3	1,410.0	677.7	2,114.4	N/A	1,717.5
30 - 34	2,465.3	457.4	954.7	616.3	700.6	774.7	2,517.7	912.0	585.4	289.0	1,040.0	N/A	811.1
35 - 39	1,194.8	150.1	586.6	662.5	277.8	362.3	1,004.5	49.6	196.6	152.0	345.0	N/A	320.4
40 - 44	777.1	100.6	289.4	159.6	72.1	193.7	647.8	166.4	129.2	112.0	224.2	N/A	193.3
45 - 49	442.7	36.9	253.9	221.8	14.9	91.1	333.0	82.6	49.6	15.7	35.1	N/A	92.6
50 - 54	119.8	0.0	107.1	31.0	0.0	51.4	165.2	35.1	55.0	12.2	69.5	N/A	48.2
55 - 59	169.8	15.7	66.0	29.1	11.5	14.5	168.8	8.7	26.2	0.0	56.6	N/A	20.3
60 - 64	52.5	0.0	0.0	0.0	0.0	3.7	57.7	12.4	8.0	0.0	0.0	N/A	6.2
65 and Older	0.0	0.0	0.0	0.0	0.0	4.2	0.0	1.1	0.0	0.0	0.0	N/A	2.5
Total	1,347.1	498.4	961.2	695.4	420.9	676.8	1,406.2	723.8	485.3	236.4	692.8	N/A	671.4

Arizona Department of Health Services - STD Control Program
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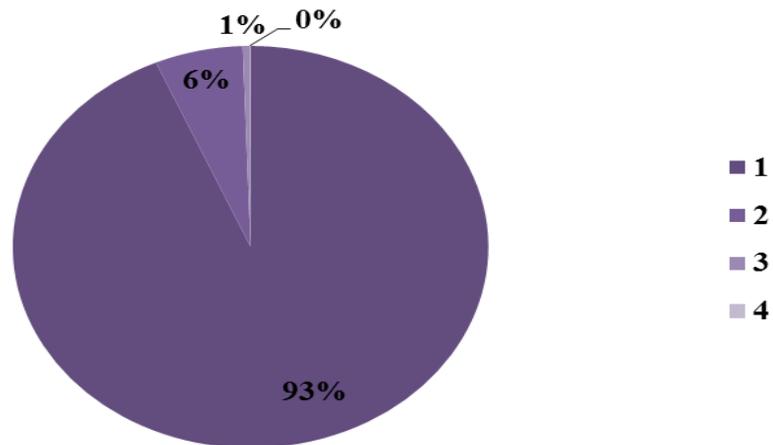
- Among adolescent female infections, Maricopa County contributed 59% of reported cases and Pima County contributed 17.6% of reported cases. Among adolescent male infections, Maricopa County contributed 62.3% of reported cases and Pima County contributed 18.8% of reported cases

- Among Arizona adolescents, Navajo, Coconino and Pima Counties had the highest rates of reported chlamydia infection (1435.5, 1155.2 and 1102.7 cases per 100,000 persons, respectively)



- Disparities among adolescent Arizonans of different racial/ethnic groups have been observed consistently over the last decade
- Reported case rates among Black and American Indian/Alaskan Natives adolescents have been the highest among 10-19 year olds, with their rates being 4.3 and 5.2 times that of non-Hispanic Whites in 2013 (1,892.9 and 2,295.1 cases per 100,000 persons, respectively)
- American Indian/Alaskan Natives aged 10-19 years old also surpassed the reported case rate of Blacks in the same age range from 2012 to 2013, despite the fact that both groups experienced decreases in case count. It is important to note that this group contributed roughly 13.9% of cases in 2013 and an average of 11.7% of reported cases from 2009 to 2013
- Though an 18.4% increase was observed among Asian adolescents from 2012 to 2013, this group contributed less than 1% of overall morbidity among 10-19 year olds. Conversely, 35.9% and 15.5% of cases in this age group were represented by Hispanics and non-Hispanic Whites

Figure 5. Distribution of Repeat Chlamydial Infections among 10-19 Year Olds, Arizona 2013



Arizona Department of Health Services - STD Control Program

- There were 7,899 infections reported among adolescents aged 10-19 years old in 2013. These infections occurred among 7,376 individuals, with a very small subset of adolescents experiencing multiple infections over the course of the year
- 6,895 adolescents had a single chlamydial infection reported (93.5% of all adolescents with reported chlamydial infections)
- 442 adolescents had two infections (6% of all adolescents with reported chlamydial infections)
- 36 adolescents had three infections (1% of all adolescents with reported chlamydial infections), and 3 had four infections

Gonorrhea

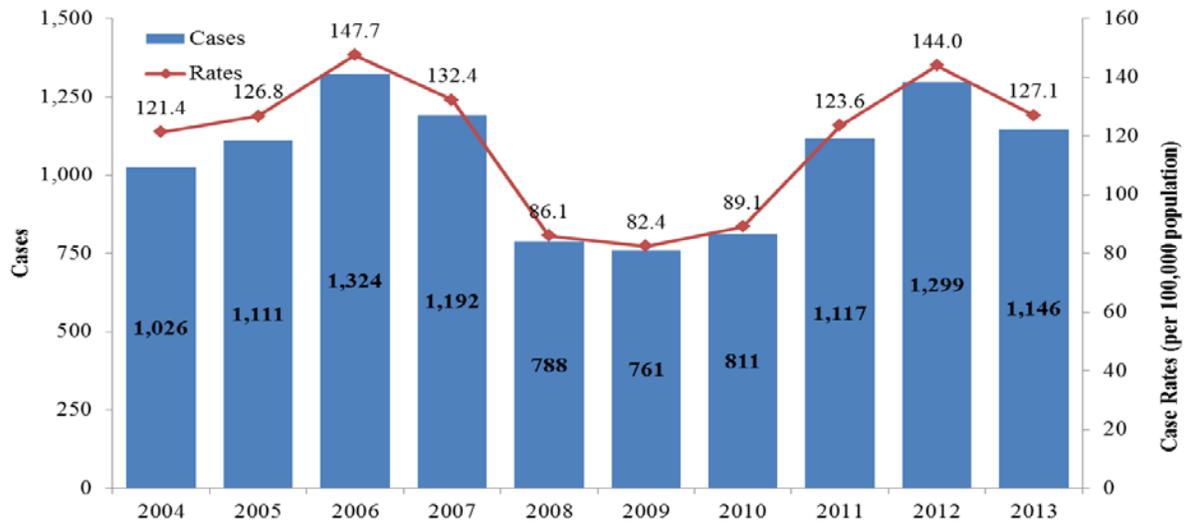
Gonorrhea is the second most frequently reportable sexually transmitted infection in both on a national and state scale. Gonorrhea is caused by infection with the bacterium *Neisseria gonorrhoeae*, and similarly to chlamydia, the infections can be cervical, pharyngeal, anal, testicular and ocular.

The number of reported gonorrhea infections is also greatly affected by the widespread prevalence of asymptomatic infection among males and females. Depending on the site of infection, the likelihood of experiencing symptoms varies, with the urethral site of males being most symptomatic. Similarly to chlamydial infections, gonorrheal infections are mostly asymptomatic among women, and thus routine screening is the best method for detecting infections. Due to the bacterium's ability to cause infections at multiple sites, many infections would remain undetected if at risk persons are screened at a single anatomical site.^{3, 4}

Untreated gonococcal infections can have serious consequences. Among women with chronic untreated gonorrhea, infections can spread to other reproductive organs (uterus and fallopian tubes), which can cause chronic pelvic pain and pelvic inflammatory disease (PID). PID due to gonorrhea can also cause sometimes irreversible damage to the uterus and fallopian tubes of a woman, which can result in ectopic pregnancy and in some cases infertility. Inflammation of the testes and prostate among men, and throat and anus/rectum among both sexes is also a consequence of untreated gonorrhea.

Gonorrhea screening recommendations include at least annual screening for the following at risk groups: all sexually active persons, all symptomatic persons, persons with a partner recently diagnosed with an STD, men who have sex with men (MSM), pregnant women and all women aged 25 and under. Persons with multiple and/or anonymous sex partners should be tested more frequently. Persons with HIV should also be tested at least once per year. Additional focus has been placed on screening multiple sites (pharyngeal, urethral, vaginal/cervical and anal), to ensure that all potential sites of infection have been assessed.²

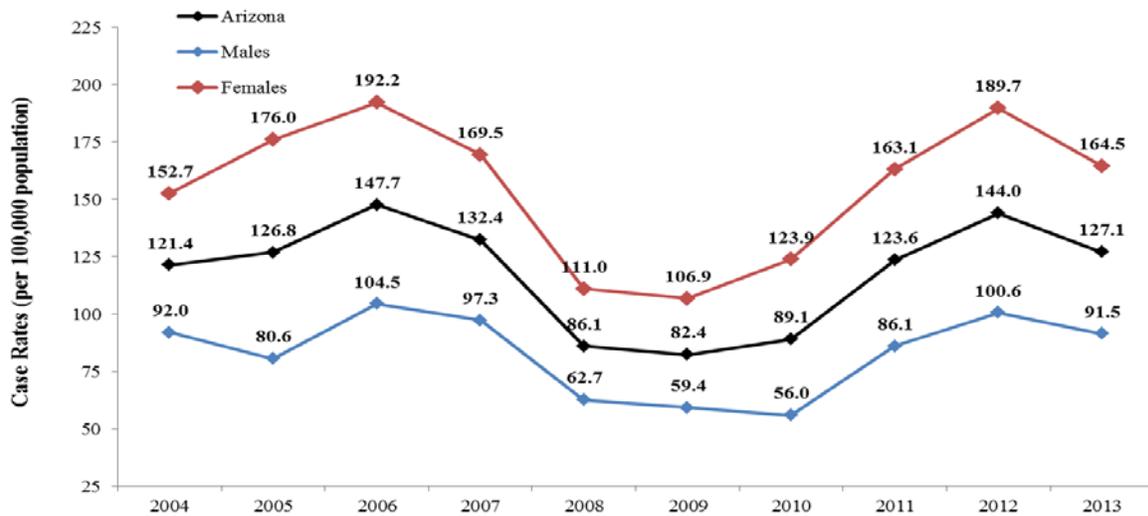
Figure 6. Reported Gonorrhea Cases and Case Rates in 10-19 Year Olds, Arizona 2004-2013



Arizona Department of Health Services - STD Control Program
 *2013 Rates were calculated using 2012 population estimates

- Gonococcal infections have steadily increased among Arizonans in general over the last decade, despite the diminishing proportion 10-19 year olds make to overall morbidity
- Though reported cases and case rates in the state have steadily increased since 2009, adolescent counts and rates have produced varying patterns of increase and decrease.
- Over the course of the last five years the proportion of Arizona cases reported for persons between ages 10-19 has steadily decreased, with adolescents representing a five year low of 17.6% of all reported cases in 2013
- Despite the decrease reported cases and case rates for this age group have increased by 50.6% and 54.2%, respectively since 2009, despite decreases of 11.7% in case count and case rate from 2012 to 2013
- Current case counts and case rates have decreased by 13.7% from those observed among adolescents in 2006 (1,324 cases, 147.7 cases per 100,000 adolescents), the peak year for high gonorrhea morbidity within this group

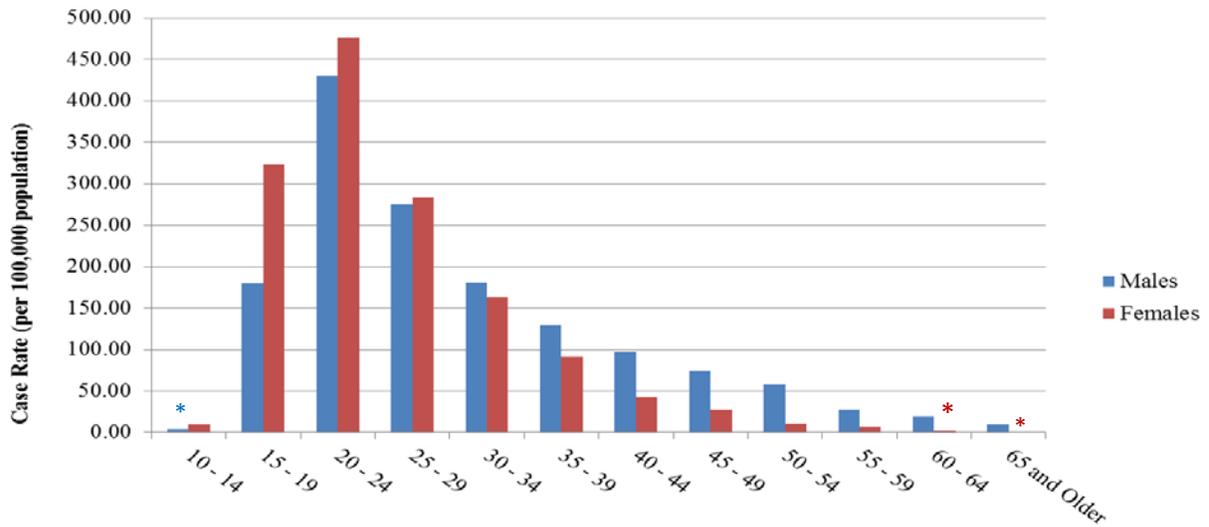
Figure 7. Reported Gonorrhea Case Rates by Gender in 10 - 19 Year Olds, Arizona, 2004 - 2013



Arizona Department of Health Services - STD Control Program
 *2013 Rates were calculated using 2012 population estimates

- Gender-based disparities in reported gonococcal infection among adolescents are the reverse of that observed for the state in general, with adolescent females having both higher case counts and rates than adolescent males
- While the width of the disparity has fluctuated over time, the rate of females has been slightly above or below double that of males for the last five years
- Both sexes experienced a decrease in case count and rate from 2012 to 2013, although females saw a greater decrease than males (13.3% vs 9.0%, for case count and case rate, respectively)

Figure 8. Reported Gonorrhea Case Rates by Age Group and Gender, Arizona, 2013



Arizona Department of Health Services - STD Control Program
 *2013 Rates were calculated using 2012 population estimates

- While 10-19 year olds constitute a significant proportion of chlamydia morbidity (17.6% of cases in 2013), 20-24 year olds contributed both the greatest proportion of cases (33.0% of cases in 2013) and had the highest case rates for both males and females (430.6 and 475.8 cases per 100,000 persons, respectively)
- The high morbidity age range, which includes 15-29 year olds, contributed 69.2% of all 2013 cases, with males in this age range representing 62.7% of all male cases and females in this age range representing 76.2% of all female cases

Table 5. Reported Male Gonorrhea Cases by Age Group and County, Arizona, 2013

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0	0	0	0	0	8	0	0	1	0	0	0	9
15 - 19	1	6	8	5	1	311	9	50	14	3	6	0	414
20 - 24	6	9	21	6	14	776	22	158	32	5	10	0	1,059
25 - 29	6	6	12	5	7	470	12	78	26	3	6	0	631
30 - 34	1	2	9	2	5	305	8	47	16	3	2	0	400
35 - 39	4	1	3	0	4	204	5	29	8	1	5	0	264
40 - 44	3	0	1	0	1	176	1	19	5	1	0	0	207
45 - 49	1	2	4	0	1	114	4	21	3	1	1	0	152
50 - 54	2	3	1	0	1	92	2	16	4	0	1	0	122
55 - 59	1	0	0	1	1	37	0	10	0	1	0	0	51
60 - 64	1	1	0	0	0	27	0	5	0	0	0	0	34
65 and Older	0	1	0	0	1	11	0	1	0	0	0	0	14
Total	26	31	59	19	36	2,531	63	434	109	18	31	0	3,357

Arizona Department of Health Services - STD Control Program

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0.0	0.0	0.0	0.0	0.0	5.5*	0.0	0.0	7.3*	0.0	0.0	N/A	3.9
15 - 19	30.5*	84.0*	129.4*	143.3*	15.9*	222.5	208.1*	149.9	113.4	48.4*	70.9*	N/A	179.3
20 - 24	218.8*	134.2*	239.5	179.7*	245.9	531.8	572.6	391.3	248.4	89.1*	99.1	N/A	430.5
25 - 29	283.7*	97.8*	236.7	153.4*	123.7*	328.8	378.0	225.3	174.5	62.4*	84.7*	N/A	274.6
30 - 34	48.4*	36.1*	211.7*	63.7*	90.6*	218.7	268.3*	148.1	101.1	63.4*	32.6*	N/A	180.7
35 - 39	201.6*	20.3*	76.8*	0.0	79.0*	157.1	171.6*	101.1	52.3*	22.8*	93.0*	N/A	128.7
40 - 44	143.2*	0.0	26.3*	0.0	17.3*	129.2	35.1*	65.5	35.9*	19.8*	0.0	N/A	97.6
45 - 49	44.6*	38.1*	104.0*	0.0	15.1*	89.0	122.9*	70.4	24.7*	17.2*	18.2*	N/A	73.9
50 - 54	84.9*	52.9*	23.5*	0.0	12.5*	73.3	58.3*	49.5	34.2*	0.0	18.3*	N/A	58.3
55 - 59	48.0*	0.0	0.0	29.2*	12.3*	34.4	0.0	32.0	0.0	12.1*	0.0	N/A	26.9
60 - 64	54.5*	18.4*	0.0	0.0	0.0	28.5	0.0	17.3*	0.0	0.0	0.0	N/A	19.5
65 and O	0.0	6.8*	0.0	0.0	3.5*	4.8	0.0	1.4*	0.0	0.0	0.0	N/A	3.1
Total	75.5	34.3	87.9	37.2	32.0	129.8	117.7	88.9	53.6	17.3	30.6	N/A	103.0

Arizona Department of Health Services - STD Control Program
 *Rates are not reliable due to small number size

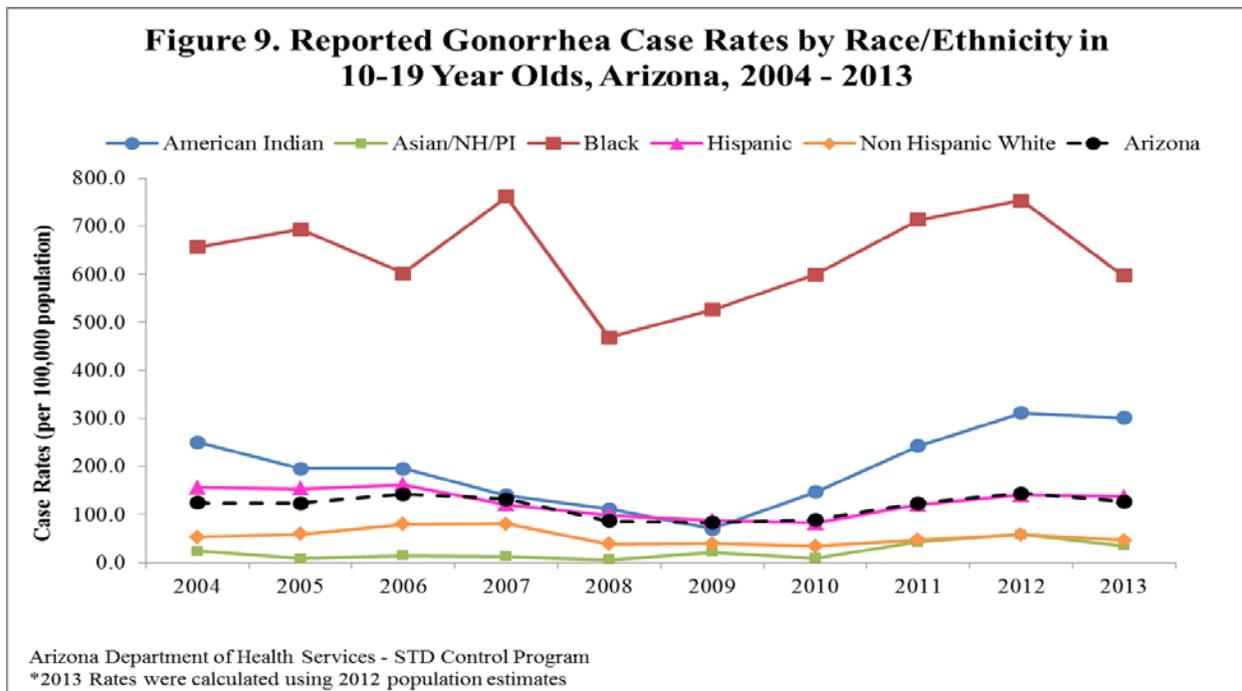
Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0	0	0	0	0	16	1	3	0	0	1	0	21
15 - 19	6	9	19	5	3	499	27	84	39	3	8	0	702
20 - 24	20	11	25	12	17	754	40	141	48	3	16	0	1,087
25 - 29	5	8	15	8	14	414	30	73	27	5	9	0	608
30 - 34	8	2	5	3	11	242	13	33	22	2	6	0	347
35 - 39	8	0	8	0	3	126	5	16	12	1	4	0	183
40 - 44	1	1	3	0	1	67	2	6	7	0	2	0	90
45 - 49	0	0	2	0	2	39	0	9	4	1	0	0	57
50 - 54	2	0	0	0	0	18	0	1	1	0	1	0	23
55 - 59	0	0	3	1	0	9	1	0	0	0	1	0	15
60 - 64	0	0	0	0	0	2	0	1	0	0	0	0	3
65 and Older	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	50	31	80	29	52	2,193	119	368	161	15	48	0	3,146

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Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0.0	0.0	0.0	0.0	0.0	11.5	23.7*	9.8*	0.0	0.0	13.5*	N/A	9.4
15 - 19	189.9*	147.3*	272.7	159.7*	52.2*	379.4	666.8	262.2	349.6	55.0*	104.9*	N/A	323.5
20 - 24	818.3	205.6	262.3	395.1	313.8	541.5	1,157.1	364.6	525.4	60.9*	220.6	N/A	475.8
25 - 29	242.4*	157.4*	330.0	318.7*	281.8	300.5	1,061.6	223.0	245.6	109.3*	147.5*	N/A	283.9
30 - 34	410.9*	39.8*	119.3*	123.3*	226.7	176.5	461.0	106.3	169.5	44.5*	105.8*	N/A	163.3
35 - 39	415.6*	0.0	223.5*	0.0	64.1*	96.5	186.0*	56.7	102.6	21.7*	72.6*	N/A	91.3
40 - 44	48.6*	20.1*	78.9*	0.0	18.0*	49.5	68.2*	20.4*	64.6*	0.0	34.5*	N/A	43.2
45 - 49	0.0	0.0	50.8*	0.0	29.8*	30.1	0.0	29.7*	39.7*	15.7*	0.0	N/A	27.6
50 - 54	79.8*	0.0	0.0	0.0	0.0	13.8	0.0	2.9*	9.2*	0.0	17.4*	N/A	10.6
55 - 59	0.0	0.0	66.0*	29.1*	0.0	7.7*	28.1*	0.0	0.0	0.0	18.9*	N/A	7.2
60 - 64	0.0	0.0	0.0	0.0	0.0	1.9*	0.0	3.1*	0.0	0.0	0.0	N/A	1.5
65 and O	0.0	0.0	0.0	0.0	0.0	0.4*	0.0	1.1*	0.0	0.0	0.0	N/A	0.4
Total	135.5	34.9	116.2	60.0	46.9	110.1	222.2	73.0	87.5	13.8	48.7	N/A	95.5

Arizona Department of Health Services - STD Control Program
 *Rates are not reliable due to small number size

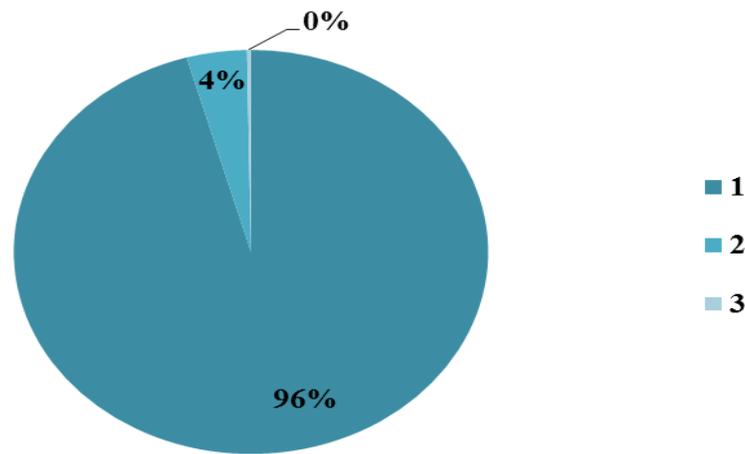
- Maricopa and Pima Counties accounted for a combined 84.9% of all Arizona gonorrhea morbidity in 2013
- Maricopa County reported 75.4% of all male cases, and 75.4% of cases among males aged 10-19. Pima County reported 12.9% of all males cases, and 11.8% of cases among males aged 10-19
- Maricopa County reported 69.7% of all female cases, and 71.2% of cases among females aged 10-19. Pima County reported 11.7% of all female cases, and 12.0% of cases among females aged 10-19
- Despite the large case contribution from the urban counties, Navajo, Maricopa, Apache and Coconino Counties had the highest case rates in 2013 (169.9, 119.8, 103.8 and 102.2 cases per 100,000 persons, respectively)
- Among adolescents, Navajo and Coconino Counties had the highest reported case rates in 2013 (214.6 and 158.9 cases per 100,000 persons, respectively). Maricopa County had the highest rate among adolescent males (109.5 cases per 100,000 persons) and Navajo County had the highest rate among adolescent females (214.6 cases per 100,000 persons)



- Disparities based on race/ethnicity among adolescents have also been a predominant feature of reported infections over the last decade
- Reported case counts and case rates decreased for all racial/ethnic groups from 2012 to 2013

- While Black adolescents have maintained the highest reported infection rate over the last decade, the magnitude of rate difference (compared to non-Hispanic Whites) has fluctuated, with the highest ratio observed in 2010 when the rate for Black adolescents was 17.6 times that of non-Hispanic Whites, and the lowest ratio observed in 2006 when the rate was 7.6 times that of non-Hispanic Whites
- Though Black and American Indian/Alaskan Native (AI/AN) adolescents have the highest reported case rates of gonorrhea, they contributed 18.8% and 9.4%, respectively, of overall adolescent gonorrhea morbidity in 2013, compared to Hispanics who contributed 32.2% of adolescent cases

Figure 10. Distribution of Repeat Gonococcal Infections among 10-19 Year Olds, Arizona 2013



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- In 2013, there were 1,146 gonococcal infections distributed between 1,095 adolescents aged 10-19, with a very small subset of adolescents having multiple infections over the course of the year
- 1,047 adolescents had a single infection (95.6% of all adolescents with a reported infection)
- 45 adolescents had two infections (4.1% of all adolescents with a reported infection)
- 3 adolescents had three infections (less than 1% of all adolescents with a reported infection)
- Among adolescents with gonococcal infections, 513 had concurrent chlamydial infections at the time of testing (46.8% of all adolescents with a reported gonococcal infection)

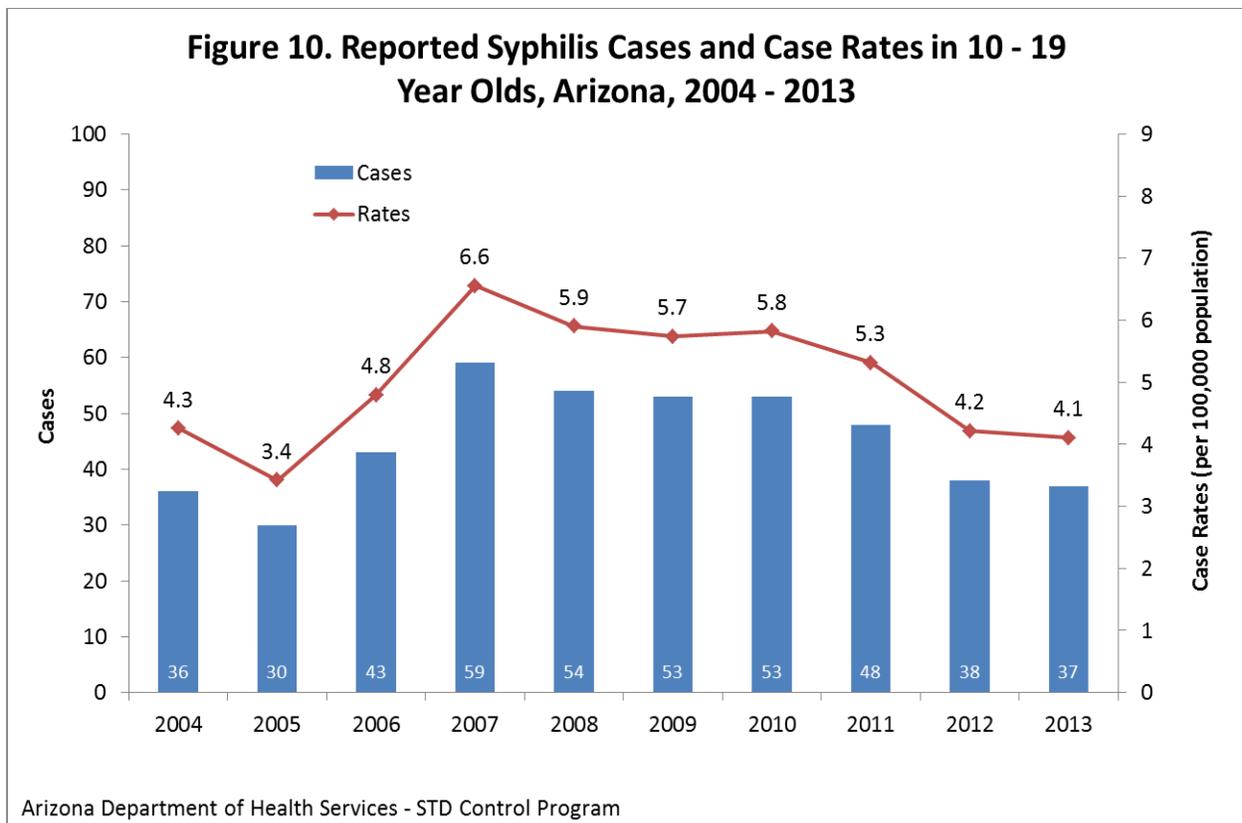
- There were 525 concurrent chlamydial and gonococcal infections reported among adolescents, with 505 experiencing a single infection, 8 with two infections and 2 adolescents with 3 co-infections

Syphilis

Syphilis is an STD caused by a bacterium which, if left untreated, may result in long-term complications or possibly death. CDC estimates that 55,400 persons in the United States are infected annually. In 2013, 56,471 cases of syphilis were reported to CDC. Of these, 17,375 cases were primary and secondary syphilis, the earliest and most infectious stages of syphilis. In addition 348 cases of congenital syphilis were reported.

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 (rash, 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 it may result in death. A pregnant woman can pass the infection to her unborn baby. The complications of congenital syphilis can include deformities, low birth weight, premature delivery and stillbirth.

CDC recommends that all persons with symptoms be examined and all pregnant women be routinely tested. Arizona statutes require that pregnant women be tested at their first prenatal visit and, in high morbidity areas, in their third trimester. 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.



Statewide cases and case rates, 10-19 year olds, 2013

- The rate of syphilis (primary, secondary, early latent, latent-unknown duration, and late latent) among 10 – 19 year olds in Arizona has decreased in six consecutive years.
- The rate of syphilis among this group has decreased from 6.6 cases per 100,000 in 2007 to a rate of 4.1 in 2013. This represents a 38% decrease over that time frame. Fig. 10.
- In 2013, 81% of syphilis cases among 10-19 year olds in Arizona were reported from Maricopa and Pima Counties.
- Syphilis cases among 10-19 year olds accounted for only 3.8% of all reported syphilis cases in 2013.
- The highest rates of syphilis are seen among the age groups 20-24, 25-29 and 30-34.
- For every age group the rate of syphilis was higher for males compared to females in Arizona. Fig. 11.

Table 9. Reported Male Syphilis Cases by Age Group and County, Arizona, 2013

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - 19	0	0	1	0	0	17	1	6	0	0	1	0	26
20 - 24	1	2	2	0	1	89	0	25	1	0	3	0	124
25 - 29	1	3	2	1	1	103	2	17	4	1	5	0	140
30 - 34	2	2	1	1	0	76	2	21	2	0	4	0	111
35 - 39	0	1	0	0	5	46	0	17	9	1	1	0	80
40 - 44	1	2	0	0	0	52	0	18	3	1	1	0	78
45 - 49	1	0	0	0	1	55	0	10	4	1	0	0	72
50 - 54	0	1	0	0	0	38	0	12	2	0	0	0	53
55 - 59	0	1	0	1	0	22	0	4	2	0	0	0	30
60 - 64	1	0	1	0	0	12	0	2	0	0	1	0	17
65 and Older	0	0	0	0	2	5	0	3	0	0	1	0	11
Total	7	12	7	3	10	515	5	135	27	4	17	0	742

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Table 10. Reported Male Syphilis Case Rates by Age Group and County, Arizona, 2013

Age Group	Apache	Cochise & Santa Cruz	Coconino	Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
15 - 19	0.0	0.0	16.2*	0.0	0.0	12.2	23.1*	18.0*	0.0	0.0	11.8*		11.3
20 - 24	36.5*	29.8	22.8*	0.0	17.6*	61.0	0.0	61.9	7.8*	0.0	29.7*		50.4
25 - 29	47.3*	48.9	39.4*	30.7*	17.7*	72.1	63.0*	49.1	26.8*	20.8*	70.6*		60.9
30 - 34	96.8*	36.1	23.5*	31.9*	0.0	54.5	67.1*	66.2	12.6*	0.0	65.3*		50.1
35 - 39	0.0	20.3	0.0	0.0	98.7*	35.4	0.0	59.2	58.8*	22.8*	18.6*		39.0
40 - 44	47.7*	40.3	0.0	0.0	0.0	38.2	0.0	62.0	21.5*	19.8*	18.2*		36.8
45 - 49	44.6*	0.0	0.0	0.0	15.1*	42.9	0.0	33.5	32.9*	17.2*	0.0		35.0
50 - 54	0.0	17.6	0.0	0.0	0.0	30.3	0.0	37.1	17.1*	0.0	0.0		25.3
55 - 59	0.0	17.5	0.0	29.2*	0.0	20.4	0.0	12.8*	18.8*	0.0	0.0		15.8
60 - 64	54.5*	0.0	27.4*	0.0	0.0	12.7	0.0	6.9*	0.0	0.0	23.3*		9.8
65 and Older	0.0	0.0	0.0	0.0	06.9*	2.2*	0.0	4.1*	0.0	0.0	6.3*		2.5
Total	20.3*	13.3	10.4*	5.9*	08.9*	26.4	9.3*	27.6	13.3	3.8*	16.8		22.8

Arizona Department of Health Services - STD Control Program
 *Rates are not statistically reliable due to small number size.

Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - 19	1	2	0	0	0	6	0	1	1	0	0	0	11
20 - 24	0	0	0	0	0	25	1	2	2	1	0	0	31
25 - 29	0	0	0	0	0	35	1	7	2	0	1	0	46
30 - 34	0	1	0	0	0	22	0	6	1	1	1	0	32
35 - 39	1	0	0	0	1	18	0	4	2	0	0	0	26
40 - 44	2	0	0	0	0	19	0	4	1	0	0	0	26
45 - 49	0	0	0	0	0	11	0	3	1	0	2	0	17
50 - 54	0	1	0	0	0	3	0	1	0	0	0	0	5
55 - 59	0	0	0	0	0	6	0	1	0	0	0	0	7
60 - 64	0	0	0	0	0	1	0	2	0	0	0	0	3
65 and Older	0	0	0	0	0	2	0	1	0	0	0	0	3
Total	4	4	0	0	1	148	2	32	10	2	4	0	207

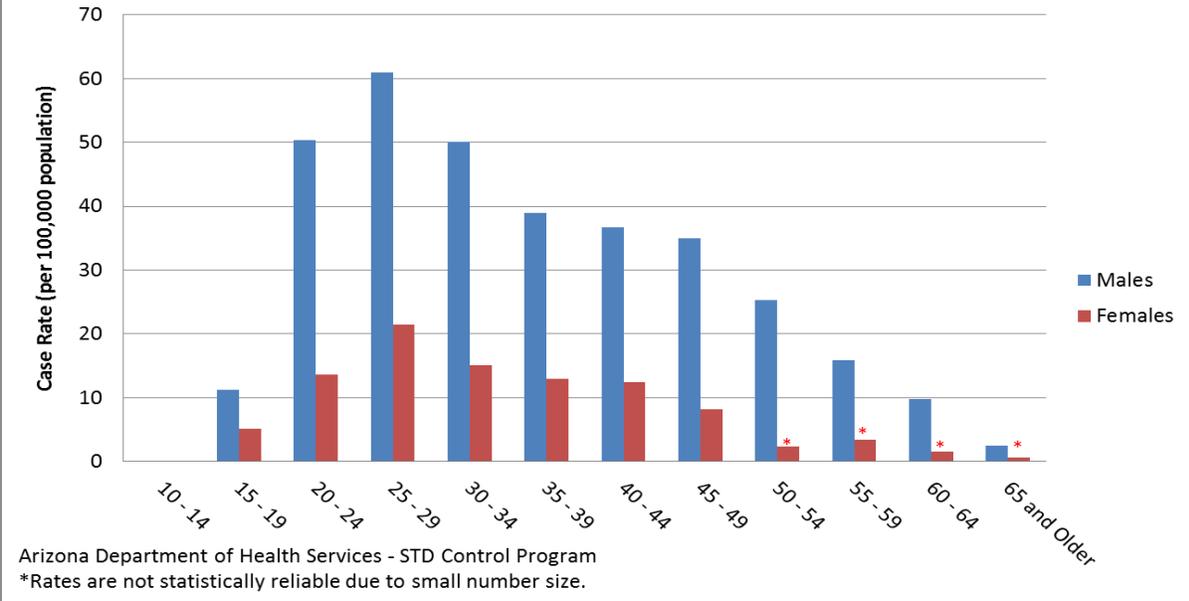
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Age Group	Apache	Cochise & Santa Cruz	Coconino	Gila, Graham & Greenlee	La Paz & Mohave	Maricopa	Navajo	Pima	Pinal	Yavapai	Yuma	Unknown	Arizona
10 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
15 - 19	31.7*	32.7*	0.0	0.0	0.0	4.6	0.0	3.1*	09.0*	0.0	0.0		5.1
20 - 24	0.0	0.0	0.0	0.0	0.0	18.0	28.9*	5.2*	21.9*	20.3*	0.0		13.6
25 - 29	0.0	0.0	0.0	0.0	0.0	25.4	35.4*	21.4*	18.2*	0.0	16.4*		21.5
30 - 34	0.0	19.9*	0.0	0.0	0.0	16.0	0.0	19.3*	7.7*	22.2*	17.6*		15.1
35 - 39	51.9*	0.0	0.0	0.0	21.4*	13.8	0.0	14.2*	17.1*	0.0	0.0		13.0
40 - 44	97.1*	0.0	0.0	0.0	0.0	14.0	0.0	13.6*	9.2*	0.0	0.0		12.5
45 - 49	0.0	0.0	0.0	0.0	0.0	8.5	0.0	9.9*	9.9*	0.0	35.1*		8.2
50 - 54	0.0	16.2*	0.0	0.0	0.0	2.3	0.0	2.9*	0.0	0.0	0.0		02.3*
55 - 59	0.0	0.0	0.0	0.0	0.0	5.1	0.0	2.9*	0.0	0.0	0.0		03.4*
60 - 64	0.0	0.0	0.0	0.0	0.0	0.9	0.0	6.2*	0.0	0.0	0.0		01.5*
65 and Older	0.0	0.0	0.0	0.0	0.0	0.7	0.0	1.1*	0.0	0.0	0.0		00.6*
Total	10.8*	4.5*	0.0	0.0	0.9*	7.4	3.7*	6.3	5.4	1.8	4.1		6.3

Arizona Department of Health Services - STD Control Program
 *Rates are not statistically reliable due to small number size.

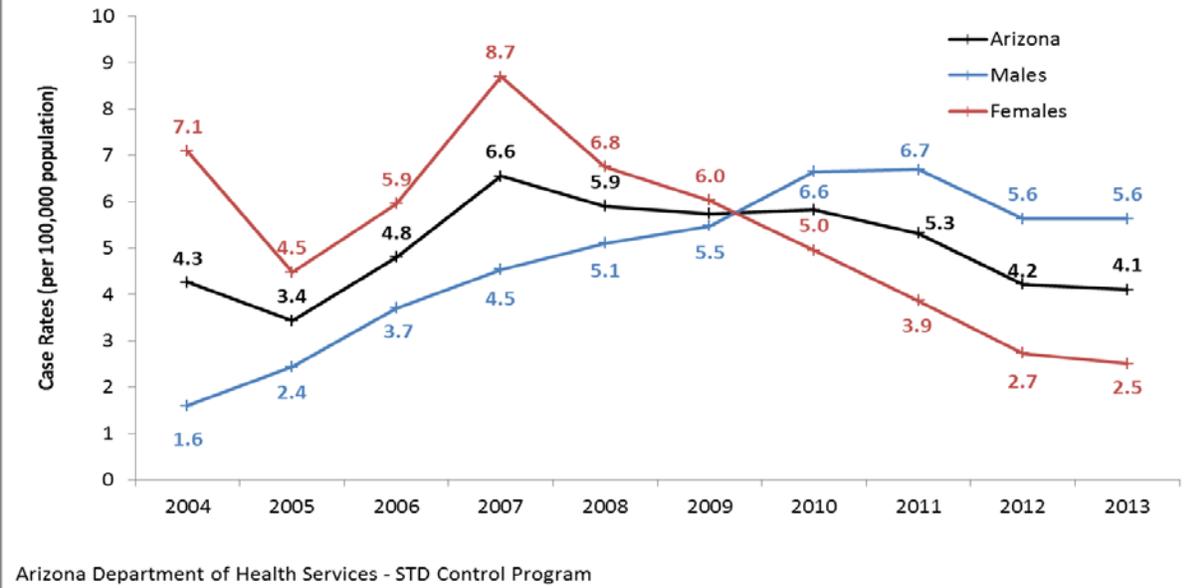
- This report is primarily focused on adolescents in Arizona, however it is important to note that in 2013, 25 – 29 year old males had the highest rate of syphilis (60.9 cases per 100,000 population), while 25-29 year old females had a rate of 21.5 cases per 100,000. Males 20-24 years old had the second highest case rate (50.4), followed by 30 – 34 year old males (rate of 50.1) Among females, the second highest rate was among those 20-24 years old (13.6), followed by 30-34 year old females (rate of 15.1) (Fig 11.)

Figure 11. Reported Syphilis Case Rates by Age Group and Gender, Arizona, 2013



- Beginning in 2010 Males have experienced higher rates of syphilis. And since that time the rate difference has steadily increased. By 2013, the rate among males was 2.2 times higher than among women.

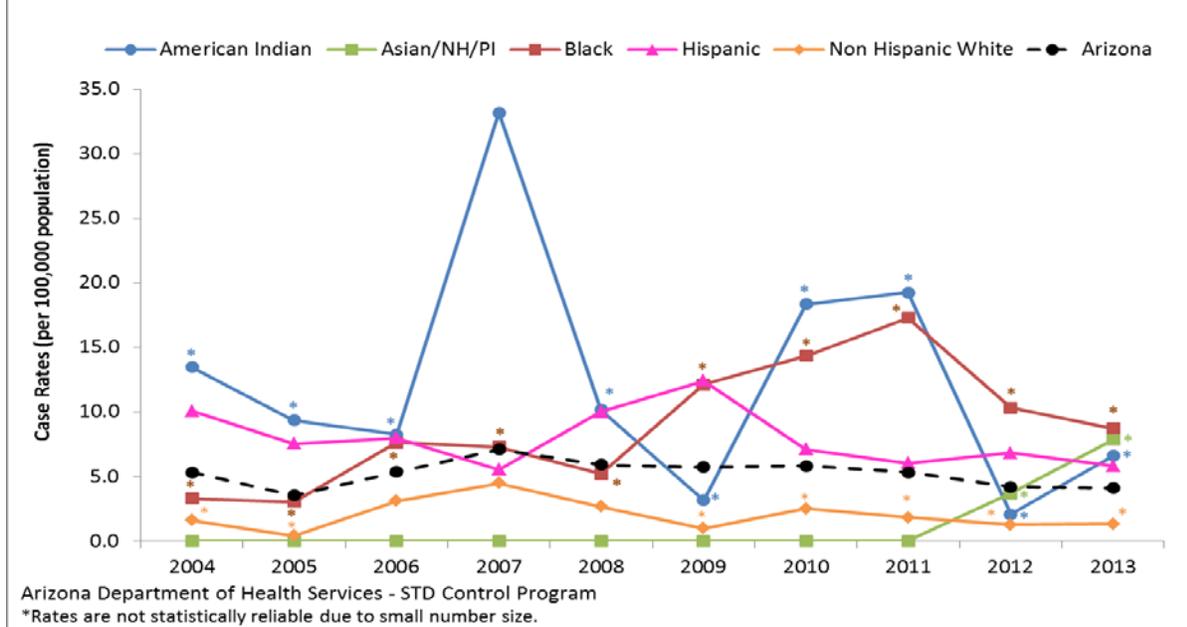
Figure 12. Reported Syphilis Case Rates by Gender in 10 - 19 Year Olds, Arizona, 2004 - 2013



- The rate of syphilis among the 10-19 year olds of various race/ethnicity categories in Arizona has varied from 2004-2013.

- Non-Hispanic White, 10-19 year olds have experienced an overall decrease in the rate of syphilis from 2007 to 2013. The rate amongst this group reached a four year low of 1.3 in 2013.
- Hispanic 10-19 year olds have experienced an overall decrease in rate from 2009 (12.4 cases per 100,000 population) to 2013 (rate of 5.8). The rate of syphilis among Hispanic 10-19 year olds in Arizona is 4.5 times greater than the rate among Non-Hispanic White, 10-19 year olds in Arizona.
- Among Black 10-19 year olds the rate of syphilis reached a 10 year high of 17.3 cases per 100,000 population in 2011. This rate has fallen to 8.7 in 2013. The rate of syphilis among Black 10-19 year olds in Arizona is 6.7 times greater than the rate among Non-Hispanic White, 10-19 year olds in Arizona.
- The rate of syphilis among 10-19 year old American Indian/Alaskan Natives = reached a 10 year high in 2007 as a Southwest Arizona Indian Nation experienced an outbreak of syphilis during that time. It should be noted the age group impacted during this particular outbreak was unusually low.
- The rate among 10-19 year old, American Indians has varied widely over the previous decade and reached a 10 year low of 2.1 cases per 100,000 population in 2012. The rate increased to 6.6 cases per 100,000 population in 2013.
- The rate among Asians 10-19 years old in Arizona increased to 7.9 cases per 100,000 population in 2013. However, this represents an increase from zero cases in 2011, to 2 cases in 2013. This marks the first time in 10 years that the rate for Asians, 10-19 years old exceeded the rate among all 10-19 year olds in Arizona.

Figure 13. Reported Syphilis Case Rates by Race/Ethnicity in 10-19 Year Olds, Arizona, 2004-2013



As detailed in this report, STDs affect people of all ages, races, ethnicities, educational levels, and economic status. In 2013, young adults ages 15-29 bore a disproportionate burden of STDs in Arizona. The ADHS STDCP is addressing these health disparities by collaborating across ADHS programs and reaching out to county and tribal health departments, community-based organizations, national youth organizations, educators, 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 STDCP, this report provides useful and pertinent data to the Arizona public, community leaders, youth educators, and medical providers to promote dialogue about sexual health and disease prevention, to promote screening, medical treatment and services, and to improve the sexual health of all adolescent and young adult Arizonans. Sexual health is everyone's responsibility.

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