SEXUALLY TRANSMITTED DISEASE SURVEILLANCE UTAH 2006-2015

January 2017

UTAH DEPARTMENT OF HEALTH
Bureau of Epidemiology

Acknowledgments

The Utah Department of Health (UDOH) would like to recognize the efforts of local health department personnel throughout the state of Utah who play a critical role in case investigation and data collection on cases of sexually transmitted diseases.

Sexually transmitted disease data for Utah are published by the UDOH Bureau of Epidemiology. Please direct questions or comments to:

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Introduction

Sexually Transmitted Disease Surveillance, Utah, 2006-2015 is a summary of surveillance data for the following reportable sexually transmitted diseases (STDs) in Utah: Chlamydia, gonorrhea, and primary and secondary (P&S) syphilis. Of the over 80 Utah reportable communicable diseases, chlamydia was the most frequently reported disease in 2015 with 8,636 cases; and gonorrhea was third with 1,562 cases.[1] In collaboration with the 13 local health departments (LHDs) throughout the state, each STD case is investigated, including the provision of partner services.

This report consists of five sections: One section each for chlamydia, gonorrhea, and P&S syphilis; a section specific to chlamydia and gonorrhea in adolescents 15 to 19 years of age and young adults 20 to 24 years of age; and a section with tables. Each disease-specific section contains text and figures that summarize data and display trends. The "Adolescents and Young Adults" section takes a more detailed look at the chlamydia and gonorrhea incidence in this vulnerable age group. The "Tables" section includes data for STDs by age group, sex, race/ethnicity, geography, sexual orientation in males, and testing data. Finally, the appendix contains a map of the 13 LHDs and a table listing the counties in each district's service area.

Technical Notes

The Utah Communicable Disease Rule requires that health care providers and laboratories report cases of chlamydia, gonorrhea, and syphilis to their LHD or the Utah Department of Health (UDOH), Bureau of Epidemiology within three working days of identification.[2] Upon receipt, these reports are entered into UT-NEDSS, a secure statewide disease surveillance system which was launched in 2009. This database, along with STD*MIS (Sexually Transmitted Disease Management Information System), a legacy database provided by the Centers for Disease Control and Prevention (CDC), is the source for much of the data provided in this report. The variable "men who have sex with men (MSM)" was introduced into UT-NEDSS in 2009; therefore, charts and tables pertaining to this variable begin in 2009. The cases in this report are classified by CDC's *Morbidity and Mortality Weekly Report (MMWR)* year unless otherwise noted.

Chlamydia and gonorrhea testing data referenced in this report are limited to data provided by the UDOH's Utah Public Health Laboratory (UPHL). In 2013, the UPHL changed its name from Unified State Laboratories: Public Health (USL:PH), the name used in previous reports. The UPHL data includes testing conducted at adult and youth correctional facilities, community and family planning clinics, LHDs, a small number of private providers, and student health centers throughout the state. Testing data from other laboratories are currently unavailable.

Population data used to calculate rates were obtained from the Population Estimates Query Module from the UDOH, Center for Health Data and Informatics, Indicator-Based Information System for Public Health (IBIS-PH).

In this report, missing and unknown age group, sex, and race/ethnicity data were not redistributed; therefore, incidence rates may be underestimated, particularly rates by race/ethnicity.

[1] Utah Department of Health (2016). Top 10 Communicable Disease Report, Utah, 2015, health.utah.gov/epi/data/topdiseases/2015_Top_10.pdf

[2] Utah Code Annotated. R386-702 Communicable Disease Rule.http://www.rules.utah.gov/publicat/code/r386/r386-702.htm

Chlamydia

Chlamydia trachomatis infections continue to be the most frequently reported communicable disease in both Utah and the United States.[3] In 2015, 8,636 cases of chlamydia were reported in Utah. From 2006 to 2015, Utah's chlamydia rate was an average of 58% of the U.S. rate (Figure 1).[4] Utah's chlamydia rate increased 43.1% from 201.5 cases per 100,000 population in 2006 to 288.3 in 2015. The increase in chlamydia rates may be an actual increase in disease trends or due to increased screening efforts, use of increasingly sensitive diagnostic tests, increased reporting by providers and laboratories, and/or improved information systems for reporting.

Over the past 10 years, chlamydia rates in females in Utah have averaged twice that of males in Utah (Figure 2), most likely a result of higher rates of screening in women for this usually asymptomatic infection. Females with chlamydial infection are at risk for developing pelvic inflammatory disease (PID), and both men and women may become infertile as a result of untreated chlamydial infections. Susceptibility to more serious infections, such as the human immunodeficiency virus (HIV), increases when an individual is infected with chlamydia. In addition, pregnant women with chlamydia can pass the infection to their infants during delivery, potentially resulting in pneumonia or neonatal ophthalmia.

During the 2006-2015 time period in Utah, chlamydia rates increased in all age groups between 15-64 years with rate increases ranging from 39% in the 15 to 19 year old age group to 329% in the 55 to 59 year old age group (Table 2). Although the rates in older adults are not as high as in younger age groups, this demonstrates the need to target prevention messages to a wide range of age groups.

Almost two-thirds of the chlamydia cases reported in Utah in 2015 were among people 15-24 years of age. The highest rates of infection were reported among females aged 20-24 years (1,698.1 cases per 100,000 population) and 15-19 years (1,580.2 cases per 100,000 population). The highest rate of infection reported in males was among men aged 20-24 years (763.3 cases per 100,000 population) (Figure 3).

In 2015, three LHDs in Utah had chlamydia rates higher than the state rate: Salt Lake County Health District (414.3 cases per 100,000 population), San Juan Health District (355.1 cases per 100,000 population), and Weber-Morgan Health District (312.9 cases per 100,000 population) (Figure 4). Similar to prior years, the majority of chlamydial infections were identified in the four counties along the Wasatch Front: Salt Lake (53.1% of cases), Davis (10.3% of cases), Weber-Morgan (9.2% of cases), and Utah (11.3% of cases).

In 2015, the highest chlamydia rates among the major racial and ethnic groups in Utah were reported among non-Hispanic blacks (1008.6 cases per 100,000 population) and Pacific Islanders (665.3 cases per 100,000 population), followed by Hispanics and American Indian/Alaska Natives (510.3 and 510.2 cases per 100,000 population, respectively) (Figure 5). The lowest chlamydia rates were reported among the non-Hispanic multiple race category (51.5 cases per 100,000 population).

Chlamydia screening tests administered by adult and youth correctional facilities, community and family planning clinics, LHDs, a small number of private providers, and student health centers throughout the state are processed at the UPHL. The lab adopted a dual chlamydia/gonorrhea test in late 2004. The number of chlamydia results reported by the UPHL increased 48% between 2006 and 2015 (Figure 6). Consistent with screening recommendations, 57% of the chlamydia tests during this ten-year period were administered to female patients and males have consistently had a higher positivity rate than females. Testing data from other laboratories are currently unavailable.

[3] Utah Department of Health (2016). Top 10 Communicable Disease Report, Utah, 2015, http://health.utah.gov/epi/data/topdiseases/2015_Top_10.pdf.

[4] Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2015*. Atlanta: U.S. Department of Health and Human Services; 2016.

Figure 1. Chlamydia Rates, Utah and United States, 2006-2015

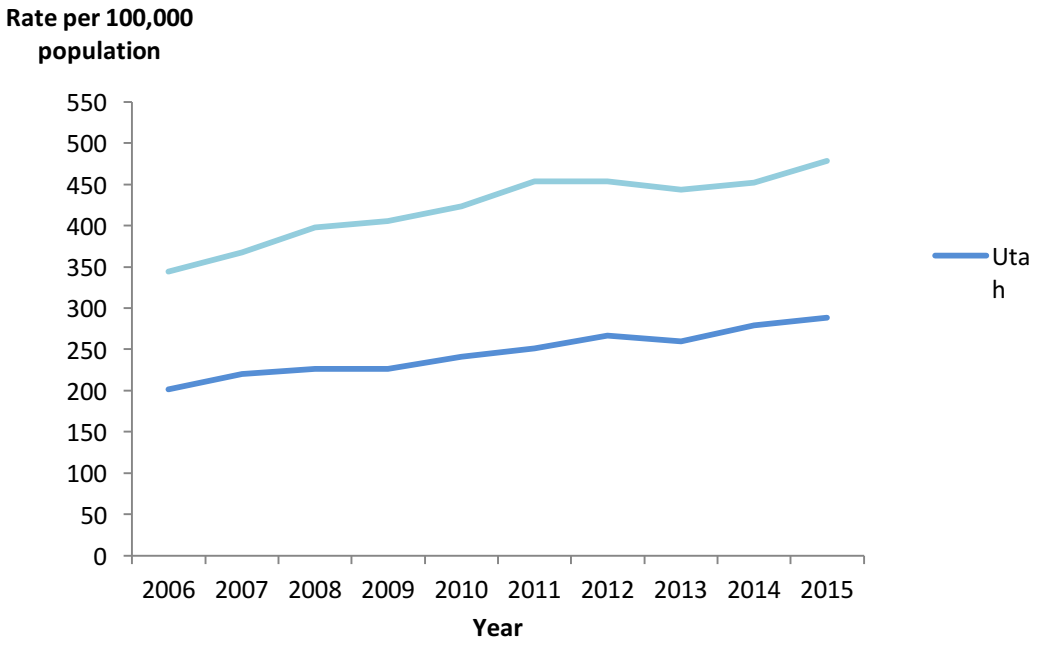


Figure 2. Chlamydia Rates by Sex, Utah, 2006-2015

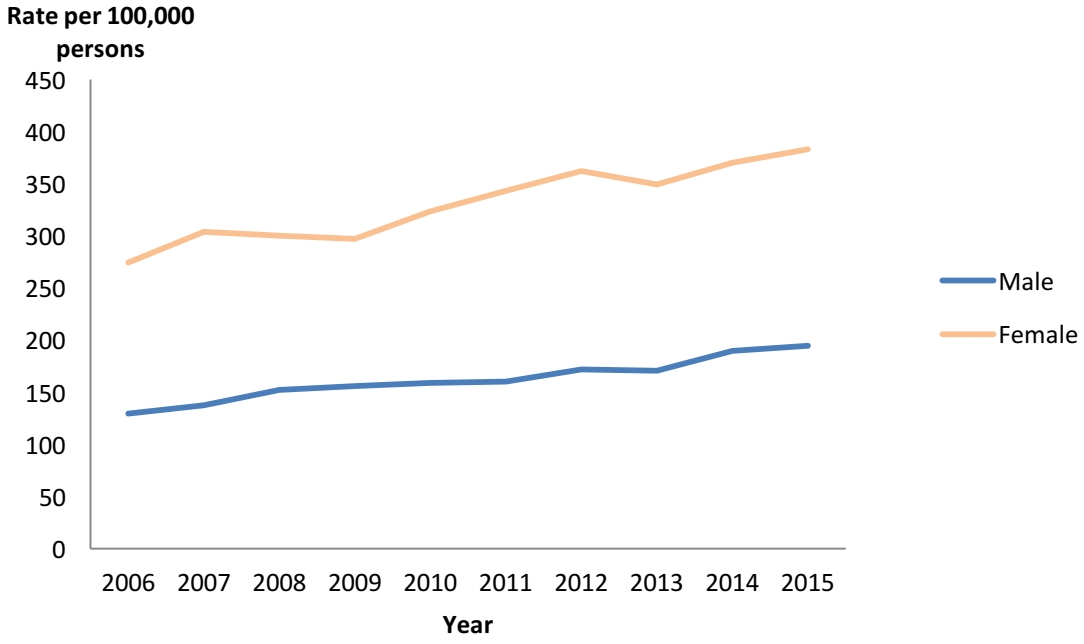


Figure 3. Chlamydia Rates by Age Group and Sex Among Persons Aged ≥10 Years, Utah, 2015

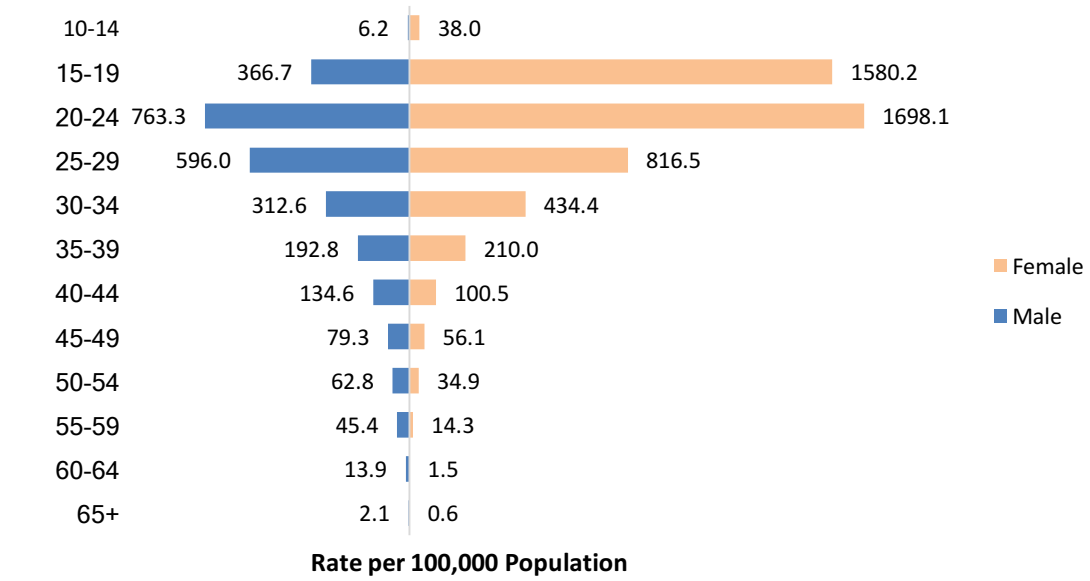


Figure 4. Chlamydia Rates by Local Health District, Utah, 2015

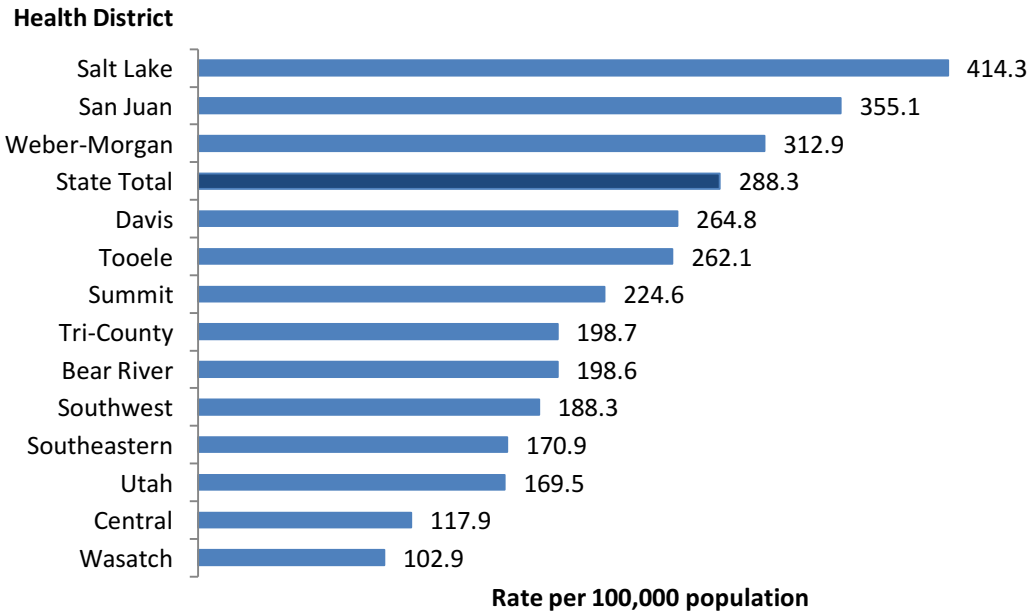


Figure 5. Chlamydia Rates by Race/Ethnicity, Utah, 2015

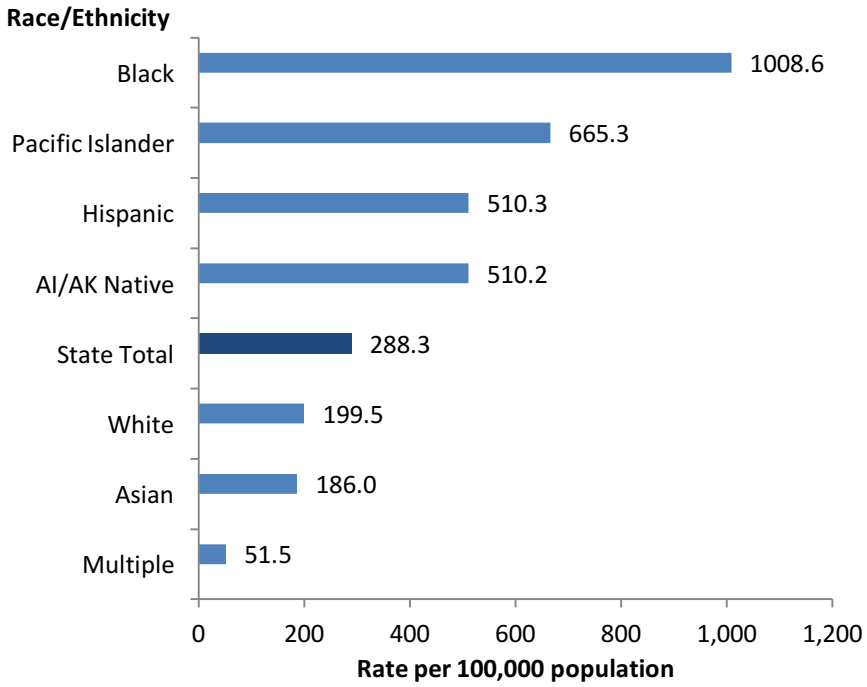
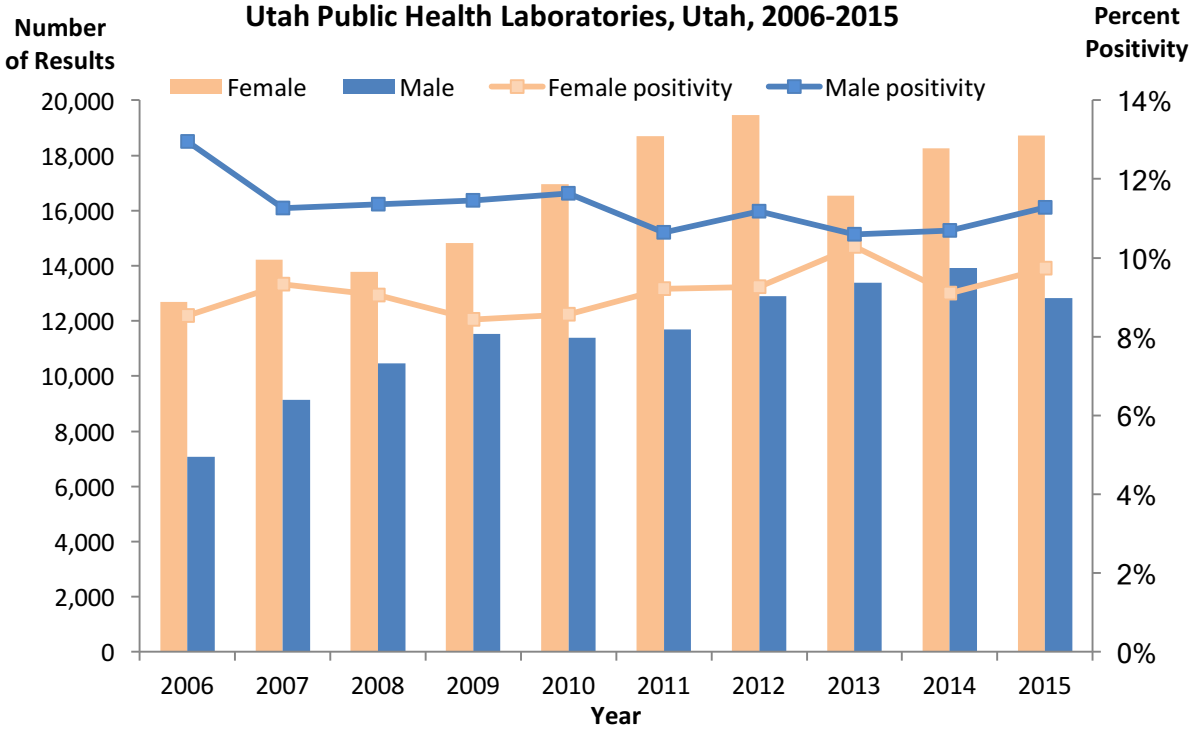


Figure 6. Number of Chlamydia Test Results and Percent Positivity by Sex, Utah Public Health Laboratories, Utah, 2006-2015



Gonorrhea

In 2015, 1,562 cases of gonorrhea were reported in Utah. Gonorrhea was the third most frequently reported communicable disease in Utah and the second most reported disease in the United States.[5, 6] Utah's gonorrhea rate was 42.1% the U.S. rate in 2015, up from 9.5% the U.S. rate in 2011 (Figure 7). Following a 40% increase of Utah's gonorrhea rate from 2004 to 2006, when the rate peaked at 35.2 cases per 100,000 population, Utah's gonorrhea rate decreased annually to the lowest rate reported of 9.8 in 2011. The rate increased to 52.1 cases per 100,000 population in 2015, an increase of 432% from the 2011 rate.

Gonorrhea rates among males in Utah have consistently been higher than among females over the past 10 years (Figure 8); from 2009 to 2012, males had rates at least 2.5 times higher than females. However, in 2013 and 2014 rates among males were only 1.5 times higher due to a large increase of gonorrhea in females. In 2015, the male to female rate ratio returned to 2.1 as the gonorrhea rate among females decreased slightly. Two-thirds of male gonorrhea cases in 2009 and 2010 were among men who have sex with men (MSM). This percentage has decreased, from 62% in 2011 to 43% in 2015; however, the percentage of unknown sexual orientation has increased from 15% in 2011 to 24% in 2015 (Figure 12).

Untreated gonorrhea infections can damage the reproductive system in both males and females. Females with gonorrhea infection are at risk for developing pelvic inflammatory disease (PID). Gonorrhea can spread to joints and become systemic (disseminated gonorrhea). Susceptibility to infections, such as the human immunodeficiency virus (HIV), increases in individuals infected with gonorrhea. Furthermore, pregnant women with gonorrhea can pass the infection to their infant during delivery, potentially resulting in ophthalmia neonatorum.

In 2015, 64% of the reported gonorrhea cases in Utah were among people 20-34 years of age. In males, the highest rates of infection were in the 25-29 years old age group (242.6 cases per 100,000 population) followed by the 20-24 years old age group and the 30-34 years old age group (179.0 and 142.3 cases per 100,000 population, respectively) (Figure 9). In females, the highest rate of infection was among 20-24-year olds (117.1 cases per 100,000 population). Although the rates were lower, the largest percentage rate increase from 2014 to 2015 was among people 55 to 59 years old.

In 2015, two local LHDs in Utah had gonorrhea rates higher than the state rate: Salt Lake County Health District (94.7 cases per 100,000 population) and Weber-Morgan Health District (57.7 cases per 100,000 population) (Figure 10). Similar to prior years, more than 90% of the cases were identified in four LHDs along the Wasatch Front: Salt Lake (67.2%), Weber-Morgan (9.4%), Davis (5.9%), and Utah (8.3%).

In 2015, the highest gonorrhea rate among the major racial and ethnic groups in Utah was reported among non-Hispanic blacks (429.5 cases per 100,000 population), followed distantly by non-Hispanic Pacific Islanders, non-Hispanic American Indians / Alaska Natives, and Hispanics (79.1, 78.8, and 73.5 cases per 100,000 population, respectively) (Figure 11).

Gonorrhea screening tests administered by adult and youth correctional facilities, community and family planning clinics, LHDs, a small number of private providers, and student health centers throughout the state are processed at the UPHL. The lab adopted a dual chlamydia/gonorrhea test in late 2004. The number of gonorrhea results reported by the UPHL increased 46% between 2006 and 2015 (Figure 13). Consistent with screening recommendations, 57% of gonorrhea tests were administered to females; males had

[5] Utah Department of Health (2016). Top 10 Communicable Disease Report, Utah, 2015, http://health.utah.gov/epi/data/topdiseases/2015_Top_10.pdf

[6] Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2015*. Atlanta: U.S. Department of Health and Human Services; 2016.

positivity rates that are consistently higher than females. In 2015, 46% more tests were administered to women compared to men. Males and females had a positivity rate of 4.7% and 0.9% respectively. Testing data from other laboratories are currently unavailable.

To address Utah's increasing gonorrhea case rate, the Utah Department of Health (UDOH) in conjunction with five local health departments (LHDs) implemented an electronic gonorrhea outbreak investigation form utilizing Utah's integrated electronic surveillance system, UT-NEDSS.

The gonorrhea outbreak investigation form was implemented in April of 2014 and concluded in October of 2014. Additional interview questions gathered information regarding symptoms, health insurance status, student status, places sex partners were met, anonymous sex partners, drug and alcohol use, sex work, and the sex of partners.

Results from these analysis showed that programmatic activities should be targeted to individuals who are known or suspected drug users and those who have been incarcerated or have had a sex partner who has been incarcerated in the past 12 months.

Further investigation is needed to further understand the rise in gonorrhea rates.

Figure 7. Gonorrhea Rates, Utah and United States, 2006-2015

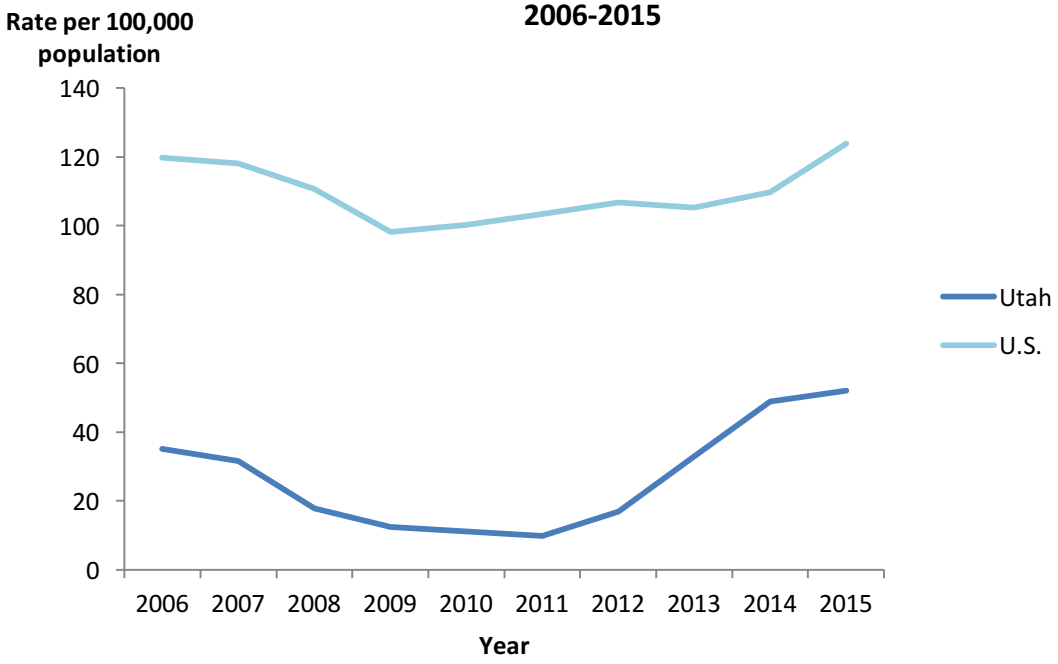


Figure 8. Gonorrhea Rates by Sex, Utah, 2006-2015

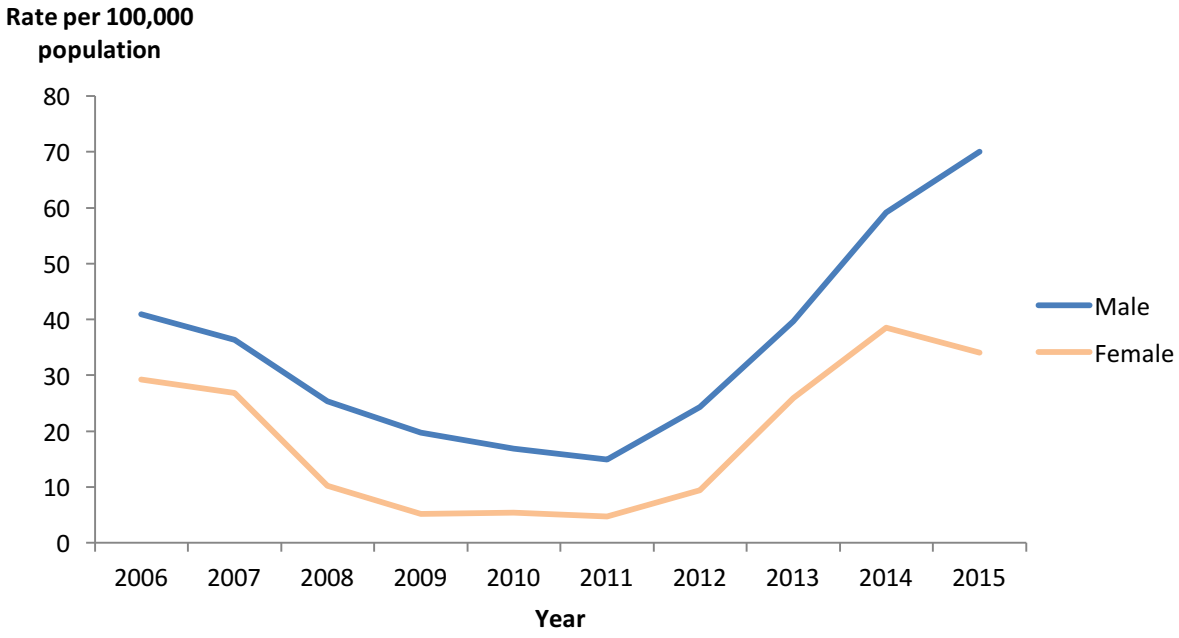


Figure 9. Gonorrhea Rates by Age Group and Sex Among Persons Aged ≥10 Years, Utah, 2015

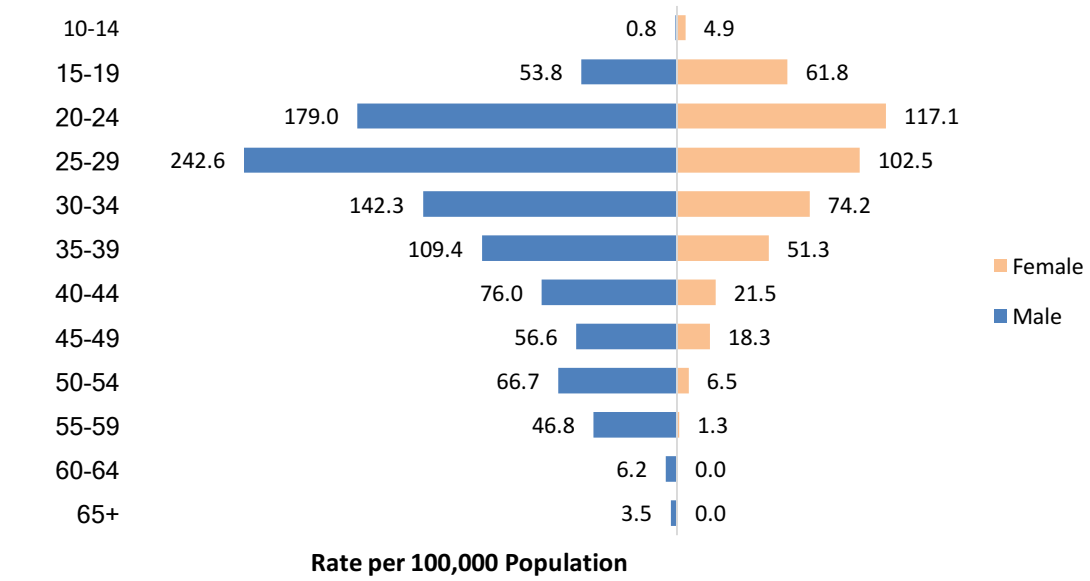


Figure 10. Gonorrhea Rates by Local Health District, Utah, 2015

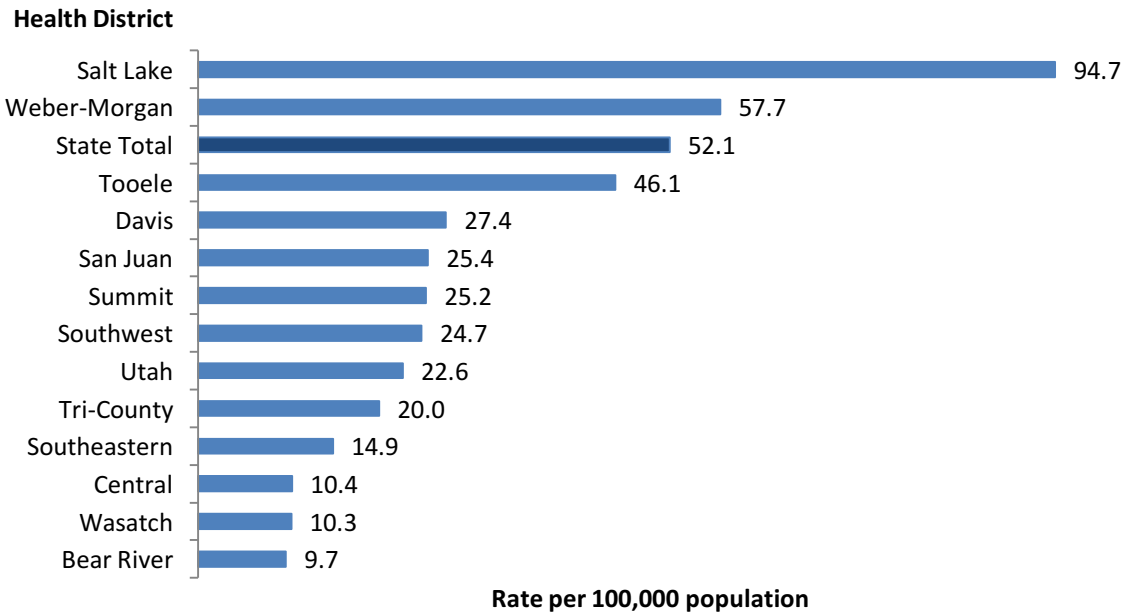


Figure 11. Gonorrhea Rates by Race/Ethnicity, Utah, 2015

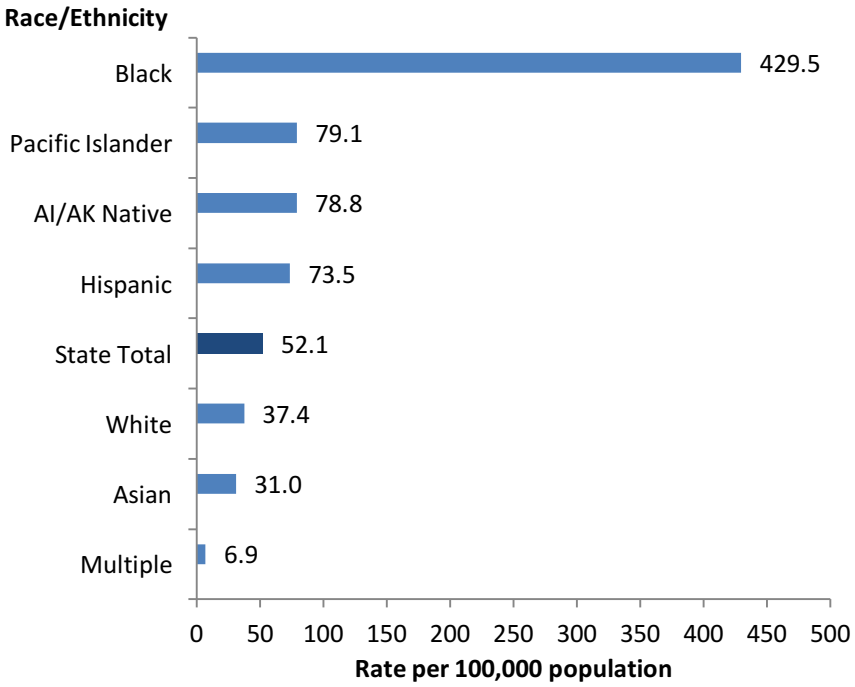
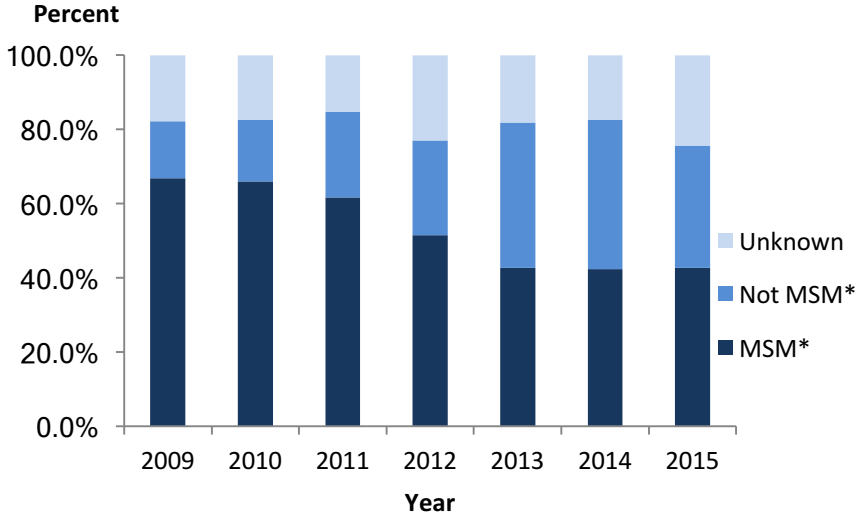
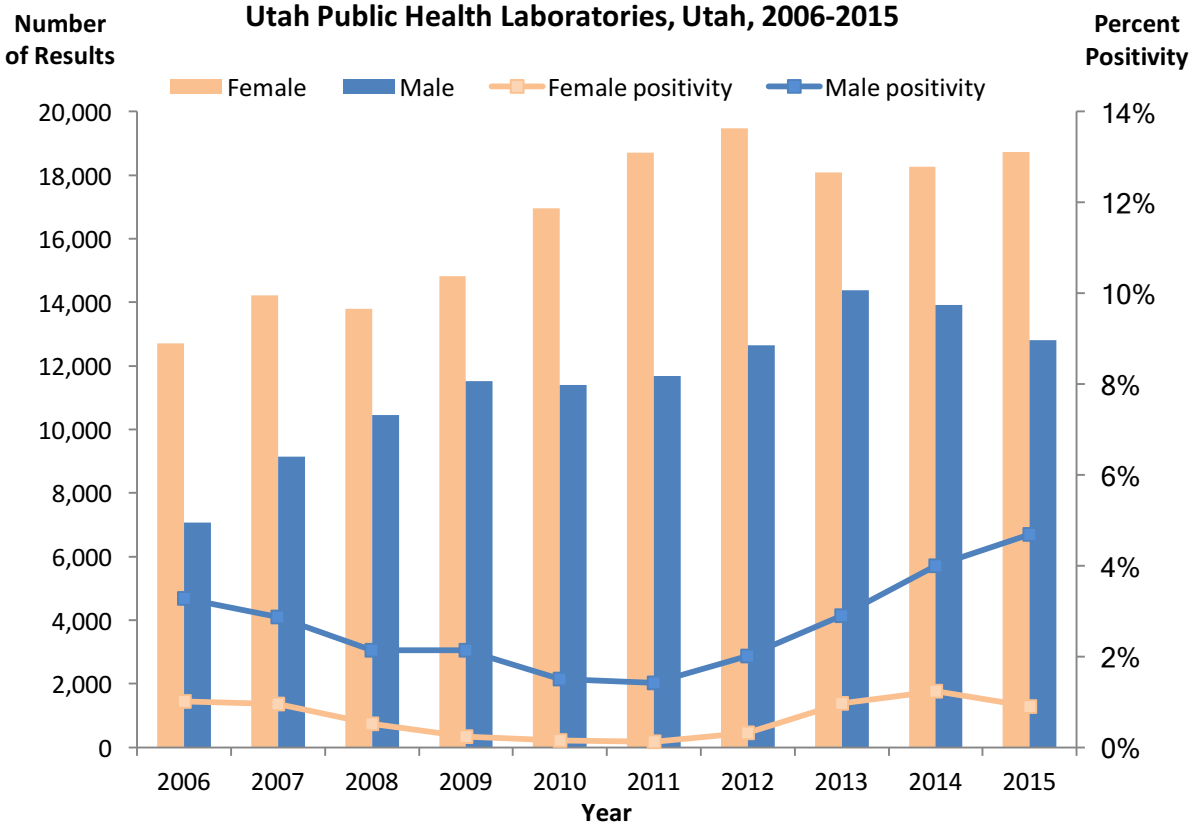


Figure 12. Percent of Male Gonorrhea Cases by Sexual Orientation, Utah, 2009-2015



*MSM = Men Who Have Sex with Men

Figure 13. Number of Gonorrhea Test Results and Percent Positivity by Sex,
Utah Public Health Laboratories, Utah, 2006-2015



Primary and Secondary Syphilis

Syphilis is a complex sexually transmitted disease comprised of several stages throughout the duration of infection. The initial stage, primary syphilis, is characterized by a highly infectious, painless open sore at the site of infection called a chancre. Syphilis is passed from person to person through direct contact with the chancre. Sexual transmission can also occur during the secondary stage of syphilis during which there is widespread hematogenous spread of the organism throughout the body. An infant can acquire syphilis through the placenta if the mother is infected, and untreated syphilis in pregnant women may result in stillbirth and perinatal death. In later stages of the disease, the bacteria move throughout the body, damaging many organs over time. Significant complications typically occur when syphilis is untreated. Due to the open nature of the syphilitic sores, untreated syphilis facilitates the transmission of the human immunodeficiency virus (HIV).

The primary and secondary (P&S) stages of syphilis are considered to be the most infectious stages and are the focus of this report. In 2015, 65 cases of primary and secondary syphilis were reported in Utah compared with 48 cases in 2014. There was an average of 41 cases each year in the previous ten years. The P&S syphilis rate in Utah in 2015 was 2.2 cases per 100,000 population.

The P&S syphilis rate in Utah has risen and fallen over the past 10 years. The rate of P&S syphilis in Utah increased from 0.8 cases per 100,000 population in 2006 to 2.3 in 2010. The increase was particularly steep from 2008 to 2010, which was inconsistent with the national trend during the same time period when rates leveled off (Figure 14). In 2011, the rate decreased to 0.5 cases per 100,000 population but has increased since. In 2013, the rate increased to 2.6 cases per 100,000 population, the highest in the past 10 years. In 2015, Utah's P&S syphilis rate was 29% the national rate.[7]

P&S syphilis rates in males were significantly higher than in females throughout the past decade in Utah (Figure 15). No cases of P&S syphilis were diagnosed among females in four of the past 10 years.

The highest P&S syphilis rates in Utah in 2015 were among men 25-29 years old (13.7 cases per 100,000 population) (Figure 16). P&S syphilis cases were reported in all age groups older than 15 years old. This highlights the need to target prevention messages to a wide range of age groups.

In 2015, six LHDs in Utah reported P&S syphilis cases: Salt Lake County Health District, Davis County Health District, Weber-Morgan Health District, Utah County Health District, Bear River Health District, and Southwest Utah Health District (Figure 17). Salt Lake County Health District accounted for three fourths of the P&S cases in Utah in 2015 with a rate of 4.4 cases per 100,000 population.

Of the 65 cases of P&S syphilis reported in Utah in 2015, the breakdown among racial and ethnic groups was as follows: 42 cases (64.6%) were among non-Hispanic whites; 20 (30.8%) cases among Hispanics; and 1 case each among non-Hispanic blacks, non-Hispanic Asians and the other/unknown category.

Since 2009, over 80% of the P&S cases in men have been among men who have sex with men (MSM) (Figure 18).

[7] Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2015*.Atlanta: U.S. Department of Health and Human Services; 2016.

Figure 14. Primary and Secondary Syphilis Rates, Utah and United States, 2006-2015

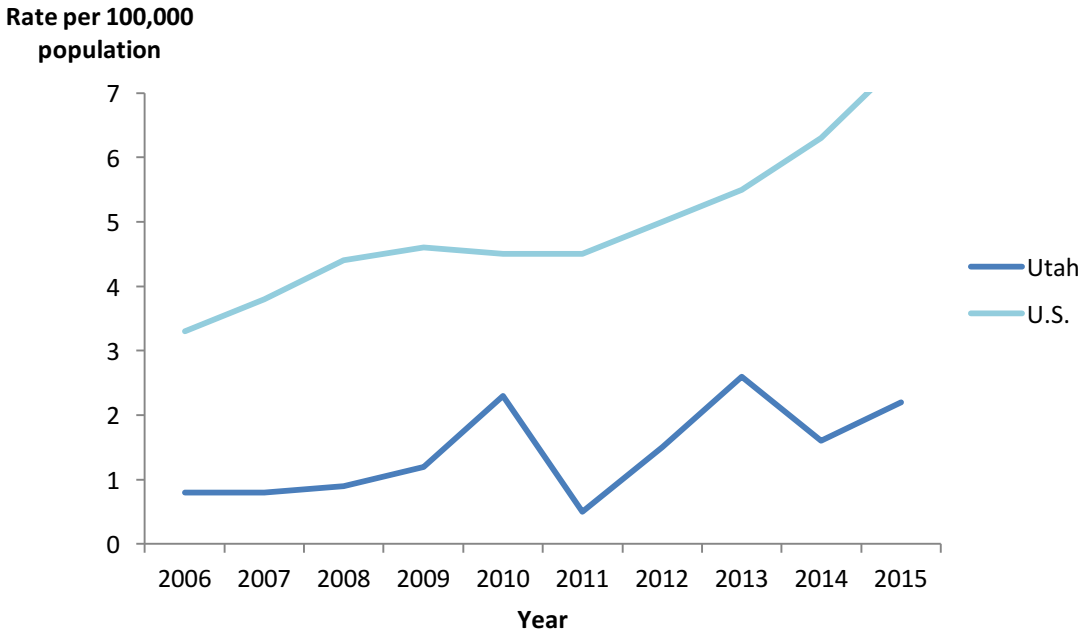


Figure 15. Primary and Secondary Syphilis Rates by Sex, Utah, 2006-2015

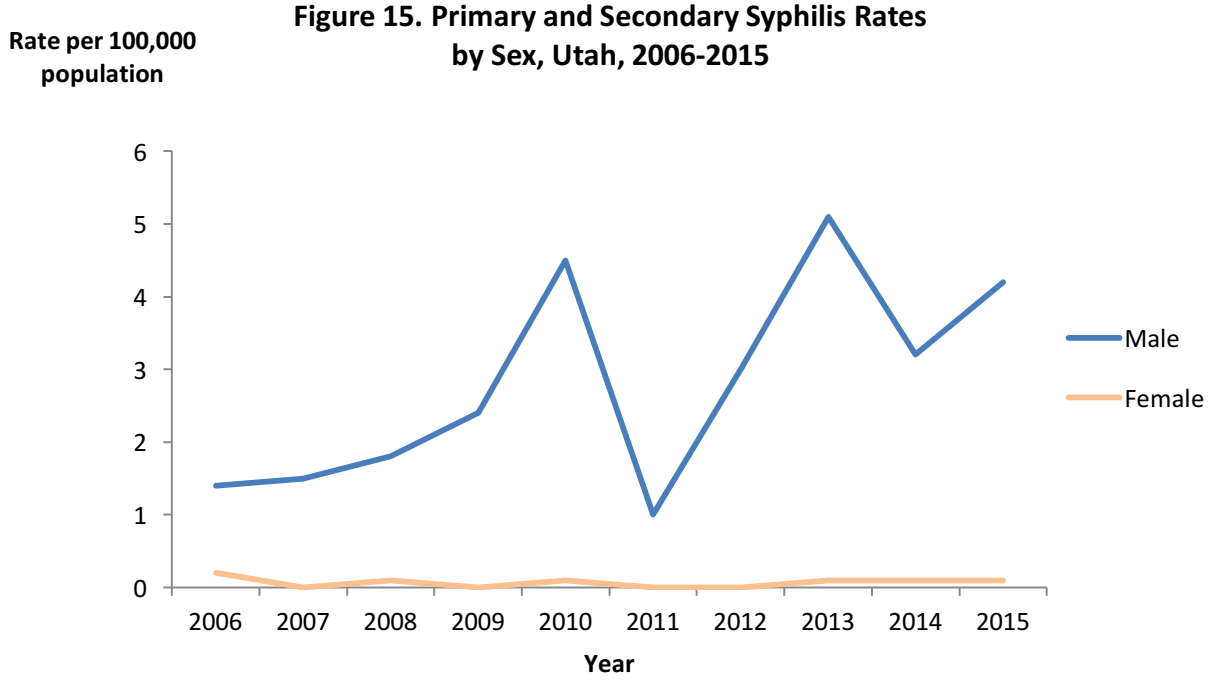


Figure 16. Primary and Secondary Syphilis Rates in Males by Age Group, Utah, 2015

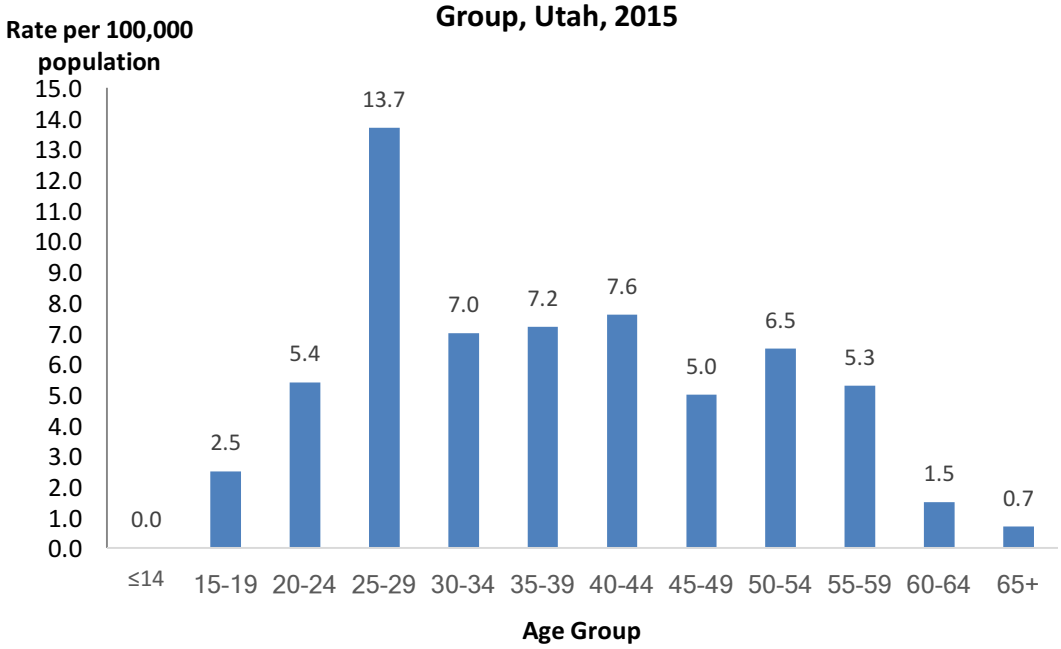


Figure 17. Primary and Secondary Syphilis Rates by Local Health District, Utah, 2015

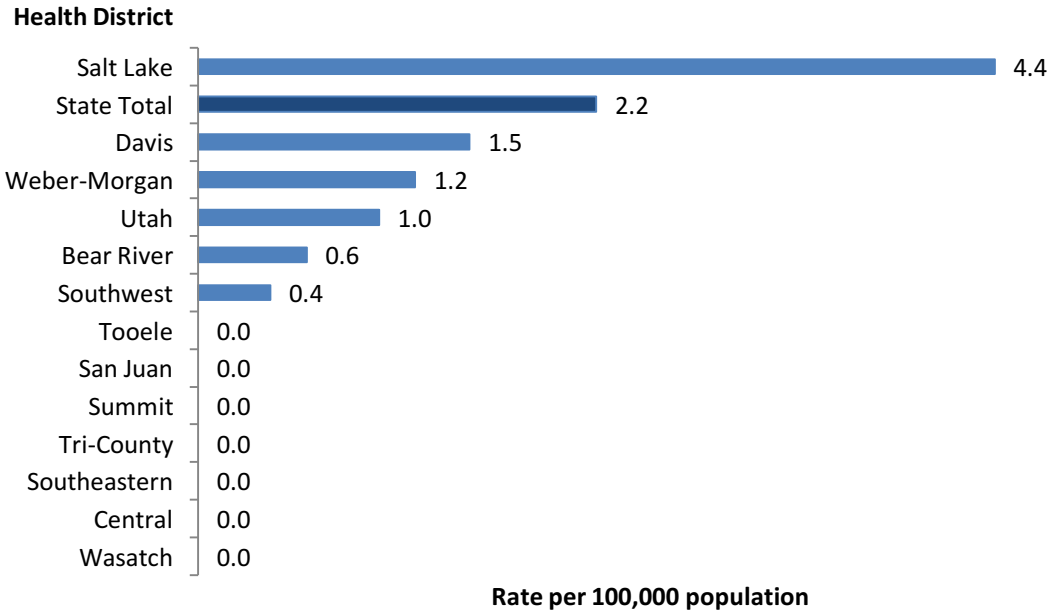
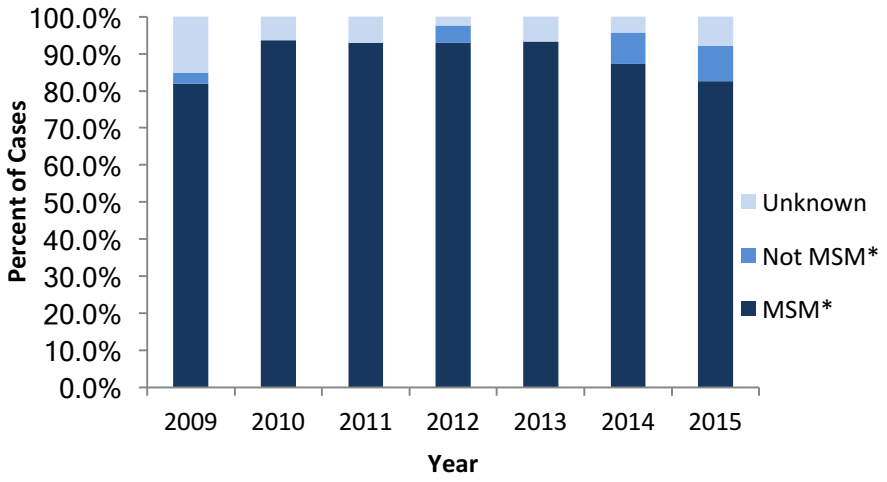


Figure 18. Percent of Male Primary and Secondary Syphilis Cases by Sexual Orientation, Utah, 2009-2015



*MSM = Men Who Have Sex with Men

Chlamydia and Gonorrhea in Adolescents and Young Adults

In both Utah and the United States, adolescents 15 to 19 years of age and young adults 20 to 24 years of age have higher incidences of chlamydia and gonorrhea.[8] In 2015, people 15 to 24 years of age represented 16% of Utah's population; yet, this population accounted for 62% of reported chlamydia cases and 33% of gonorrhea cases. The increased rate of STDs can be attributed to increased risky sexual behavior among adolescents and young adults, anatomical vulnerabilities increasing transmission rates, and increased screening among this age group.

Chlamydia

Chlamydia trachomatis infection rates steadily increased in people 15-19 and 20-24 years of age from 2006 to 2015, with the exception of a slight decrease in 2013 (Figure 19). During this 10-year period, the chlamydia rate increased 45% in males 15-19 years, 42% in males 20-24 years, 39% in females 15-19 years, and 50% in females 20-24 years. Throughout this period, the rate in females aged 15-19 was about four times that in males of the same age; and in people aged 20-24 years, the female rate was about twice that of males.

In 2015, the distribution of morbidity in adolescents and young adults varied by age. Adolescents 15 and 16 years of age had the lowest rates of chlamydia in both males and females (Figure 20). The rates increased with age and peaked in females at age 19 (2,703.3 cases per 100,000 population) and in males at age 20 (960.2 cases per 100,000 population). The rate of chlamydia in females was greater than that of males at every age; and the rate ratios generally decreased with age. Females had rates five times higher than males in 15-year-olds, four times higher in 16- to 18-year-olds, three times higher in 19-year-olds, and about two times higher in 20- to 24-year-olds.

[8] Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2015.*Atlanta: U.S. Department of Health and Human Services; 2016.

Gonorrhea

Gonorrhea rates peaked in 2006 for those 20-24 years of age (133.1 cases per 100,000 population) and in 2007 for those 15-19 years of age (69.7 cases per 100,000 population) (Figure 21). Since then, both age groups declined steadily until 2012, when rates in both age groups increased. Rates continued to increase in both age categories from 2011 through 2015; rates in 15-19 year olds increased 250% while rates in 20-24 year olds increased 319%. From 2014 to 2015, male rates in 15-19 year olds and 20-24 year olds stayed relatively constant. During this same time frame, the rates decreased 21.8% in females 15-19 years of age and 12.2% in females 20-24 years of age.

Rates among males and females 15-19 years of age have fluctuated in the past 10 years. In 2006 and 2007, females 15-19 years of age had gonorrhea rates at least twice that of males in this age group (Figures 21). The rates between the sexes in this age group were similar from 2008 to 2011; males had a rate twice that of females in 2012; and females had higher rates from 2013 to 2015. Among males and females 20-24 years of age, males have consistently had higher rates of gonorrhea. From 2008 to 2011, male rates in this age group were two to three times female rates; however, in 2012, the gonorrhea rate of females 20-24 years of age doubled and, in 2013, almost tripled, rendering the male and female rates similar. Since 2013, rates in females in this age group have not increased at the same rate as males. Consequently, in 2015, rates among males were 1.5 times rates among females.

In 2015, the distribution of morbidity in adolescents and young adults varied by age (Figure 22). Adolescent males and females 15-17 years of age had the lowest gonorrhea rates. Rates in males were higher than in females of the same age in people 20 years or older. The highest rate in males was among adolescents 20 years of age (202.9 cases per 100,000 population) and the highest rate in females was among young women 22 years of age (164.2 cases per 100,000 population).

Figure 19. Chlamydia Rates by Age Group and Sex in Adolescents and Young Adults, Utah, 2006-2015

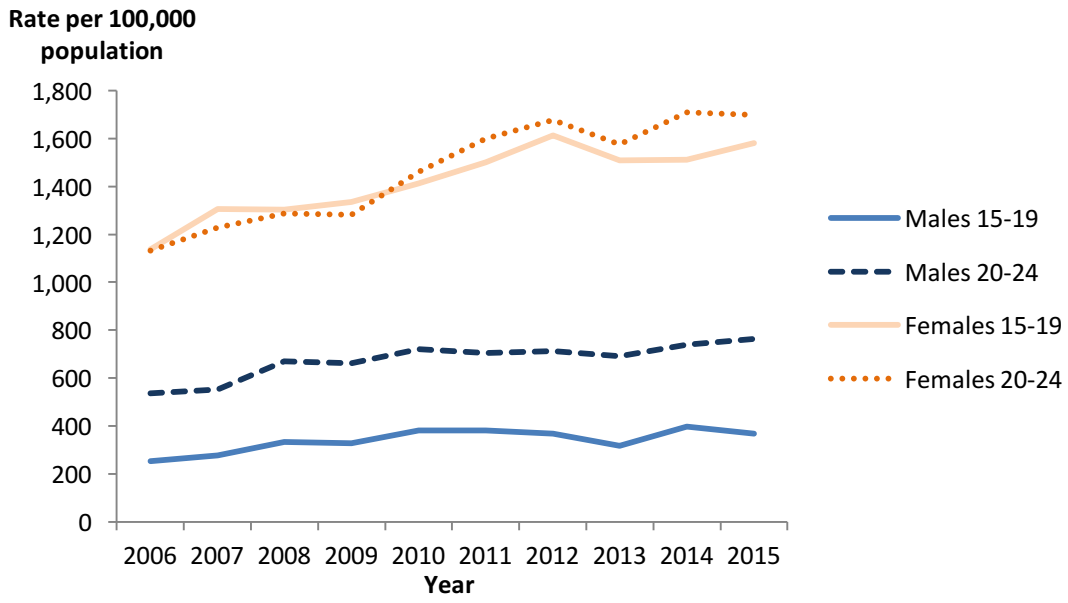


Figure 20. Chlamydia Rates by Age and Sex in Adolescents and Young Adults, Utah, 2015

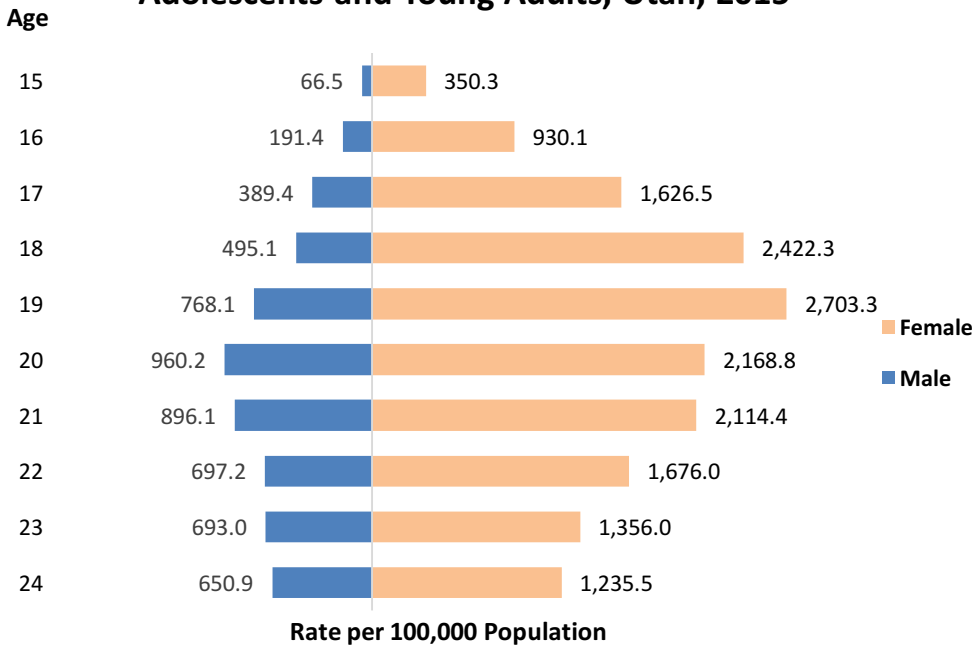


Figure 21. Gonorrhea Rates by Age Group and Sex in Adolescents and Young Adults, Utah, 2006-2015

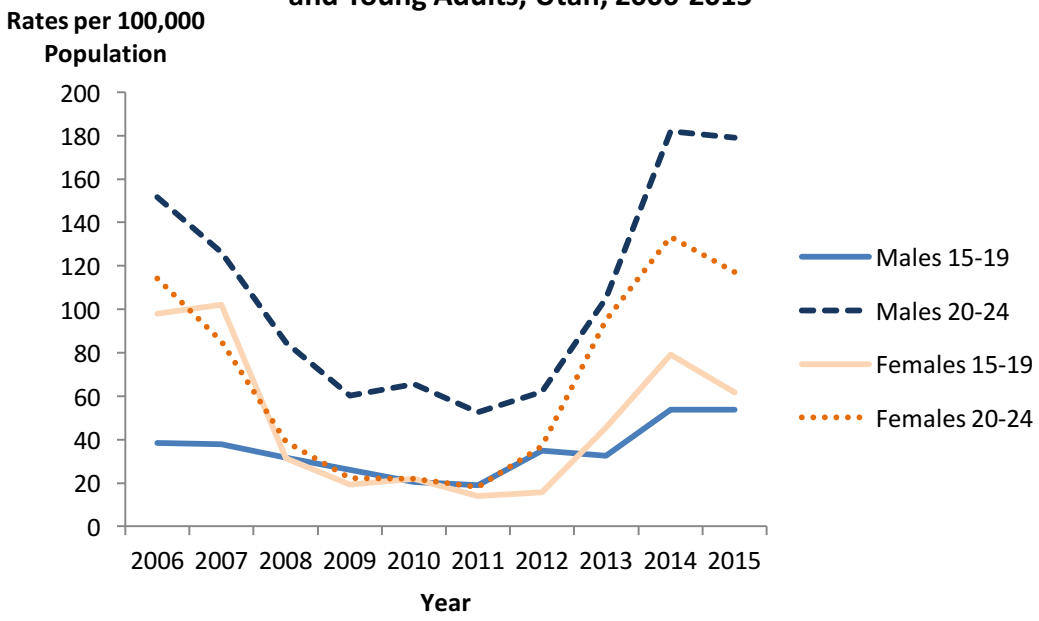
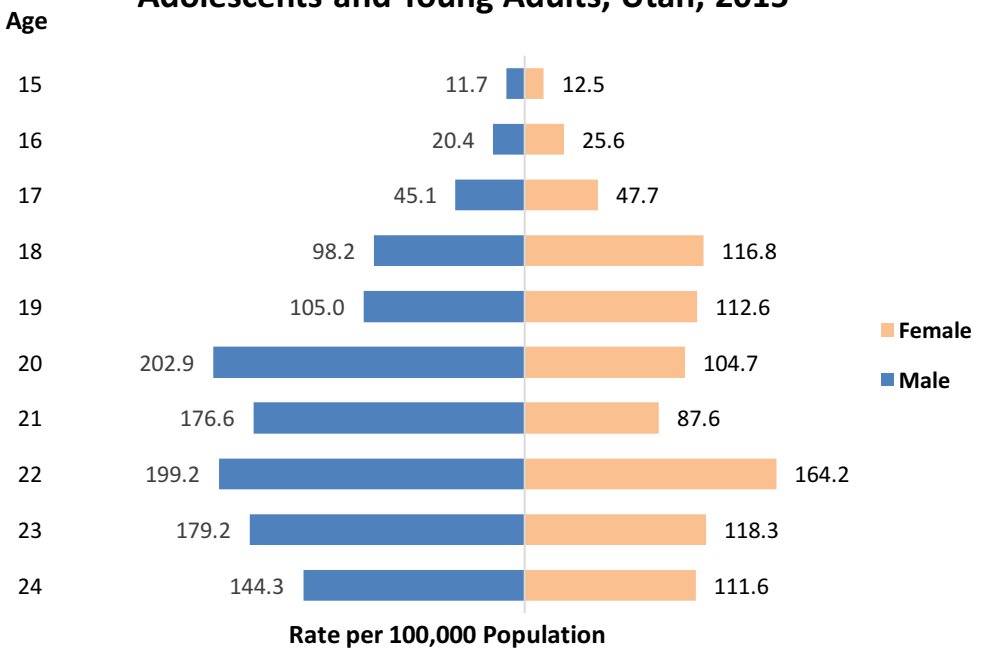


Figure 22. Gonorrhea Rates by Age and Sex in Adolescents and Young Adults, Utah, 2015



TABLES

Table 1. Cases of Sexually Transmitted Diseases and Rates per 100,000 Population, Utah and United States (U.S.), 2006-2015

	Chlamydia			Gonorrhea			Primary and Secondary Syphilis		
	Utah		U.S.	Utah		U.S.	Utah		U.S.
Year	Cases	Rate	Rate	Cases	Rate	Rate	Cases	Rate	Rate
2006	5,090	201.5	344.3	888	35.2	119.7	21	0.8	3.3
2007	5,720	220.2	367.5	821	31.6	118.0	20	0.8	3.8
2008	6,021	226.1	398.1	477	17.9	110.7	25	0.9	4.4
2009	6,157	226.1	405.3	341	12.5	98.1	33	1.2	4.6
2010	6,686	240.9	423.6	310	11.2	100.2	65	2.3	4.5
2011	7,075	251.2	453.4	277	9.8	103.3	14	0.5	4.5
2012	7,616	266.6	453.3	483	16.9	106.7	43	1.5	5.0
2013	7,535	259.5	443.5	953	32.8	105.3	76	2.6	5.5
2014	8,225	279.3	452.2	1,439	48.9	109.8	48	1.6	6.3
2015	8,636	288.3	478.8	1,562	52.1	123.9	65	2.2	7.5

Note: Cases were classified by Morbidity and Mortality Weekly Report (MMWR) year.

Sources: Utah Cases - Bureau of Epidemiology, Utah Department of Health; US Rates - Centers for Disease Control and Prevention; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 2. Chlamydia Cases and Rates by Age Group and Sex, Utah, 2006-2015

Sex	Age Group (years)	Cases										Rates per 100,000 Population									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MALE	<1	4	2	4	3	2	3	5	2	0	0	15.2	7.3	15.0	11.0	7.4	11.4	19.6	7.6	0.0	0.0
	1 to 9	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 14	2	8	7	5	6	5	5	4	2	8	1.9	7.4	6.3	4.4	5.1	4.1	4.1	3.2	1.6	6.2
	15 to 19	269	302	366	364	425	423	411	362	457	436	252.5	278.5	332.3	327.7	381.0	381.2	367.8	317.5	396.1	366.7
	20 to 24	644	651	774	758	825	828	872	867	934	981	536.0	551.8	669.1	662.6	721.4	703.9	712.0	691.1	738.6	763.3
	25 to 29	382	429	445	515	494	514	549	616	657	651	352.6	376.9	381.4	440.6	419.1	450.2	502.4	576.1	610.8	596.0
	30 to 34	160	212	210	252	237	249	322	320	334	358	170.4	216.0	203.6	231.0	212.9	218.6	278.8	275.0	289.0	312.6
	35 to 39	87	100	116	118	112	116	147	160	194	215	109.0	120.1	135.2	132.6	122.4	123.4	149.5	155.5	180.8	192.8
	40 to 44	39	46	50	50	59	70	72	78	112	124	51.8	60.8	66.0	65.2	74.4	84.5	84.4	89.0	124.7	134.6
	45 to 49	26	23	36	34	22	35	50	47	57	63	34.1	29.9	46.2	43.6	28.4	45.9	65.9	62.0	74.4	79.3
	50 to 54	12	12	20	21	21	14	26	20	45	48	17.6	16.8	27.3	28.2	27.7	18.2	33.7	25.8	58.1	62.8
	55 to 59	8	3	6	5	9	1	8	5	13	34	13.9	5.1	9.8	7.8	13.5	1.5	11.3	6.9	17.7	45.4
	60 to 64	1	1	1	3	4	3	2	5	3	9	2.4	2.2	2.1	6.0	7.5	5.3	3.5	8.4	4.8	13.9
	65+	2	5	1	1	0	1	0	3	1	3	2.0	4.9	0.9	0.9	0.0	0.8	0.0	2.3	0.7	2.1
	Unknown	1	0	3	0	3	1	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Male Total	1,637	1,794	2,039	2,129	2,219	2,263	2,469	2,489	2,809	2,930	129.2	137.5	152.5	155.6	159.1	159.9	171.9	170.5	189.7	194.4
FEMALE	<1	4	3	4	2	1	0	1	1	0	2	16.4	11.8	15.9	7.7	3.9	0.0	4.1	4.0	0.0	8.1
	1 to 9	2	2	2	1	1	0	1	1	0	0	1.0	1.0	0.9	0.5	0.4	0.0	0.4	0.4	0.0	0.0
	10 to 14	45	49	40	49	43	48	55	37	48	47	45.6	48.3	38.4	45.3	38.5	42.0	47.2	31.0	39.5	38.0
	15 to 19	1,196	1,395	1,410	1,454	1,539	1,614	1,734	1,653	1,684	1,816	1,138.4	1,307.1	1,302.9	1,334.5	1,413.7	1,501.2	1,612.3	1,507.7	1,511.2	1,580.2
	20 to 24	1,309	1,399	1,457	1,451	1,658	1,864	1,998	1,908	2,087	2,088	1,131.1	1,229.1	1,287.0	1,282.6	1,459.8	1,600.6	1,678.2	1,575.1	1,707.9	1,698.1
	25 to 29	575	672	641	649	715	738	711	777	796	876	545.2	612.7	575.7	579.9	644.7	676.7	667.0	737.6	754.8	816.5
	30 to 34	188	238	248	244	296	301	376	386	461	480	213.6	257.0	252.5	237.5	278.2	275.4	339.0	345.2	413.6	434.4
	35 to 39	80	97	106	102	121	146	157	162	188	225	104.5	121.1	128.0	119.3	137.2	161.3	166.1	163.8	182.7	210.0
	40 to 44	31	45	44	49	63	62	66	78	93	89	42.0	61.4	60.2	66.4	82.7	78.1	80.7	92.6	107.7	100.5
	45 to 49	11	14	18	14	20	29	22	24	37	43	14.4	18.2	23.1	17.9	25.9	38.4	29.5	32.6	49.7	56.1
	50 to 54	6	9	5	8	8	7	16	13	14	27	8.6	12.5	6.7	10.6	10.4	9.0	20.4	16.5	17.9	34.9
	55 to 59	0	3	1	2	2	3	6	6	6	11	0.0	5.0	1.6	3.1	2.9	4.3	8.3	8.1	7.9	14.3
	60 to 64	2	0	1	0	0	0	2	0	2	1	4.6	0.0	2.0	0.0	0.0	0.0	3.3	0.0	3.1	1.5
	65+	0	0	4	1	0	0	2	0	0	1	0.0	0.0	3.1	0.7	0.0	0.0	1.4	0.0	0.0	0.6
	Unknown	4	0	1	2	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Female Total	3,453	3,926	3,982	4,028	4,467	4,812	5,147	5,046	5,416	5,706	274.5	303.7	300.4	297.2	323.4	343.3	362.4	349.5	370.0	383.3
TOTAL	<1	8	5	8	5	3	3	6	3	0	2	15.8	9.5	15.4	9.4	5.7	5.9	12.1	5.9	0.0	3.9
	1 to 9	2	2	2	1	1	0	1	1	0	0	0.5	0.5	0.5	0.2	0.2	0.0	0.2	0.2	0.0	0.0
	10 to 14	47	57	47	54	49	53	60	41	50	55	23.1	27.2	21.9	24.2	21.4	22.5	25.1	16.8	20.1	21.7
	15 to 19	1,465	1,697	1,776	1,818	1,964	2,037	2,145	2,015	2,141	2,252	692.3	788.7	813.4	826.2	891.0	932.4	978.1	901.0	944.0	963.2
	20 to 24	1,953	2,050	2,231	2,209	2,483	2,692	2,870	2,775	3,021	3,069	828.0	884.4	974.7	970.8	1,089.3	1,150.0	1,188.3	1,125.4	1,215.0	1,220.3
	25 to 29	957	1,101	1,086	1,164	1,209	1,252	1,260	1,393	1,453	1,527	447.6	492.6	476.3	508.7	528.4	560.8	583.7	656.3	682.1	705.3
	30 to 34	348	450	458	496	533	550	698	706	795	838	191.3	235.9	227.5	234.1	244.8	246.4	308.3	309.4	350.2	372.4
	35 to 39	167	197	222	220	233	262	304	322	382	440	106.8	120.6	131.6	126.1	129.7	142.0	157.7	159.6	181.7	201.2
	40 to 44	70	91	94	99	122	132	138	156	205	213	47.0	61.1	63.2	65.8	78.4	81.4	82.6	90.8	116.4	117.9
	45 to 49	37	37	54	48	42	64	72	71	94	106	24.2	24.0	34.7	30.8	27.2	42.2	47.9	47.5	62.3	67.9
	50 to 54	18	21	25	29	29	21	42	33	59	75	13.1	14.6	17.0	19.3	19.0	13.6	27.0	21.1	37.9	48.7
	55 to 59	8	6	7	7	11	4	14	11	19	45	6.9	5.0	5.6	5.4	8.2	2.9	9.8	7.5	12.7	29.6
	60 to 64	3	1	2	3	4	3	4	5	5	10	3.5	1.1	2.1	2.9	3.7	2.6	3.4	4.1	3.9	7.5
	65+	2	5	5	2	0	1	2	3	1	4	0.9	2.2	2.1	0.8	0.0	0.4	0.7	1.1	0.3	1.3
	Unknown	5	0	4	2	3	1	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total Cases	5,090	5,720	6,021	6,157	6,686	7,075	7,616	7,535	8,225	8,636	201.5	220.2	226.1	226.1	240.9	251.2	266.6	259.5	279.3	288.3

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.
Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 3. Chlamydia Cases and Rates by Local Health District, Utah, 2006-2015

Local Health District	Cases										Rates per 100,000 Population									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bear River	190	233	190	175	238	276	296	251	267	348	127.3	152.3	120.6	108.1	143.6	164.8	175.7	147.3	155.1	198.6
Central	52	54	77	59	85	74	79	93	109	91	74.2	75.3	104.1	78.6	112.2	97.2	104.2	122.1	142.7	117.9
Davis	535	540	569	753	702	746	865	890	953	890	191.9	187.3	192.4	249.4	228.0	239.0	273.6	275.7	289.1	264.8
Salt Lake	2,824	3,238	3,415	3,279	3,520	3,638	3,935	3,805	4,280	4,588	292.1	329.2	341.7	322.5	340.7	346.9	369.6	351.9	391.6	414.3
San Juan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	355.1
Southeastern	89	91	76	98	105	122	147	169	127	69	168.0	168.6	138.8	176.3	185.7	216.4	260.5	301.4	227.0	170.9
Southwest	214	263	274	249	336	345	355	382	434	419	114.8	135.7	138.1	123.6	165.0	166.6	169.0	179.3	199.2	188.3
Summit	36	64	62	48	65	54	63	73	91	89	105.1	184.7	176.0	133.9	178.0	144.2	166.1	189.8	232.5	224.6
Tooele	66	88	83	109	124	132	118	141	143	165	128.2	163.5	148.5	190.5	211.9	222.7	197.1	232.1	232.0	262.1
TriCounty	51	46	71	62	85	88	90	113	136	119	112.2	96.8	143.7	118.1	163.0	165.4	164.1	198.4	232.9	198.7
Utah	420	464	518	623	719	791	799	779	940	975	93.7	98.8	106.2	123.4	138.3	149.1	147.9	141.0	167.4	169.5
Wasatch	24	32	29	39	29	34	42	39	35	30	115.6	149.4	131.1	170.4	122.7	139.3	165.5	146.7	126.0	102.9
Weber-Morgan	589	607	657	663	678	775	826	800	706	797	266.5	268.2	282.2	279.2	280.5	318.0	335.2	321.5	281.1	312.9
Unknown	0	0	0	0	0	0	1	0	4	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	5,090	5,720	6,021	6,157	6,686	7,075	7,616	7,535	8,225	8,636	201.5	220.2	226.1	226.1	240.9	251.2	266.6	259.5	279.3	288.3

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year. San Juan County has been an independent LHD since 2015. Prior to 2015, it was served by the Southeastern Utah LHD

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 4. Chlamydia Cases and Rates by Race/Ethnicity, Utah, 2006-2015

Race/Ethnicity	Cases										Rates per 100,000 Population									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
AI/AK Native*	111	104	105	112	106	170	192	198	164	149	421.4	387.0	389.4	411.5	389.3	620.5	698.6	709.0	576.2	510.2
Asian	85	96	98	78	90	89	118	121	134	132	179.4	195.3	190.9	145.8	162.5	153.3	194.2	190.0	199.8	186.0
Black	174	187	190	229	237	284	301	321	352	317	783.3	794.4	775.4	884.6	893.0	1,034.8	1,051.1	1,080.0	1,151.7	1,008.6
Hispanic†	1,293	1,405	1,488	1,648	1,641	1,782	1,973	1,985	1,924	2,098	449.9	453.7	449.9	474.1	455.0	481.3	520.8	509.4	481.9	510.3
White	3,326	3,812	4,009	3,843	4,385	4,561	4,863	4,710	5,075	4,722	159.5	179.2	185.2	174.6	196.3	201.9	212.9	203.6	217.2	199.5
Pacific Islander	80	111	125	131	138	139	141	143	188	185	400.3	524.5	558.7	559.9	567.6	563.6	556.7	547.5	701.5	665.3
Multiple	8	4	5	6	8	10	23	24	30	30	21.7	10.1	11.9	13.4	17.0	20.4	45.0	45.2	54.1	51.5
Other/Unknown	13	1	1	110	81	40	5	33	358	1,003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	5,090	5,720	6,021	6,157	6,686	7,075	7,616	7,535	8,225	8,636	201.5	220.2	226.1	226.1	240.9	251.2	266.6	259.5	279.3	288.3

† Includes persons of Hispanic ethnicity regardless of race.

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - U.S. Bureau of the Census.

Table 5. Chlamydia Test Results and Percent Positivity by Sex, Utah Public Health Laboratories, Utah, 2006-2015

	Female			Male			Total**		
Year*	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive
2006	1,084	12,696	8.54%	916	7,074	12.95%	2,356	21,489	10.96%
2007	1,326	14,209	9.33%	1,029	9,136	11.26%	2,563	25,125	10.20%
2008	1,247	13,788	9.04%	1,188	10,463	11.35%	2,577	25,647	10.05%
2009	1,251	14,819	8.44%	1,320	11,525	11.45%	2,621	26,846	9.76%
2010	1,453	16,951	8.57%	1,326	11,391	11.64%	2,821	28,756	9.81%
2011	1,723	18,704	9.21%	1,245	11,690	10.65%	3,011	30,711	9.80%
2012	1,803	19,468	9.26%	1,443	12,900	11.19%	3,278	32,708	10.02%
2013	1,701	16,544	10.28%	1,417	13,375	10.59%	3,170	30,308	10.46%
2014	1,662	18,260	9.10%	1,487	13,915	10.69%	3,183	32,537	9.78%
2015	1,824	18,726	9.74%	1,446	12,819	11.28%	3,289	31,754	10.36%

* Results reported by calendar year.
** Totals include results where the gender is unknown.
Source: Utah Public Health Laboratories, Utah Department of Health.

Table 6. Gonorrhea Cases and Rates by Age Group and Sex, Utah, 2006-2015

Sex	Age Group (years)	Cases										Rates per 100,000 Population									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MALE	<1	0	0	1	0	0	0	0	0	0	0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1 to 9	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 14	0	0	1	1	0	1	0	2	0	1	0.0	0.0	0.9	0.9	0.0	0.8	0.0	1.6	0.0	0.8
	15 to 19	41	41	35	29	23	21	39	37	62	64	38.5	37.8	31.8	26.1	20.6	18.9	34.9	32.5	53.7	53.8
	20 to 24	182	149	98	69	75	62	76	132	230	230	151.5	126.3	84.7	60.3	65.6	52.7	62.1	105.2	181.9	179.0
	25 to 29	121	103	78	88	49	54	64	133	201	265	111.7	90.5	66.9	75.3	41.6	47.3	58.6	124.4	186.9	242.6
	30 to 34	53	54	43	29	34	32	61	100	149	163	56.4	55.0	41.7	26.6	30.5	28.1	52.8	85.9	128.9	142.3
	35 to 39	45	53	29	17	24	20	34	61	97	122	56.4	63.7	33.8	19.1	26.2	21.3	34.6	59.3	90.4	109.4
	40 to 44	29	31	19	12	17	10	27	40	48	70	38.5	41.0	25.1	15.6	21.4	12.1	31.7	45.7	53.4	76.0
	45 to 49	24	21	17	9	7	9	26	30	40	45	31.5	27.3	21.8	11.6	9.1	11.8	34.3	39.6	52.2	56.6
	50 to 54	14	15	11	14	3	1	12	33	29	51	20.5	21.0	15.0	18.8	4.0	1.3	15.5	42.6	37.5	66.7
	55 to 59	8	5	4	2	2	1	10	9	12	35	13.9	8.5	6.5	3.1	3.0	1.5	14.1	12.4	16.3	46.8
	60 to 64	0	1	1	1	1	0	0	2	7	4	0.0	2.2	2.1	2.0	1.9	0.0	0.0	3.3	11.2	6.2
	65+	2	2	0	0	0	0	0	0	0	5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
	Unknown	0	0	3	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Male Total	519	475	340	271	235	211	349	579	875	1,055	40.9	36.4	25.4	19.8	16.9	14.9	24.3	39.7	59.1	70.0
FEMALE	<1	0	0	1	0	0	0	0	0	1	0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0
	1 to 9	3	0	0	0	0	0	0	0	0	0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 14	7	2	3	2	1	1	3	1	5	6	7.1	2.0	2.9	1.8	0.9	0.9	2.6	0.8	4.1	4.9
	15 to 19	103	109	34	21	24	15	17	50	88	71	98.0	102.1	31.4	19.3	22.0	14.0	15.8	45.6	79.0	61.8
	20 to 24	132	97	44	25	25	21	44	115	163	144	114.1	85.2	38.9	22.1	22.0	18.0	37.0	94.9	133.4	117.1
	25 to 29	75	73	28	15	15	15	23	82	120	110	71.1	66.6	25.1	13.4	13.5	13.8	21.6	77.8	113.8	102.5
	30 to 34	20	34	13	2	7	6	24	58	103	82	22.7	36.7	13.2	1.9	6.6	5.5	21.6	51.9	92.4	74.2
	35 to 39	18	14	8	1	2	6	11	35	52	55	23.5	17.5	9.7	1.2	2.3	6.6	11.6	35.4	50.5	51.3
	40 to 44	10	9	0	2	1	1	4	12	18	19	13.6	12.3	0.0	2.7	1.3	1.3	4.9	14.2	20.9	21.5
	45 to 49	1	4	4	1	0	1	4	4	9	14	1.3	5.2	5.1	1.3	0.0	1.3	5.4	5.4	12.1	18.3
	50 to 54	0	3	0	0	0	0	4	11	4	5	0.0	4.2	0.0	0.0	0.0	0.0	5.1	14.0	5.1	6.5
	55 to 59	0	0	1	1	0	0	0	3	1	1	0.0	0.0	1.6	1.5	0.0	0.0	0.0	4.0	1.3	1.3
	60 to 64	0	0	0	0	0	0	0	3	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0
	65+	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Unknown	0	1	1	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Female Total	369	346	137	70	75	66	134	374	564	507	29.3	26.8	10.3	5.2	5.4	4.7	9.4	25.9	38.5	34.1
TOTAL	<1	0	0	2	0	0	0	0	0	1	0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	2.0	0.0
	1 to 9	3	0	0	0	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 14	7	2	4	3	1	2	3	3	5	7	3.4	1.0	1.9	1.3	0.4	0.9	1.3	1.2	2.0	2.8
	15 to 19	144	150	69	50	47	36	56	87	150	135	68.1	69.7	31.6	22.7	21.3	16.5	25.5	38.9	66.1	57.7
	20 to 24	314	246	142	94	100	83	120	247	393	374	133.1	106.1	62.0	41.3	43.9	35.5	49.7	100.2	158.1	148.7
	25 to 29	196	176	106	103	64	69	87	215	321	375	91.7	78.7	46.5	45.0	28.0	30.9	40.3	101.3	150.7	173.2
	30 to 34	73	88	56	31	41	38	85	158	252	245	40.1	46.1	27.8	14.6	18.8	17.0	37.5	69.2	111.0	108.9
	35 to 39	63	67	37	18	26	26	45	96	149	177	40.3	41.0	21.9	10.3	14.5	14.1	23.3	47.6	70.9	81.0
	40 to 44	39	40	19	14	18	11	31	52	66	89	26.2	26.9	12.8	9.3	11.6	6.8	18.6	30.3	37.5	49.3
	45 to 49	25	25	21	10	7	10	30	34	49	59	16.4	16.2	13.5	6.4	4.5	6.6	20.0	22.7	32.5	37.8
	50 to 54	14	18	11	14	3	1	16	44	33	56	10.2	12.5	7.5	9.3	2.0	0.6	10.3	28.2	21.2	36.4
	55 to 59	8	5	5	3	2	1	10	12	13	36	6.9	4.2	4.0	2.3	1.5	0.7	7.0	8.2	8.7	23.7
	60 to 64	0	1	1	1	1	0	0	5	7	4	0.0	1.1	1.0	1.0	0.9	0.0	0.0	4.1	5.5	3.0
	65+	2	2	0	0	0	0	0	0	0	5	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
	Unknown	0	1	4	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total Cases	888	821	477	341	310	277	483	953	1,439	1,562	35.2	31.6	17.9	12.5	11.2	9.8	16.9	32.8	48.9	52.1

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.
Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 7. Gonorrhea Cases and Rates by Local Health District, Utah, 2006-2015

Local Health District	Cases										Rates per 100,000 Population									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bear River	26	12	3	6	7	3	8	7	35	17	17.4	7.8	1.9	3.7	4.2	1.8	4.7	4.1	20.3	9.7
Central	8	5	0	0	3	1	3	3	7	8	11.4	7.0	0.0	0.0	4.0	1.3	4.0	3.9	9.2	10.4
Davis	58	54	24	36	38	18	41	65	104	92	20.8	18.7	8.1	11.9	12.3	5.8	13.0	20.1	31.5	27.4
Salt Lake	612	552	334	241	196	196	340	683	1002	1049	63.3	56.1	33.4	23.7	19.0	18.7	31.9	63.2	91.7	94.7
San Juan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.4
Southeastern	11	5	2	5	6	7	5	7	7	6	20.8	9.3	3.7	9.0	10.6	12.4	8.9	12.5	12.5	14.9
Southwest	17	15	14	12	6	10	14	16	23	55	9.1	7.7	7.1	6.0	2.9	4.8	6.7	7.5	10.6	24.7
Summit	6	6	4	2	2	2	3	5	9	10	17.5	17.3	11.4	5.6	5.5	5.3	7.9	13.0	23.0	25.2
Tooele	10	14	10	1	6	1	3	7	22	29	19.4	26.0	17.9	1.7	10.3	1.7	5.0	11.5	35.7	46.1
TriCounty	10	1	2	0	0	2	4	6	7	12	22.0	2.1	4.0	0.0	0.0	3.8	7.3	10.5	12.0	20.0
Utah	45	34	13	16	24	20	18	67	97	130	10.0	7.2	2.7	3.2	4.6	3.8	3.3	12.1	17.3	22.6
Wasatch	2	1	0	0	0	0	0	1	2	3	9.6	4.7	0.0	0.0	0.0	0.0	0.0	3.8	7.2	10.3
Weber-Morgan	83	122	71	22	22	17	44	86	124	147	37.6	53.9	30.5	9.3	9.1	7.0	17.9	34.6	49.4	57.7
Unknown	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	888	821	477	341	310	277	483	953	1,439	1,562	35.2	31.6	17.9	12.5	11.2	9.8	16.9	32.8	48.9	52.1

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year. San Juan County has been an independent LHD since 2015. Prior to 2015, it was served by the Southeastern Utah LHD

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 8. Gonorrhea Cases and Rates by Race/Ethnicity, Utah, 2006-2015

Race/Ethnicity	Cases										Rates per 100,000 Population									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
AI/AK Native*	18	13	5	2	6	5	14	20	16	23	68.3	48.4	18.5	7.3	22.0	18.3	50.9	71.6	56.2	78.8
Asian	12	8	10	4	2	2	3	13	21	22	25.3	16.3	19.5	7.5	3.6	3.4	4.9	20.4	31.3	31.0
Black	53	79	41	26	9	20	58	71	101	135	238.6	335.6	167.3	100.4	33.9	72.9	202.5	238.9	330.5	429.5
Hispanic†	179	182	88	60	35	41	84	172	320	302	62.3	58.8	26.6	17.3	9.7	11.1	22.2	44.1	80.1	73.5
White	614	524	331	236	253	206	317	666	931	885	29.4	24.6	15.3	10.7	11.3	9.1	13.9	28.8	39.8	37.4
Pacific Islander	10	13	2	3	3	3	5	7	18	22	50.0	61.4	8.9	12.8	12.3	12.2	19.7	26.8	67.2	79.1
Multiple	1	1	0	1	0	0	1	4	5	4	2.7	2.5	0.0	2.2	0.0	0.0	2.0	7.5	9.0	6.9
Other/Unknown	1	1	0	9	2	0	1	0	27	169	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	888	821	477	341	310	277	483	953	1,439	1,562	35.2	31.6	17.9	12.5	11.2	9.8	16.9	32.8	48.9	52.1

† Includes persons of Hispanic ethnicity regardless of race.

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - U.S. Bureau of the Census.

Table 9. Gonorrhea Cases and Percent Among Males by Sexual Orientation, Utah, 2009-2015

	MSM*		Not MSM*		Unknown		Total
Year	Cases	Percent	Cases	Percent	Cases	Percent	Cases
2009	181	66.8%	42	15.5%	48	17.7%	271
2010	155	66.0%	39	16.6%	41	17.4%	235
2011	130	61.6%	49	23.2%	32	15.2%	211
2012	180	51.6%	89	25.5%	80	22.9%	349
2013	247	42.7%	227	39.2%	105	18.1%	579
2014	370	42.3%	353	40.3%	152	17.4%	875
2015	450	42.7%	349	33.1%	256	24.3%	1055

*MSM=Men Who Have Sex with Men

Note: Cases were classified by Morbidity and Mortality Weekly Report (MMWR) year.

Source: Bureau of Epidemiology, Utah Department of Health.

Table 10. Gonorrhea Test Results and Percent Positivity by Sex, Utah Public Health Laboratories, Utah, 2006-2015

	Female			Male			Total**		
Year*	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive
2006	128	12,700	1.01%	232	7,074	3.28%	547	21,694	2.52%
2007	135	14,212	0.95%	263	9,136	2.88%	495	25,161	1.97%
2008	72	13,788	0.52%	224	10,463	2.14%	337	25,647	1.31%
2009	34	14,819	0.23%	247	11,525	2.14%	296	26,846	1.10%
2010	26	16,951	0.15%	172	11,392	1.51%	211	28,757	0.73%
2011	24	18,704	0.13%	166	11,690	1.42%	208	30,711	0.68%
2012	62	19,468	0.32%	255	12,645	2.02%	328	32,708	1.00%
2013	174	18,077	0.96%	418	14,384	2.91%	607	32,887	1.85%
2014	224	18,260	1.23%	556	13,915	4.00%	798	32,537	2.45%
2015	167	18,726	0.89%	601	12,819	4.69%	780	31,754	2.46%

* Results reported by calendar year.

** Totals include results where the gender is unknown.

Source: Utah Public Health Laboratories, Utah Department of Health.

Table 11. Primary and Secondary Syphilis Cases and Rates by Age Group and Sex, Utah, 2006-2015

Sex	Age Group (years)	Cases										Rates per 100,000 Population									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MALE	<1	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1 to 9	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 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	0.0	0.0	0.0
	15 to 19	0	0	1	1	0	0	0	0	1	3	0.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.9	2.5
	20 to 24	2	4	3	3	10	2	6	10	5	7	1.7	3.4	2.6	2.6	8.7	1.7	4.9	8.0	4.0	5.4
	25 to 29	3	4	5	9	13	1	10	14	7	15	2.8	3.5	4.3	7.7	11.0	0.9	9.2	13.1	6.5	13.7
	30 to 34	5	5	2	10	8	3	9	10	12	8	5.3	5.1	1.9	9.2	7.2	2.6	7.8	8.6	10.4	7.0
	35 to 39	1	2	1	6	10	3	5	12	6	8	1.3	2.4	1.2	6.7	10.9	3.2	5.1	11.7	5.6	7.2
	40 to 44	3	1	3	1	9	0	4	6	4	7	4.0	1.3	4.0	1.3	11.3	0.0	4.7	6.8	4.5	7.6
	45 to 49	3	2	2	1	4	2	5	5	2	4	3.9	2.6	2.6	1.3	5.2	2.6	6.6	6.6	2.6	5.0
	50 to 54	1	1	4	1	2	1	1	7	7	5	1.5	1.4	5.5	1.3	2.6	1.3	1.3	9.0	9.0	6.5
	55 to 59	0	0	2	1	4	1	3	7	2	4	0.0	0.0	3.3	1.6	6.0	1.5	4.2	9.6	2.7	5.3
	60 to 64	0	0	1	0	2	1	0	2	1	1	0.0	0.0	2.1	0.0	3.8	1.8	0.0	3.3	1.6	1.5
	65+	0	1	0	0	1	0	0	1	0	1	0.0	1.0	0.0	0.0	0.9	0.0	0.0	0.8	0.0	0.7
	Unknown	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Male Total	18	20	24	33	63	14	43	74	47	63	1.4	1.5	1.8	2.4	4.5	1.0	3.0	5.1	3.2	4.2
FEMALE	<1	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1 to 9	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 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	0.0	0.0	0.0
	15 to 19	1	0	0	0	1	0	0	1	0	1	1.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	0.9
	20 to 24	0	0	0	0	1	0	0	0	1	0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.8	0.0
	25 to 29	0	0	1	0	0	0	0	0	0	0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	30 to 34	1	0	0	0	0	0	0	0	0	1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
	35 to 39	0	0	0	0	0	0	0	1	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
	40 to 44	1	0	0	0	0	0	0	0	0	0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	45 to 49	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	50 to 54	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	55 to 59	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	60 to 64	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	65+	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Unknown	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Female Total	3	0	1	0	2	0	0	2	1	2	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1
TOTAL	<1	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1 to 9	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	10 to 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	0.0	0.0	0.0
	15 to 19	1	0	1	1	1	0	0	1	1	4	0.5	0.0	0.5	0.5	0.5	0.0	0.0	0.4	0.4	1.7
	20 to 24	2	4	3	3	11	2	6	10	6	7	0.8	1.7	1.3	1.3	4.8	0.9	2.5	4.1	2.4	2.8
	25 to 29	3	4	6	9	13	1	10	14	7	15	1.4	1.8	2.6	3.9	5.7	0.4	4.6	6.6	3.3	6.9
	30 to 34	6	5	2	10	8	3	9	10	12	9	3.3	2.6	1.0	4.7	3.7	1.3	4.0	4.4	5.3	4.0
	35 to 39	1	2	1	6	10	3	5	13	6	8	0.6	1.2	0.6	3.4	5.6	1.6	2.6	6.4	2.9	3.7
	40 to 44	4	1	3	1	9	0	4	6	4	7	2.7	0.7	2.0	0.7	5.8	0.0	2.4	3.5	2.3	3.9
	45 to 49	3	2	2	1	4	2	5	5	2	4	2.0	1.3	1.3	0.6	2.6	1.3	3.3	3.3	1.3	2.6
	50 to 54	1	1	4	1	2	1	1	7	7	5	0.7	0.7	2.7	0.7	1.3	0.6	0.6	4.5	4.5	3.2
	55 to 59	0	0	2	1	4	1	3	7	2	4	0.0	0.0	1.6	0.8	3.0	0.7	2.1	4.8	1.3	2.6
	60 to 64	0	0	1	0	2	1	0	2	1	1	0.0	0.0	1.0	0.0	1.8	0.9	0.0	1.6	0.8	0.8
	65+	0	1	0	0	1	0	0	1	0	1	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.3
	Unknown	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total Cases	21	20	25	33	65	14	43	76	48	65	0.8	0.8	0.9	1.2	2.3	0.5	1.5	2.6	1.6	2.2

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.
Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 12. Primary and Secondary Syphilis Cases and Rates by Local Health District, Utah, 2006-2015

Local Health District	Cases										Rates per 100,000 Population									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bear River	0	0	0	0	0	0	2	0	0	1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.6
Central	0	0	0	0	1	0	0	0	0	0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Davis	2	1	1	1	3	1	1	6	2	5	0.7	0.3	0.3	0.3	1.0	0.3	0.3	1.9	0.6	1.5
Salt Lake	15	19	22	28	54	9	35	66	39	49	1.6	1.9	2.2	2.8	5.2	0.9	3.3	6.1	3.6	4.4
San Juan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0
Southeastern	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Southwest	0	0	0	0	2	1	1	0	0	1	0.0	0.0	0.0	0.0	1.0	0.5	0.5	0.0	0.0	0.4
Summit	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tooele	0	0	1	0	0	0	0	1	0	0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.6	0.0	0.0
TriCounty	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Utah	4	0	1	1	3	0	3	0	2	6	0.9	0.0	0.2	0.2	0.6	0.0	0.6	0.0	0.4	1.0
Wasatch	0	0	0	0	0	0	0	0	1	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
Weber-Morgan	0	0	0	3	2	3	1	3	2	3	0.0	0.0	0.0	1.3	0.8	1.2	0.4	1.2	0.8	1.2
Unknown	0	0	0	0	0	0	0	0	2	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	21	20	25	33	65	14	43	76	48	65	0.8	0.8	0.9	1.2	2.3	0.5	1.5	2.6	1.6	2.2

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year. San Juan County has been an independent LHD since 2015. Prior to 2015, it was served by the Southeastern Utah LHD

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 13. Primary and Secondary Syphilis Cases and Rates by Race/Ethnicity, Utah, 2006-2015

Race/Ethnicity	Cases										Rates per 100,000 Population									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
AI/AK Native*	0	0	2	0	0	1	1	1	0	0	0.0	0.0	7.4	0.0	0.0	3.7	3.6	3.6	0.0	0.0
Asian	2	0	0	0	0	0	2	3	0	1	4.2	0.0	0.0	0.0	0.0	0.0	3.3	4.7	0.0	1.4
Black	1	1	2	0	2	0	1	3	6	1	4.5	4.2	8.2	0.0	7.5	0.0	3.5	10.1	19.6	3.2
Hispanic†	5	3	2	7	9	1	3	9	8	20	1.7	1.0	0.6	2.0	2.5	0.3	0.8	2.3	2.0	4.9
White	12	16	19	25	53	12	36	60	32	42	0.6	0.8	0.9	1.1	2.4	0.5	1.6	2.6	1.4	1.8
Pacific Islander	1	0	0	1	1	0	0	0	1	0	5.0	0.0	0.0	4.3	4.1	0.0	0.0	0.0	3.7	0.0
Multiple	0	0	0	0	0	0	0	0	1	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
Other/Unknown	0	0	0	0	0	0	0	0	0	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	21	20	25	33	65	14	43	76	48	65	0.8	0.8	0.9	1.2	2.3	0.5	1.5	2.6	1.6	2.2

† Includes persons of Hispanic ethnicity regardless of race.

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - U.S. Bureau of the Census.

Table 14. Primary and Secondary Syphilis Cases and Percent Among Males by Sexual Orientation, Utah, 2009-2015

	MSM*		Not MSM*		Unknown		Total
Year	Cases	Percent	Cases	Percent	Cases	Percent	Cases
2009	27	81.8%	1	3.0%	5	15.2%	33
2010	59	93.7%	0	0.0%	4	6.3%	63
2011	13	92.9%	0	0.0%	1	7.1%	14
2012	40	93.0%	2	4.7%	1	2.3%	43
2013	69	93.2%	0	0.0%	5	6.8%	74
2014	41	87.2%	4	8.5%	2	4.3%	47
2015	52	82.5%	6	9.5%	5	7.9%	63

*MSM=Men Who Have Sex with Men

Note: Cases were classified by Morbidity and Mortality Weekly Report (MMWR) year.

Source: Bureau of Epidemiology, Utah Department of Health.

Table 15. Chlamydia Cases and Rates per 100,000 Population by Age and Sex in Adolescents and Young Adults, Utah, 2015

	Males		Females		Total	
Age	Cases	Rates	Cases	Rates	Cases	Rates
15	17	66.5	84	350.3	101	203.9
16	47	191.4	218	930.1	265	552.2
17	95	389.4	375	1,626.5	470	990.5
18	116	495.1	539	2,422.3	655	1,433.9
19	161	768.1	600	2,703.3	761	1,763.4
20	194	960.2	518	2,168.8	712	1,614.9
21	208	896.1	507	2,114.4	715	1,515.1
22	189	697.2	398	1,676.0	587	1,154.3
23	205	693.0	344	1,356.0	549	999.1
24	185	650.9	321	1,235.5	506	930.1

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Table 16. Gonorrhea Cases and Rates per 100,000 Population by Age and Sex in Adolescents and Young Adults, Utah, 2015

	Males		Females		Total	
Age	Cases	Rates	Cases	Rates	Cases	Rates
15	3	11.7	3	12.5	6	12.1
16	5	20.4	6	25.6	11	22.9
17	11	45.1	11	47.7	22	46.4
18	23	98.2	26	116.8	49	107.3
19	22	105.0	25	112.6	47	108.9
20	41	202.9	25	104.7	66	149.7
21	41	176.6	21	87.6	62	131.4
22	54	199.2	39	164.2	93	182.9
23	53	179.2	30	118.3	83	151.0
24	41	144.3	29	111.6	70	128.7

Note: Cases were classified by *Morbidity and Mortality Weekly Report (MMWR)* year.

Sources: Cases - Bureau of Epidemiology, Utah Department of Health; Population Estimates - National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Bureau of the Census.

Appendix:

Utah's 13 Local Health Districts

Local Health Department	Counties in Service Area
Bear River Health Department	Box Elder, Cache, Rich
Central Utah Public Health Department	Juab, Millard, Piute, Sanpete, Sevier, Wayne
Davis County Health Department	Davis
Salt Lake Valley Health Department	Salt Lake
San Juan Public Health Department	San Juan
Southeastern Utah District Health Department	Carbon, Emery, Grand
Southwest Utah Public Health Department	Beaver, Garfield, Iron, Kane, Washington
Summit County Health Department	Summit
Tooele County Health Department	Tooele
TriCounty Health Department	Daggett, Duchesne, Uintah
Utah County Health Department	Utah
Wasatch County Health Department	Wasatch
Weber-Morgan Health Department	Morgan, Weber