Sexually Transmitted Disease Surveillance 2010-2019

December 2020

UTAH DEPARTMENT OF HEALTH

Acknowledgements

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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Executive Summary

Sexually Transmitted Disease Surveillance, Utah, 2010-2019 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 more than 75 Utah reportable communicable diseases, chlamydia and gonorrhea have been among the most frequently reported diseases, with 11,073 cases and 2,884 cases reported in 2019, respectively.

In collaboration with the 13 local health departments (LHDs) throughout the state, each STD case is investigated and the case is provided with partner services. Disease investigation specialists (DIS) promote prompt treatment and facilitate partner notification, thereby interrupting the chain of disease transmission. DIS also promote HIV testing, provide HIV pre-exposure prophylaxis (PrEP) referrals and sexual health education, and collect the data used to compile this report. The findings in this report should be utilized to identify priority populations for sexual health interventions. Among the findings of this report, the following are of particular note:

- 2019 rates of chlamydia, gonorrhea, and P&S all represent 10-year highs
- The majority of infections are reported along the more populous Wasatch Front: 88% of chlamydia infections, 93% of gonorrhea infections, and 93% of P&S syphilis infections in 2019
- Racial and ethnic minorities continue to shoulder a disproportionate burden of STDs in Utah
- The rate of chlamydia has increased 44% since 2010 to a rate of 345 cases per 100,000 persons
- Almost three-fifths of the chlamydia cases reported in 2019 were among persons aged 15-24
- The rate of gonorrhea has increased 818% since 2011 (the lowest rate reported in the time frame)
- In 2019, 64% of gonorrhea cases were among persons aged 20-34
- The rate of P&S syphilis has increased 87% since 2010 to 4.3 cases per 100,000 persons
- Since 2010, more than 80% of P&S syphilis cases in men have been among men who have sex with men (MSM)

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Introduction

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 aged 15 to 19 and young adults aged 20 to 24; 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.[1] 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 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). Population estimates are provided by the National Center for Health Statistics (NCHS) through a collaborative agreement with the U.S. Census Bureau.

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

Chlamydia

Background

Chlamydia trachomatis infections continue to be the most frequently reported communicable disease in both Utah and the United States.[2] In 2019, 11,073 cases of chlamydia were reported in Utah. Between 2010 and 2018[3], Utah's chlamydia rate was an average of 60% of the U.S. rate (Figure 1).[4] Utah's chlamydia rate increased 44% from 240.5 cases per 100,000 population in 2010 to 345.4 cases per 100,000 population in 2019. 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.

Chlamydia by Age Group

During the 2010-2019 time period in Utah, chlamydia rates increased in all age groups between 15-64 years old with rate increases ranging from 16% in the 15 to 19 year old age group to more than 400% in those between 55-59 years old (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.

Chlamydia by Sex

Nearly two-thirds of the chlamydia cases reported in Utah in 2019 were among people aged 15-24. The highest rates of infection were reported among females aged 20-24 (2,047.4 cases per 100,000 population) and aged 15-19 (1,646.9 cases per 100,000 population). The highest rate of infection reported in males was among men aged 20-24 (939.6 cases per 100,000 population) (Figure 3).

Chlamydia by Region

In 2019, three LHDs in Utah had chlamydia rates higher than the state rate: Salt Lake County Health District (492.0 cases per 100,000 population), San Juan Health District (359.3 cases per 100,000 population), and Weber-Morgan Health District (366.5 cases per 100,000 population) (Figure 4). Similar to prior years, the majority of chlamydial infections were identified in the four health districts along the Wasatch Front: Salt Lake (51.6% of cases), Utah (12.3% of cases), Davis (10.4% of cases), and Weber-Morgan (9.0% of cases).

Chlamydia by Race/Hispanic Ethnicity

In 2019, the highest chlamydia rates among the major racial and ethnic groups in Utah were reported among people who are non-Hispanic blacks (1,419.0 cases per 100,000 population) and Pacific Islanders (904.7 cases per 100,000 population), followed by Hispanics and American Indian/Alaska Natives (624.4 and 529.6 cases per 100,000 population, respectively) (Figure 5). Racial/ethnic minorities continued to be disproportionately affected by chlamydia in 2019. In comparison, rates among people who are non-Hispanic whites were 230.8 cases per 100,000 population.

Chlamydia Testing

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 number of chlamydia results reported by the UPHL increased 49% between 2010 and 2019 (Figure 6). Consistent with screening recommendations, 38% more chlamydia tests during this ten-year period were administered to female patients compared with male patients. While males have historically had a higher positivity rate than females; this trend reversed in 2018 and 2019, where females had higher positivity rates. Testing data from other laboratories are currently unavailable.

[2]Utah Department of Health (2019). Utah Monthly Communicable Disease Report, November 2019. http://health.utah.gov/epi/data/monthlysummary/2019/November.html.

[3] Centers for Disease Control and Prevention 2019 Sexually Transmitted Disease Surveillance data not available at time of report compilation.

[4]Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2018.*Atlanta: U.S. Department of Health and Human Services; 2019.

Figure 1. Chlamydia Rates, Utah and United States, 2010-2019

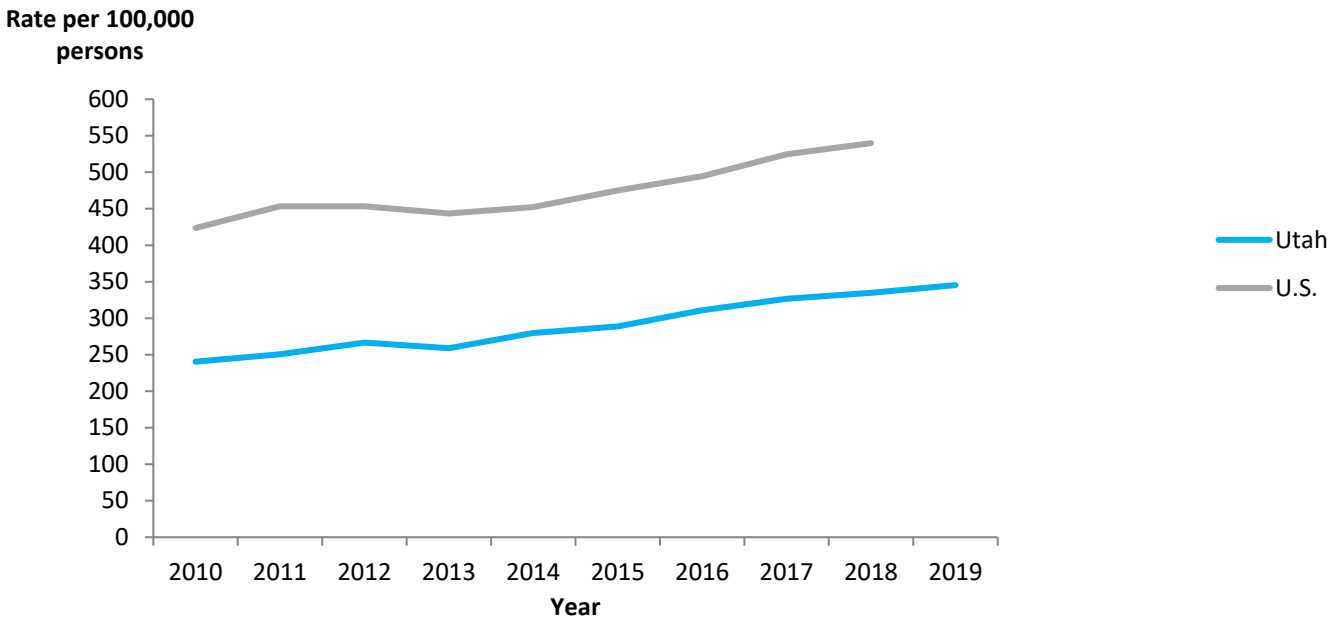


Figure 2. Chlamydia Rates by Sex, Utah, 2010-2019

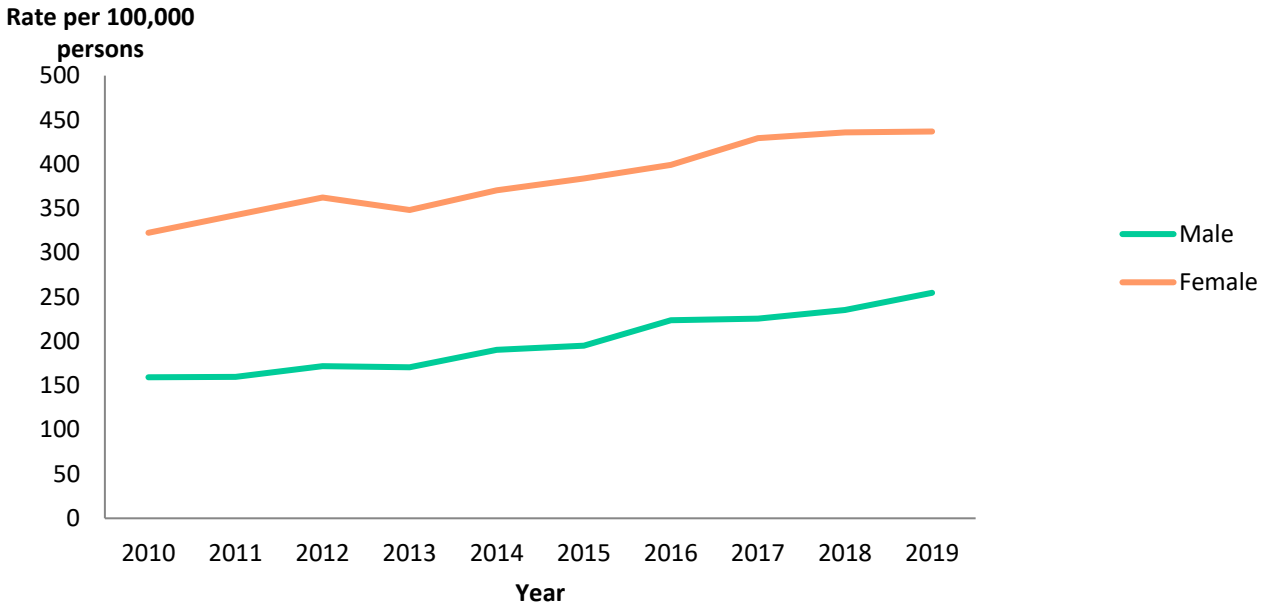


Figure 3. Chlamydia Rates by Age Group and Sex Among Persons Aged >= 10 Years, Utah, 2019

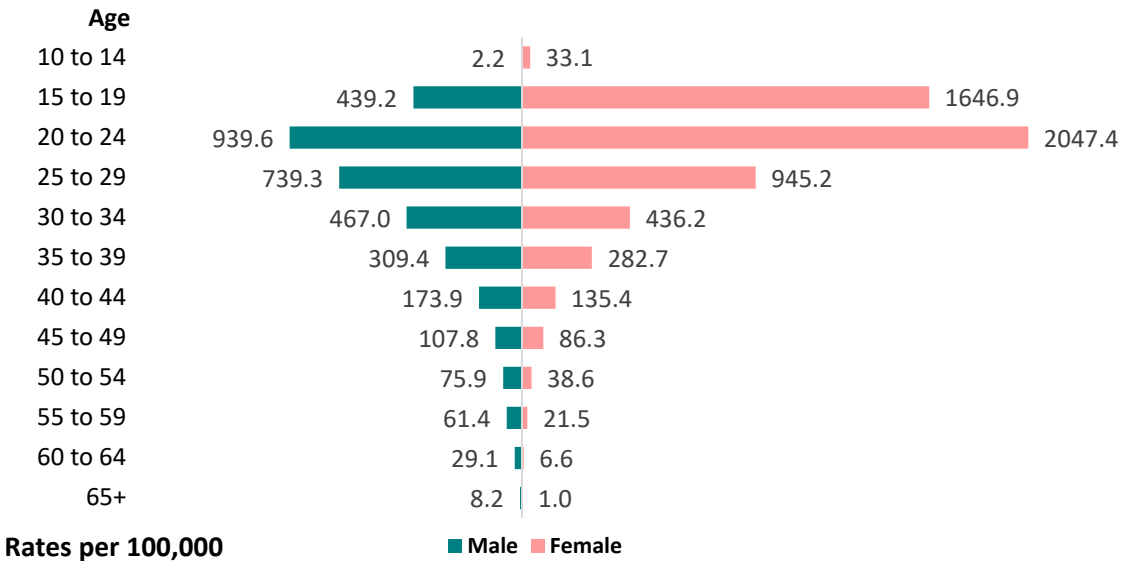


Figure 4. Chlamydia Rates by Local Health District, Utah, 2019

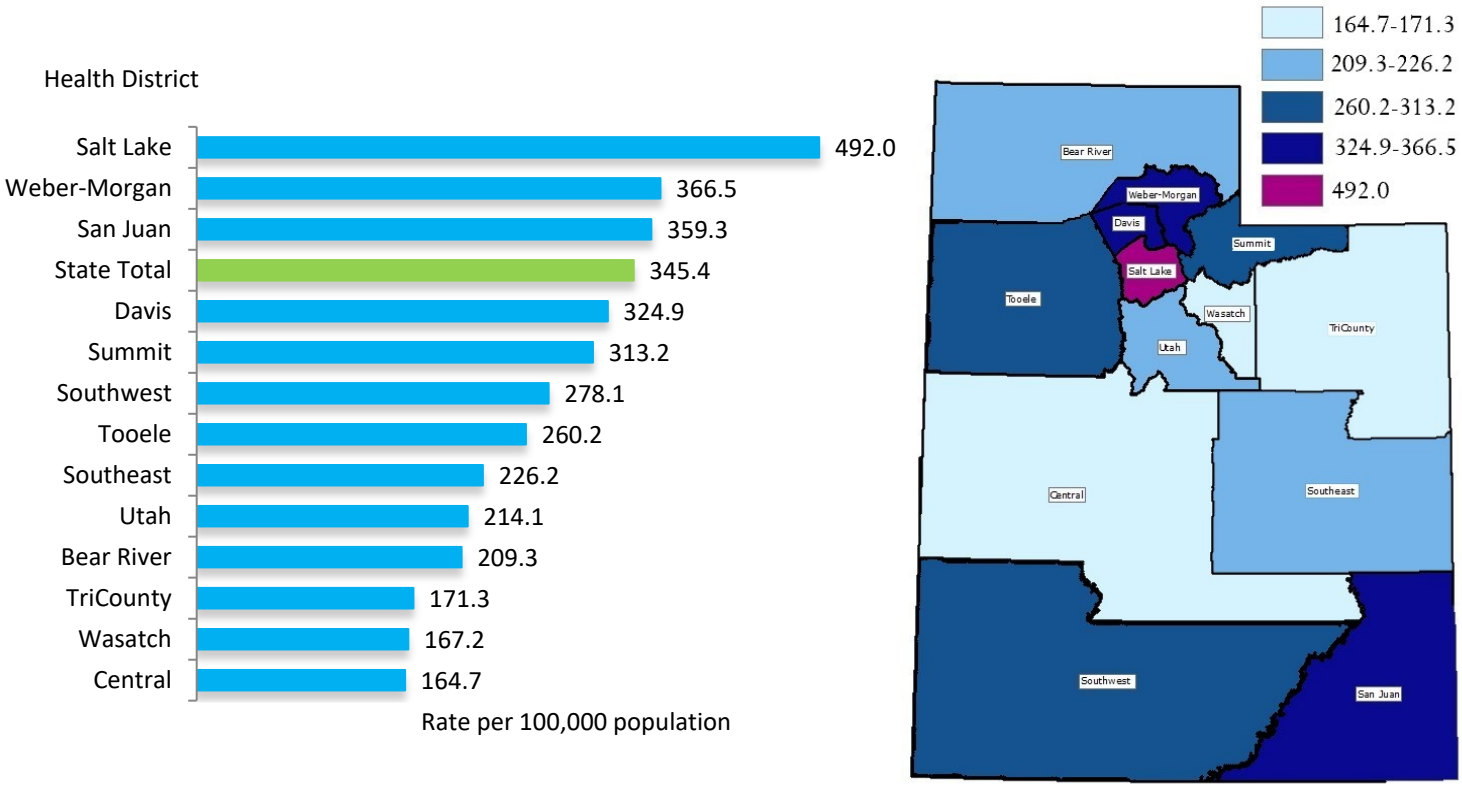


Figure 5. Chlamydia Rates by Race/Ethnicity, Utah, 2019

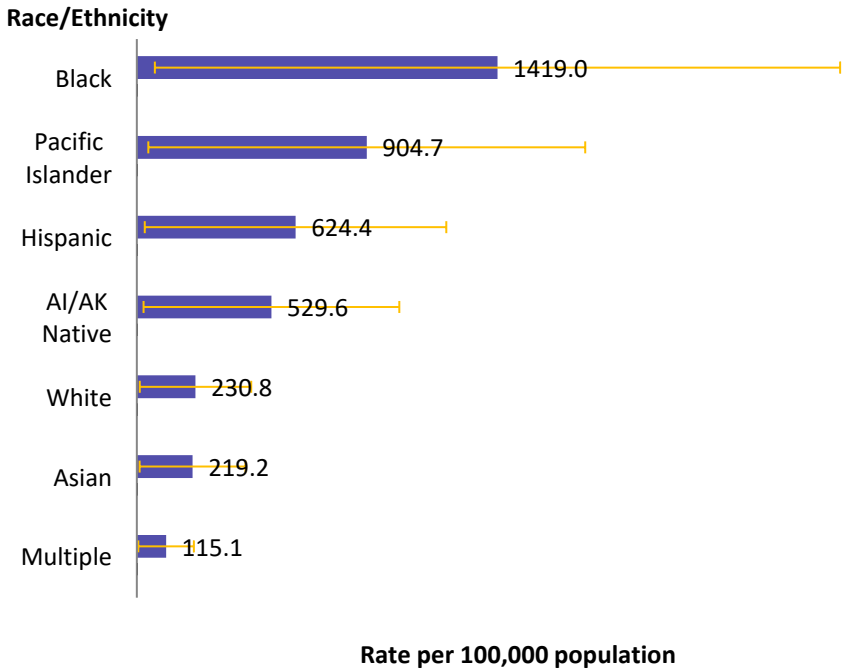
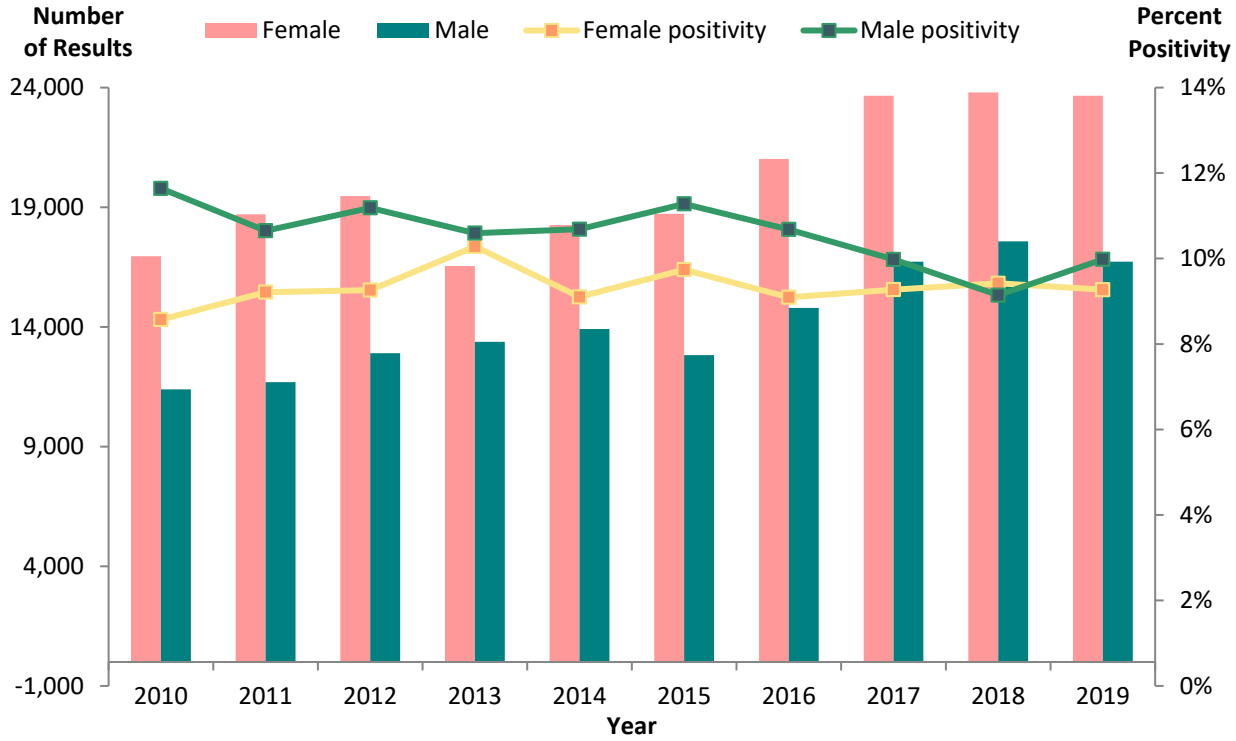


Figure 6. Number of Chlamydia Test Results and Percent Positivity by Sex, Utah Public Health Laboratories, Utah, 2010-2019



Gonorrhea

In 2019, 2,884 cases of gonorrhea were reported in Utah. Gonorrhea was the second most frequently reported communicable disease in Utah in 2019 and in the United States in 2018.[5, 6, 7] Utah's gonorrhea rate was 51.3% of the U.S. rate in 2018, up from 9.5% of the U.S. rate in 2011 (Figure 7). Following a 40% increase of Utah's gonorrhea rate between 2004 and 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 90.0 cases per 100,000 population in 2019, an increase of 818.4% from the 2011 rate.

Gonorrhea by Sex

Gonorrhea rates among males in Utah have consistently been higher than among females over the past 10 years (Figure 8); from 2010 to 2012, males had rates at least 2.6 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. Rates among males were about two times higher than females from 2015 to 2019. Two-thirds of male gonorrhea cases in 2010 were among men who have sex with men (MSM). This percentage has decreased from 62% in 2011 to 40% in 2019; however, the percentage of cases associated with unknown sexual orientation has increased from 15% in 2011 to 29% in 2019 (Figure 12).

Adverse Health Effects from Gonorrhea

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.

Gonorrhea by Age

In 2019, 88.4% of the reported gonorrhea cases in Utah were among people aged 20-34. In males, the highest rates of infection were in the 25-29 year old age group (352.2 cases per 100,000 population) followed by the 30-34 year old age group and the 20-24 year old age group (297.0 and 285.0 cases per 100,000 population, respectively) (Figure 9). In females, the highest rate of infection was among 20-24 year olds (227.4 cases per 100,000 population). Although the rates were lower, the largest percentage rate increase from 2018 to 2019 was among people aged 65 and older.

Gonorrhea by Local Health District

In 2019, two local LHDs in Utah had gonorrhea rates higher than the state rate: Salt Lake County Health District (163.5 cases per 100,000 population) and San Juan Health District (104.5 cases per 100,000 population) (Figure 10). Similar to prior years, the majority of cases were identified in four health districts along the Wasatch Front: Salt Lake (65.8%), Utah (8.5%), Weber-Morgan (8.4%), and Davis (7.9%).

Gonorrhea by Race/Ethnicity

In 2019, the highest gonorrhea rate among the major racial and ethnic groups in Utah was reported among people who are non-Hispanic blacks (507.1 cases per 100,000 population), followed distantly by non-Hispanic American Indians/Alaska Natives, non-Hispanic Pacific Islanders, and Hispanics (207.2, 162.5, and 152.6 cases per 100,000 population, respectively) (Figure 11).

Gonorrhea Testing

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 49% between 2010 and 2019 (Figure 13). Consistent with screening recommendations, 38% more tests were administered to women compared with men in 2019. Males had positivity rates consistently higher than females in this 10-year time period. In 2019, males and females had positivity rates of 4.3% and

[5]Utah Department of Health (2019). Utah Monthly Communicable Disease Report, November 2019.

[6]Centers for Disease Control and Prevention. *Sexually Transmitted Disease Surveillance 2018.*Atlanta: U.S. Department of Health and Human Services; 2019.

[7] Centers for Disease Control and Prevention 2019 Sexually Transmitted Disease Surveillance data not available at time of writing.

1.4%, respectively. Testing data from other laboratories are currently unavailable.

To address Utah's increasing gonorrhea case rate, the 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 analyses showed programmatic activities should be targeted to individuals who are known or suspected drug users and those who have been incarcerated or 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, 2010-2019

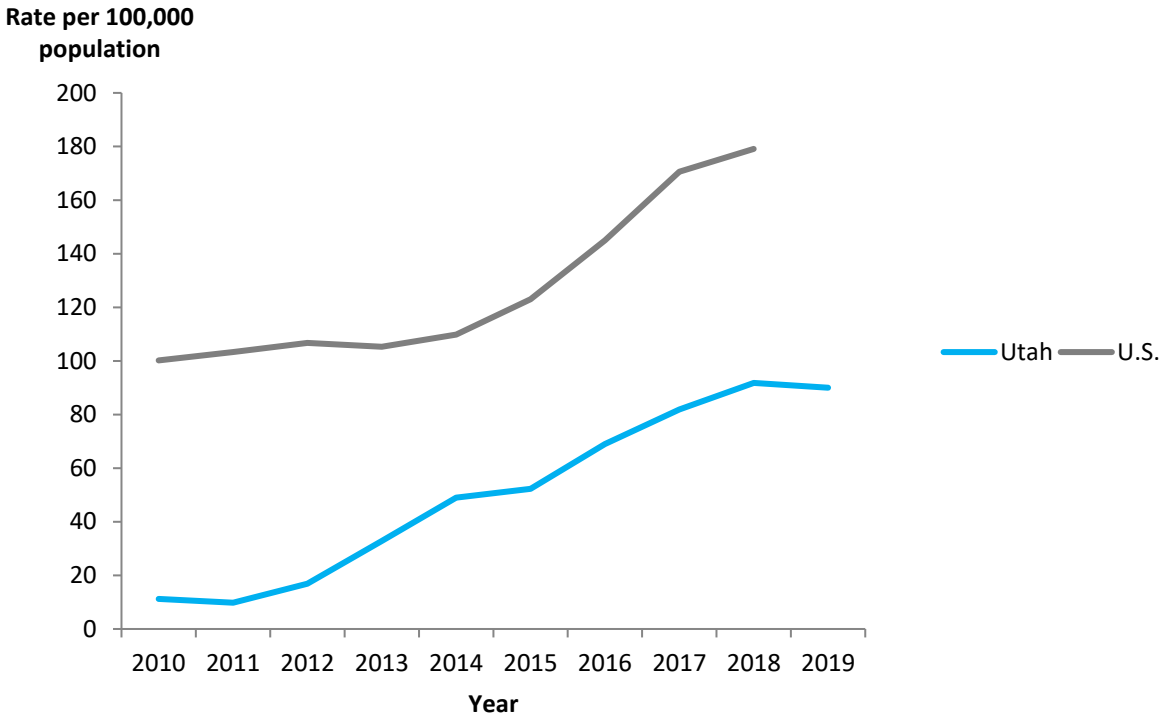


Figure 8. Gonorrhea Rates by Sex, 2010-2019

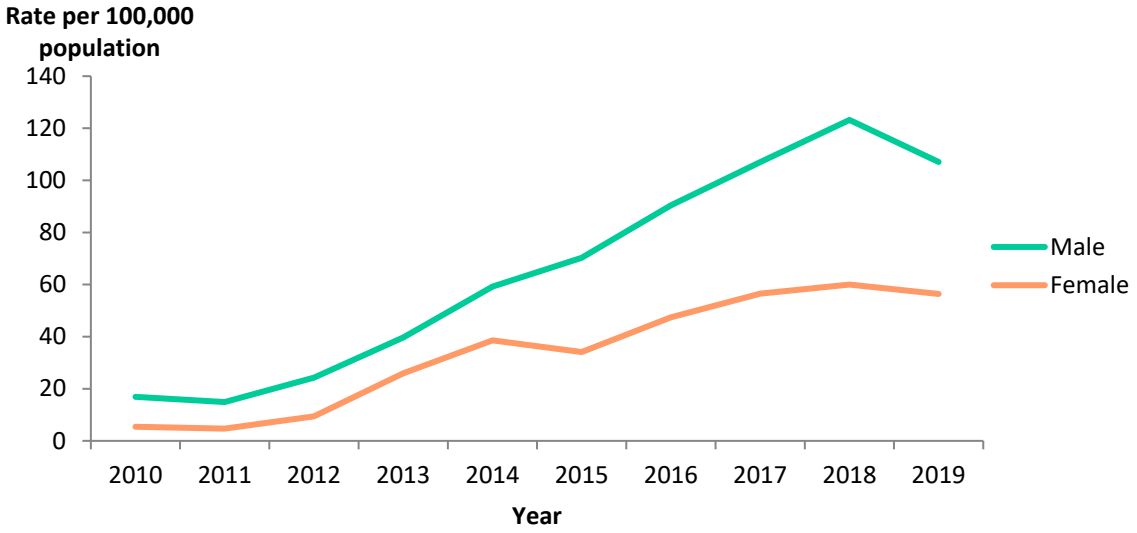


Figure 9. Gonorrhea Rates by Age Group and Sex Among Persons Aged >= 10 Years, Utah, 2019

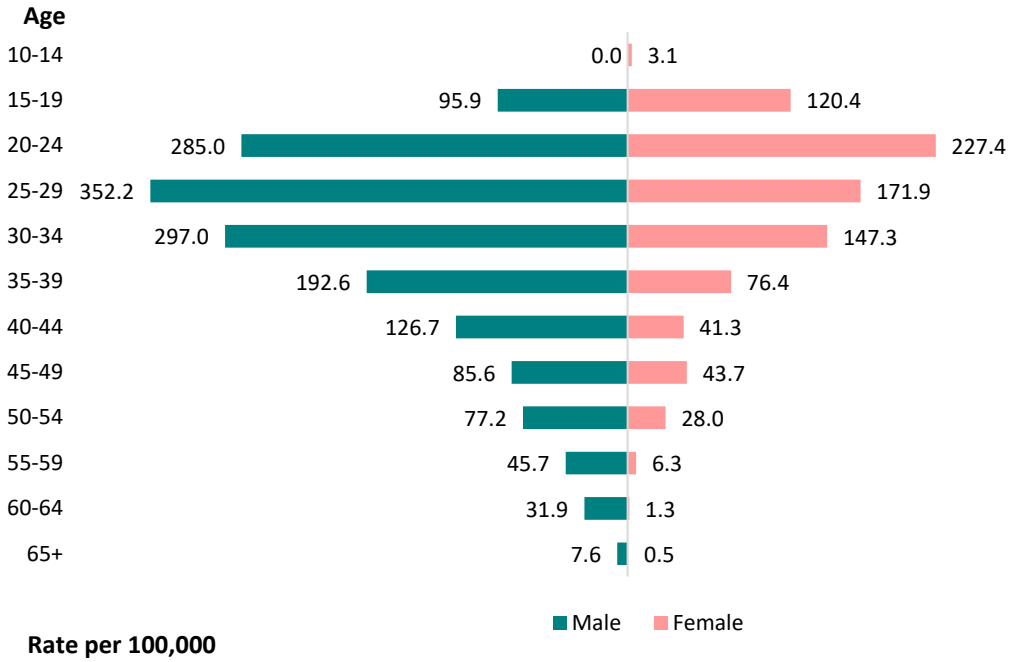


Figure 10. Gonorrhea Rates by Local Health District, Utah, 2019

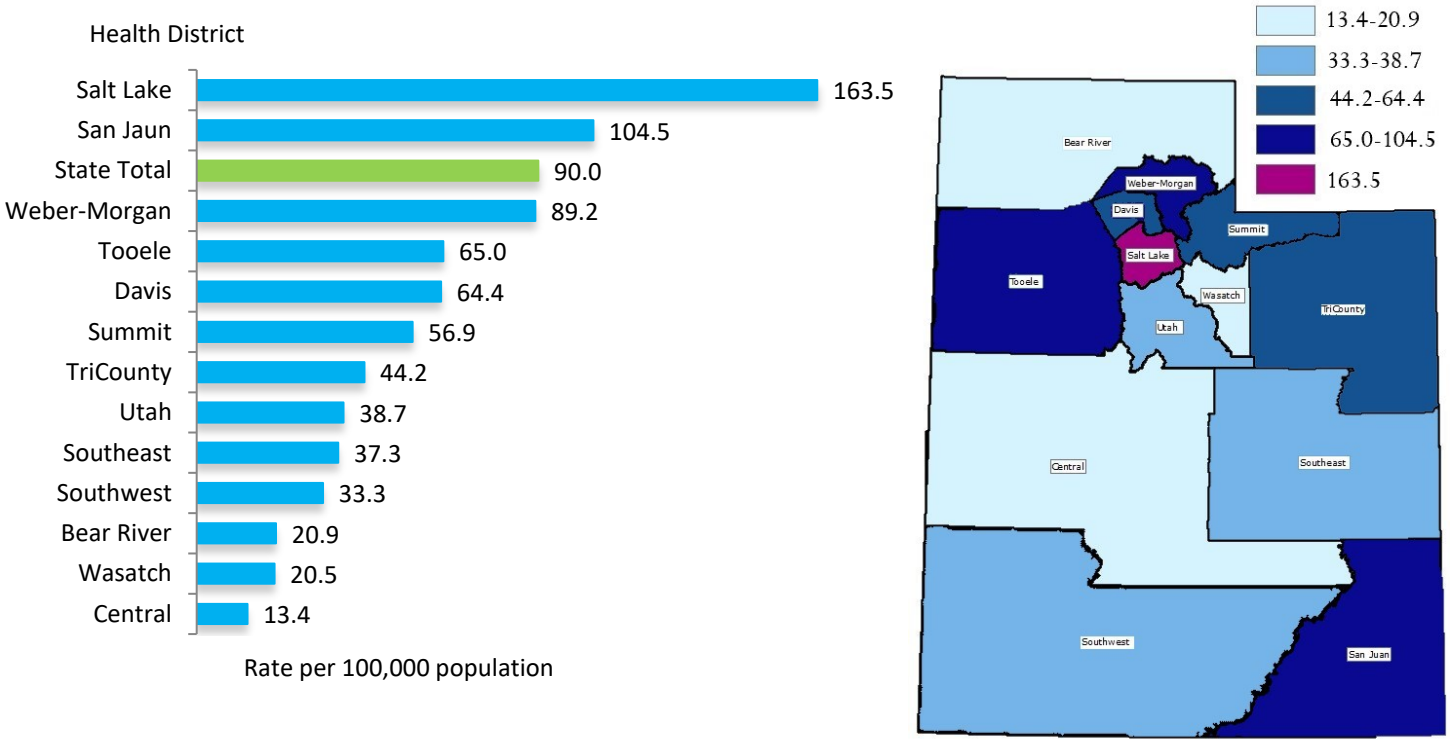


Figure 11. Gonorrhea Rates by Race/Ethnicity, Utah, 2019

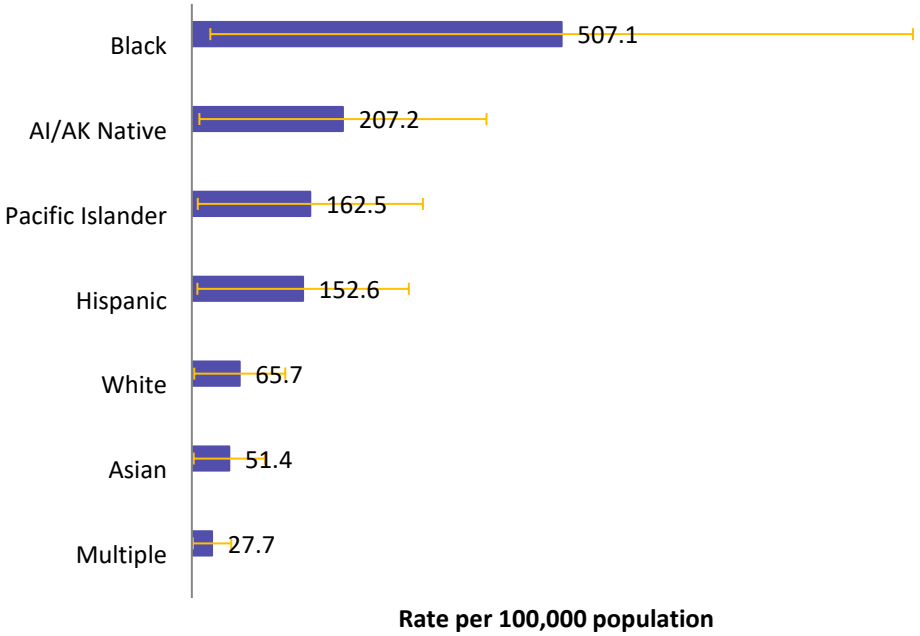


Figure 12. Gonorrhea Rates by Sexual Orientation, Utah, 2010-2019

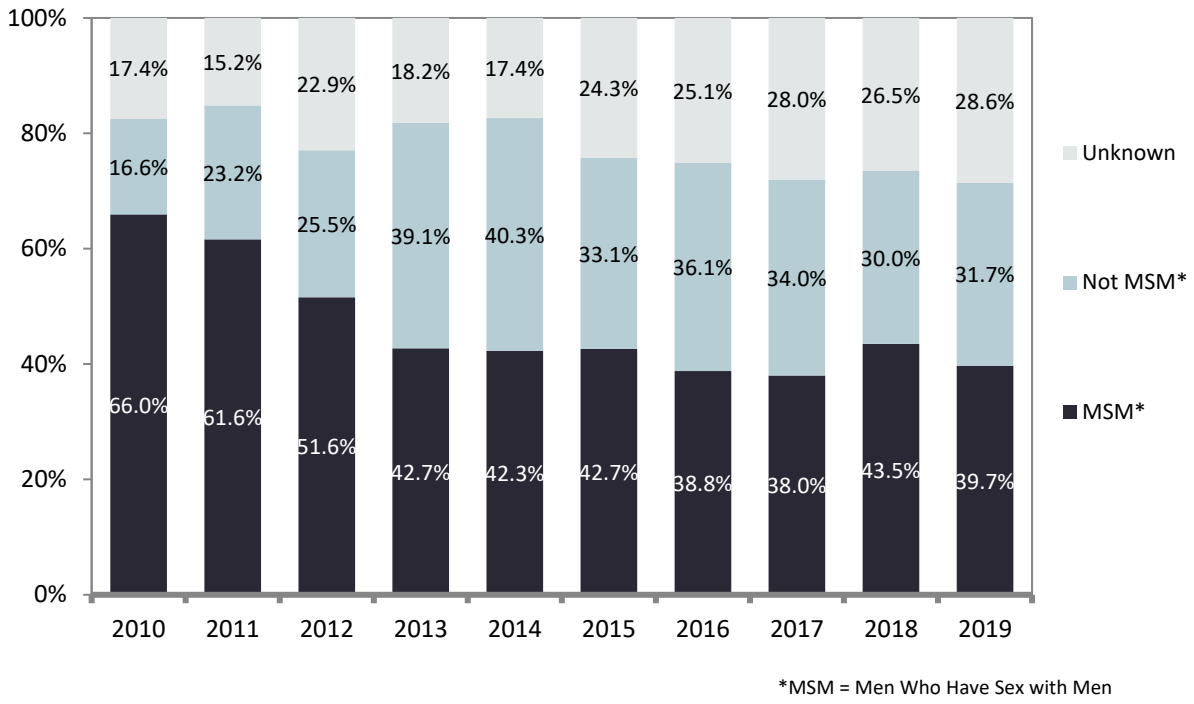
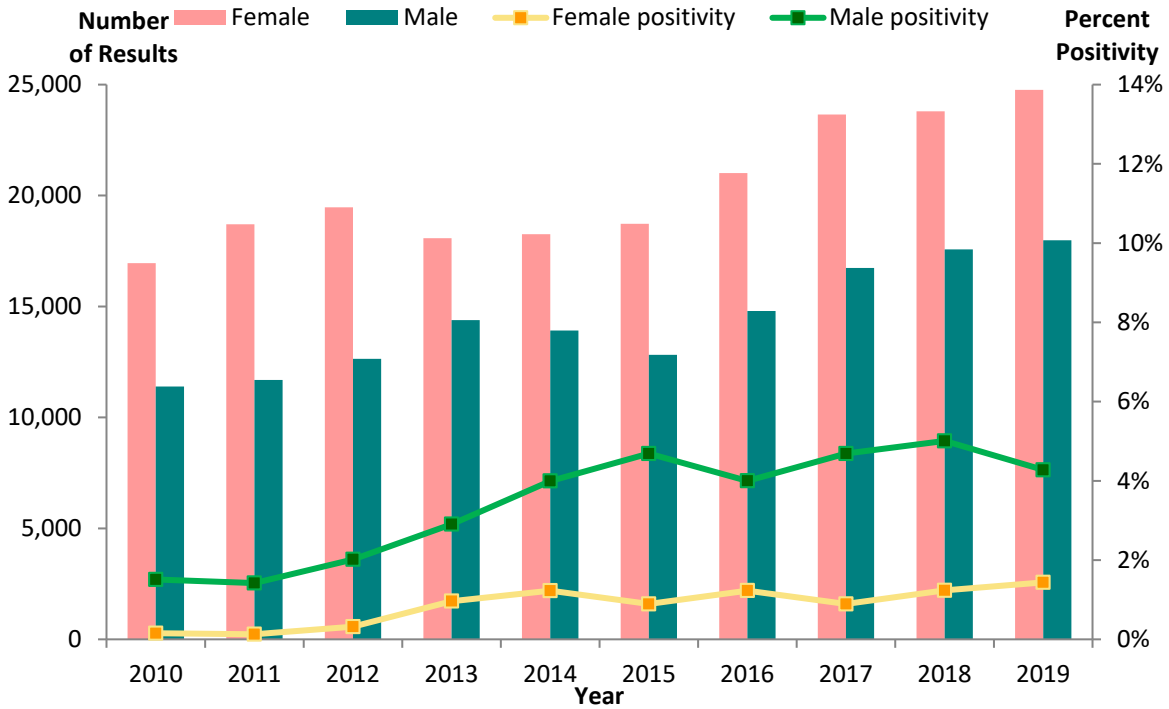


Figure 13. Number of Gonorrhea Test Results and Percent Positive by Sex, Utah Public Health Laboratories, Utah, 2010-2019



Primary and Secondary Syphilis

Background

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 2019, 138 cases of primary and secondary syphilis were reported in Utah compared with 169 cases in 2018. The P&S syphilis rate in Utah in 2019 was 4.3 cases per 100,000 population.

Rates in Utah

The P&S syphilis rate in Utah has risen and fallen over the past 10 years and has often been inconsistent with the national trend during the same periods of time, either rising or falling much more sharply than what is seen at the national level (Figure 14). In 2011, the rate decreased to 0.5 cases per 100,000 population but has increased since. In 2019, the rate decreased to 4.3 cases per 100,000 population from the 10 year high of 5.4 cases per 100,000 population in 2018. In 2019, Utah's P&S syphilis rate was 40% the national rate.

Syphilis by Sex

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 two of the past 10 years.

Syphilis by Age Group

The highest P&S syphilis rates in Utah in 2019 were among men aged 25-29 (17.9 cases per 100,000 population) and men aged 25-29 years (17.8 cases per 100,000) (Figure 16). P&S syphilis cases were reported in all age groups 15-64 years old. This highlights the need to target prevention messages to a wide range of age groups.

Syphilis by Local Health District

In 2019, eight health districts in Utah reported P&S syphilis cases: Salt Lake County Health District, Utah County Health District, Davis County Health District, Southwest Utah Health District, Southeast Utah Health District, Weber-Morgan Health District, Bear River Health District, and Summit County Health District (Figure 17). Salt Lake County Health District accounted for 70% of the P&S cases in Utah in 2019 with a rate of 8.4 cases per 100,000 population.

Syphilis by Race/Ethnicity

Of the 138 cases of P&S syphilis reported in Utah in 2019, the breakdown among racial and ethnic groups was as follows: 80 cases (58.0%) were among people who are non-Hispanic whites; 31 cases (22.5%) were among Hispanics; 8 cases (5.8%) were among non-Hispanic blacks and Other/Unknown race each; 7 cases (5.0%) were among non-Hispanic Pacific Islanders, and 1 to 3 cases each among non-Hispanic American Indian or Alaska Natives and Multi Race persons. There were no reported cases in non-Hispanic Asians.

Syphilis by Sexual Orientation

Since 2010, more than 80% of the P&S cases in men have been among men who have sex with men (MSM) (Figure 18). In 2019, 87% of P&S cases in men were among men who have sex with men.

Figure 14. Syphilis Rates, Utah and United States, 2010-2019

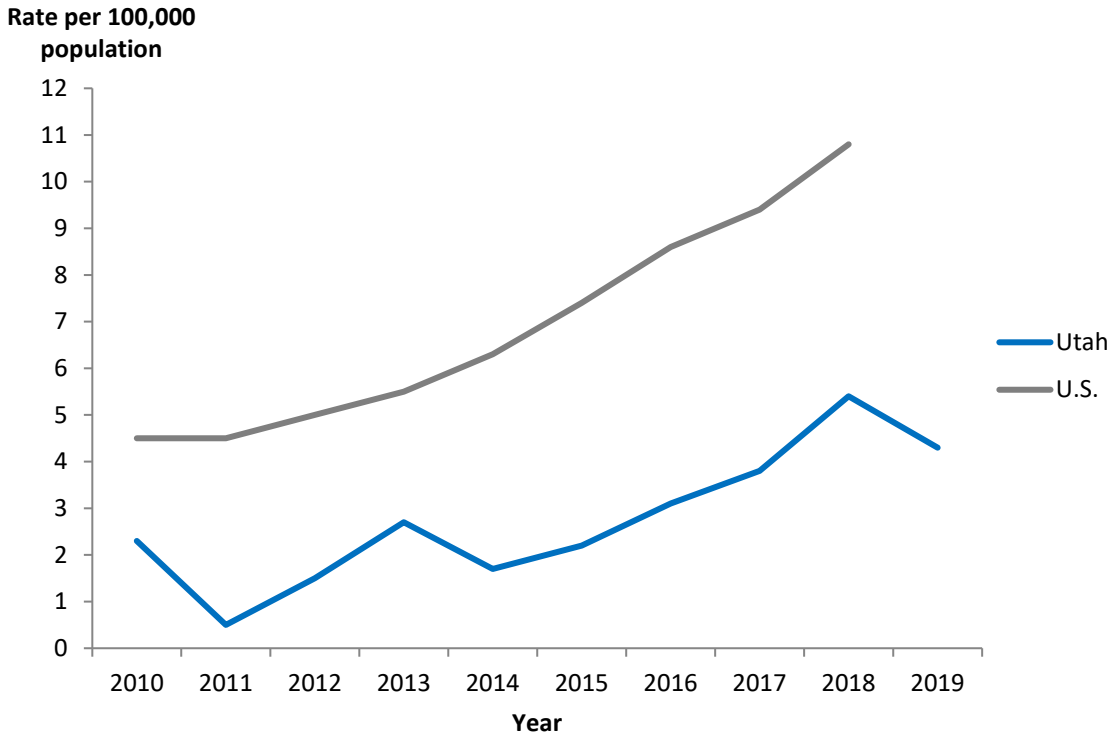


Figure 15. Syphilis Rates by Sex, Utah, 2010-2019

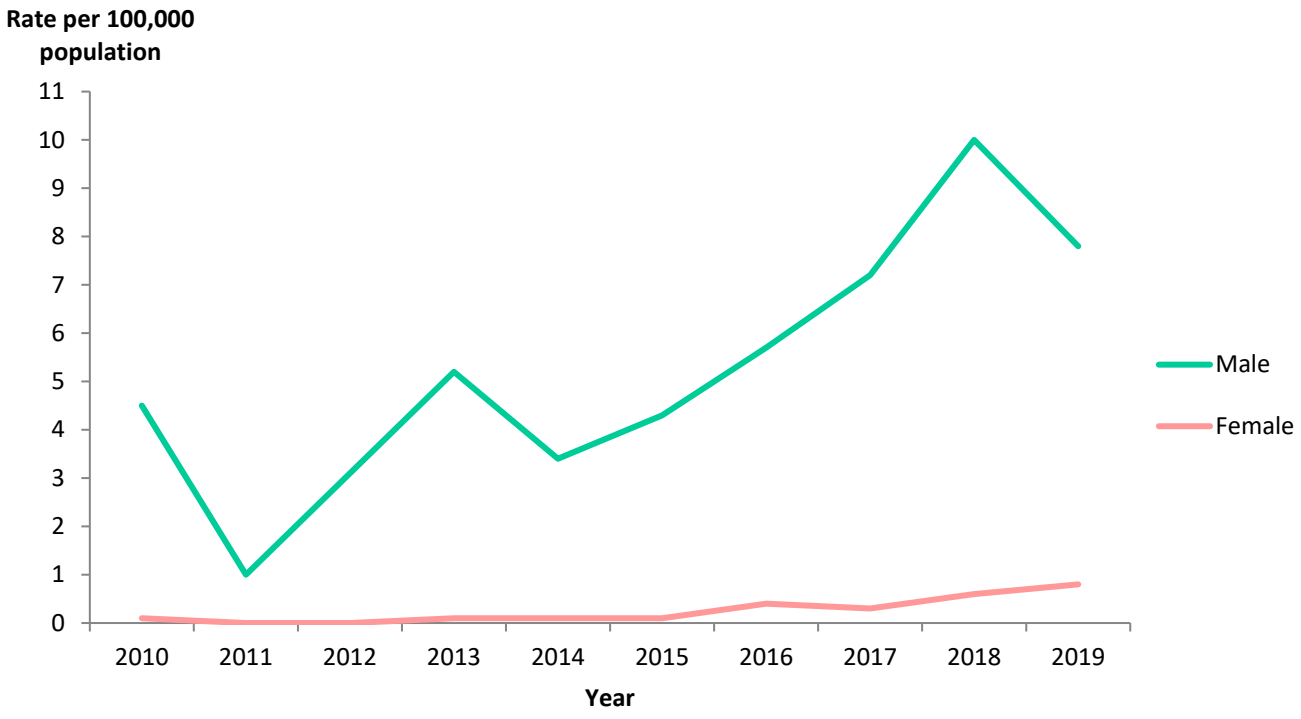


Figure 16. Primary and Secondary Syphilis Rates in Males by Age Group, Utah, 2019

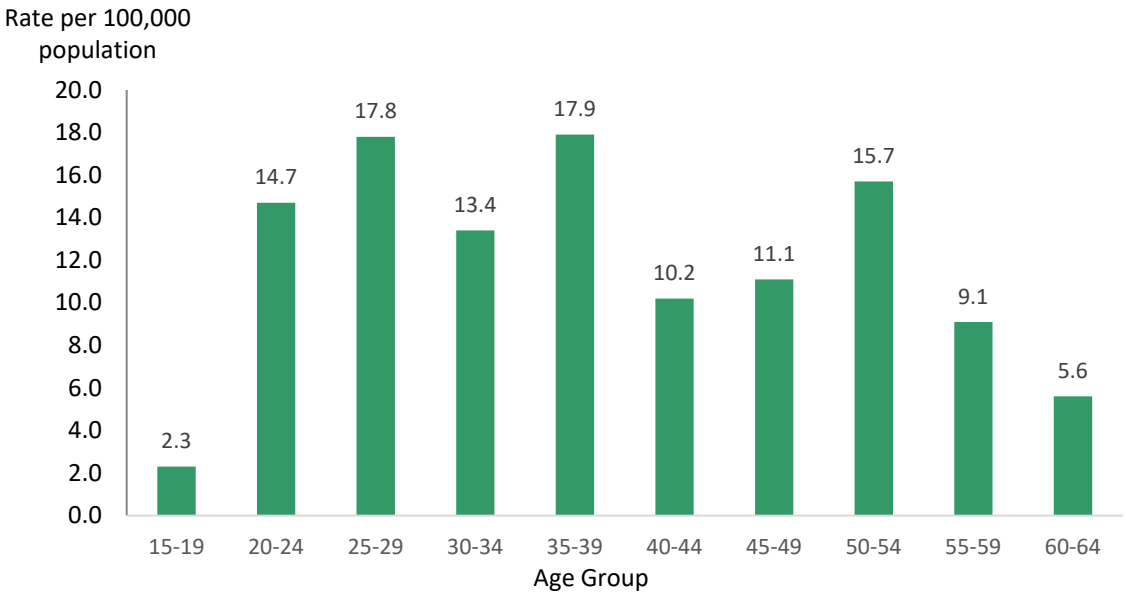


Figure 17. Primary and Secondary Rates by Local Health District, Utah, 2019

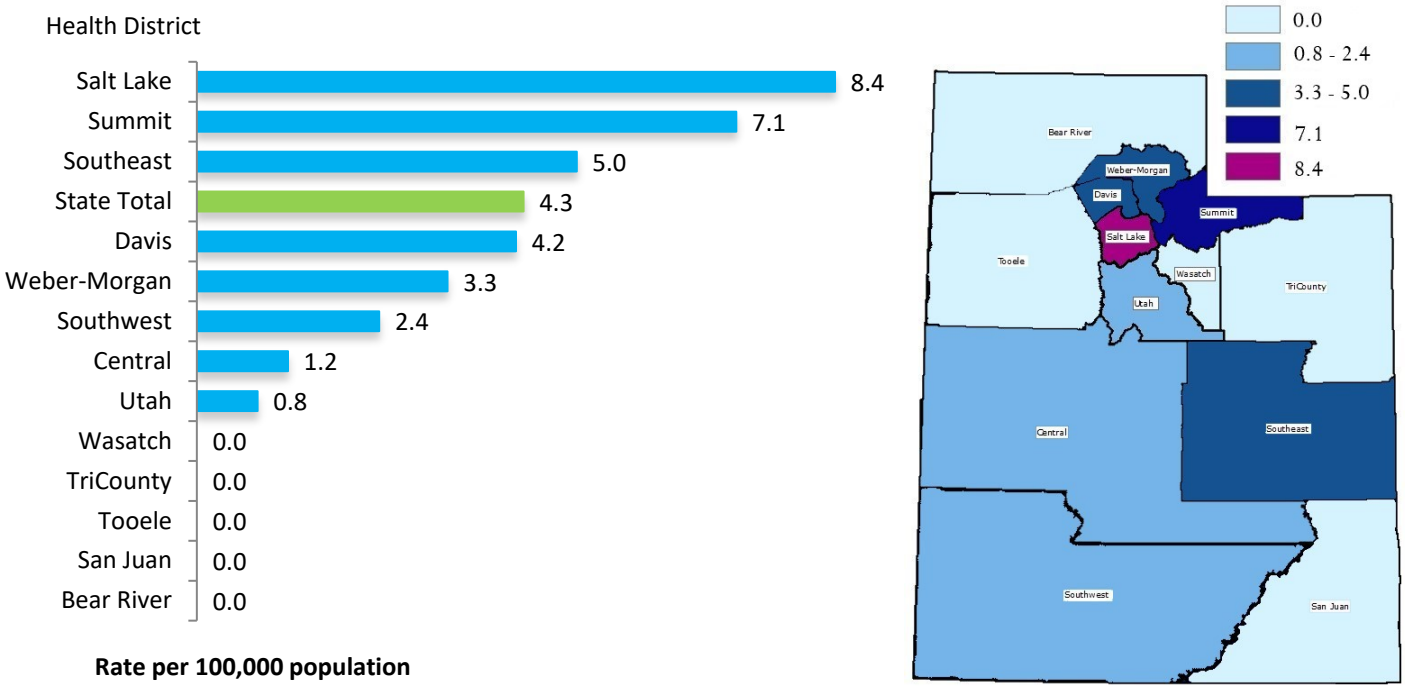
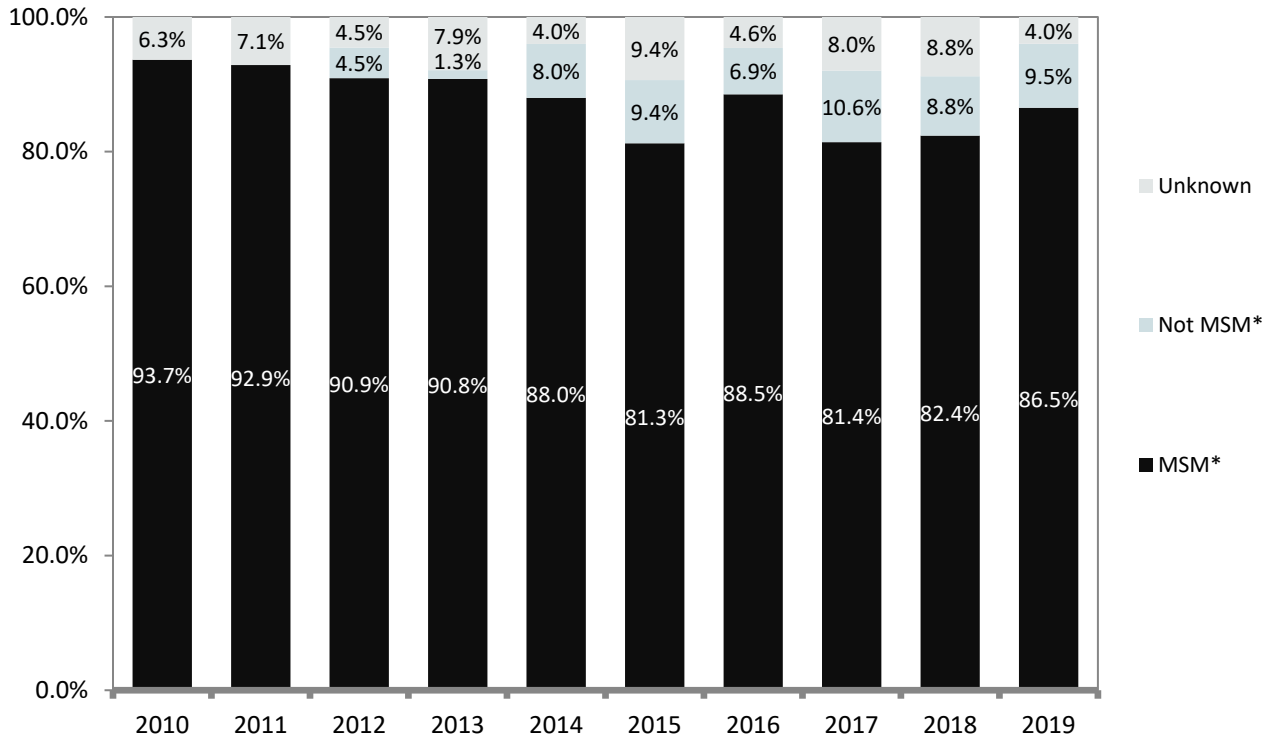


Figure 18. Primary and Secondary Rates by Sexual Orientation, Utah, 2010-2019



*MSM = Men Who Have Sex with

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 aged 20 to 24 have higher incidences of chlamydia and gonorrhea. In 2019, people aged 15 to 24 represented 16% of Utah's population; yet, this population accounted for 59% 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 aged 15-19 and 20-24 from 2010 to 2019 (Figure 19). During this 10-year period, the chlamydia rate increased 15% in males aged 15-19, 30% in males aged 20-24, 16% in females aged 15-19, and 41% in females aged 20-24. 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, the female rate was about twice that of males.

In 2019, the distribution of morbidity in adolescents and young adults varied by age. Adolescent 15 and 16 years olds 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 (3,053.1 cases per 100,000 population) and in males at age 20 (1,280.6 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 about five times higher than males in 15- and 16-year-olds, four times higher in 17- and 18-year-olds, three times higher in 19-year-olds, and about two times higher in 20- to 24-year-olds.

Gonorrhea

Gonorrhea rates in those aged 15-24 have continued on a general upward trend since 2012; previously, rates had been declining for several years. Rates in both 15-19 year olds and 20-24 year olds increased more than 500% since the lowest rates in the past 10 years in 2011. Notwithstanding the general upward trend in rates in adolescents and young adults, from 2018 to 2019, male rates in 15-19 year olds and 20-24 year olds decreased 7% and 18% respectively. During this same time frame, the rates decreased 22% in females aged 15-19 while increasing 27% in females aged 20-24.

Rates among males and females 15-19 years old have remained steady in the past 10 years (Figure 21). The rates between the sexes in this age group were similar between 2010 and 2011; males had a rate twice that of females in 2012; and females had higher rates from 2013 to 2019. Among males and females aged 20-24, males have consistently had higher rates of gonorrhea. Between 2010 and 2011, male rates in this age group were two to three times that of female rates; however, in 2013, the gonorrhea rate of females aged 20-24 more than doubled, 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 2019, rates among males were 1.3 times higher than the rates among females.

In 2019, the distribution of morbidity in adolescents and young adults varied by age (Figure 22). Adolescent males and females aged 15-17 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 young men 23 years old (389.2 cases per 100,000 population) and the highest rate in females was among young women 20 years old (258.3 cases per 100,000 population).

Figure 19. Chlamydia Rates by Age Group and Sex in Adolescents and Young Adults, Utah, 2010-2019

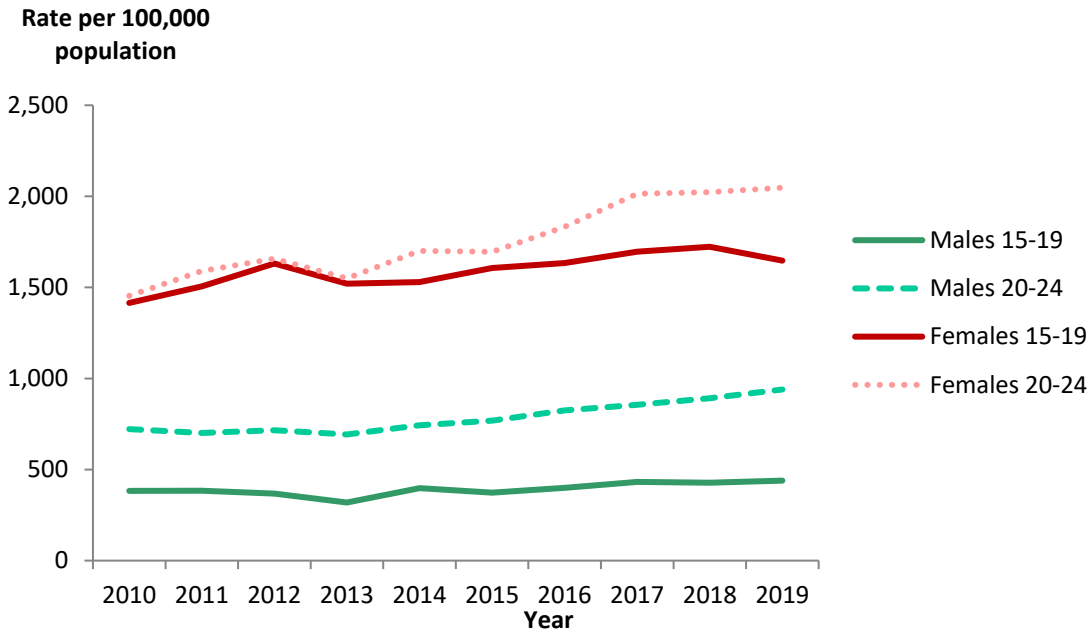


Figure 20. Chlamydia Rates by Age and Sex in Adolescents and Young Adults, Utah, 2019

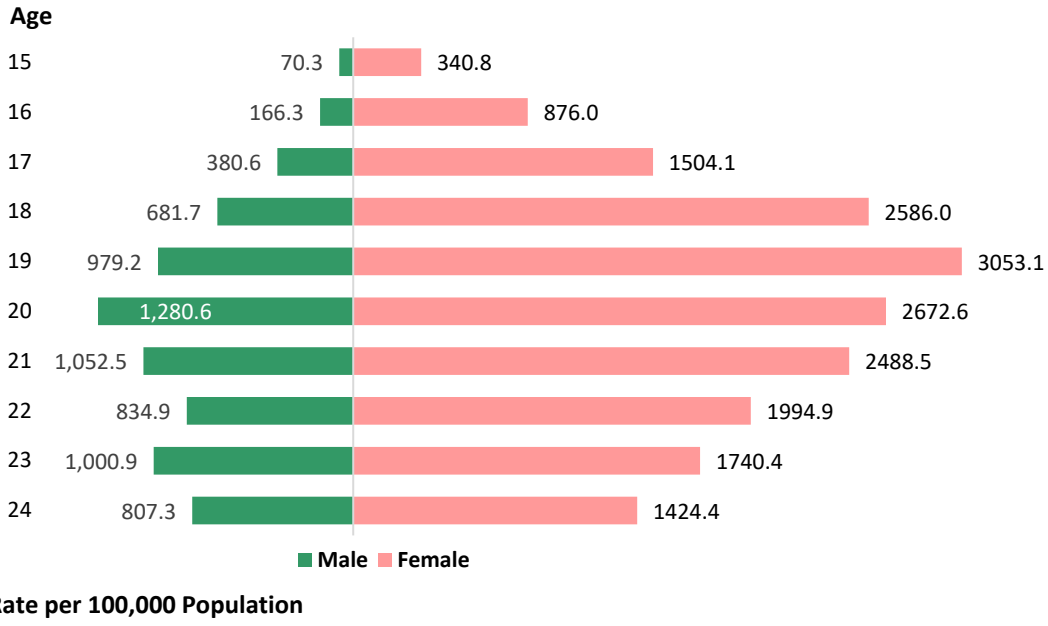


Figure 21. Gonorrhea Rates by Age Group and Sex in Adolescents and Young Adults, Utah, 2010-2019

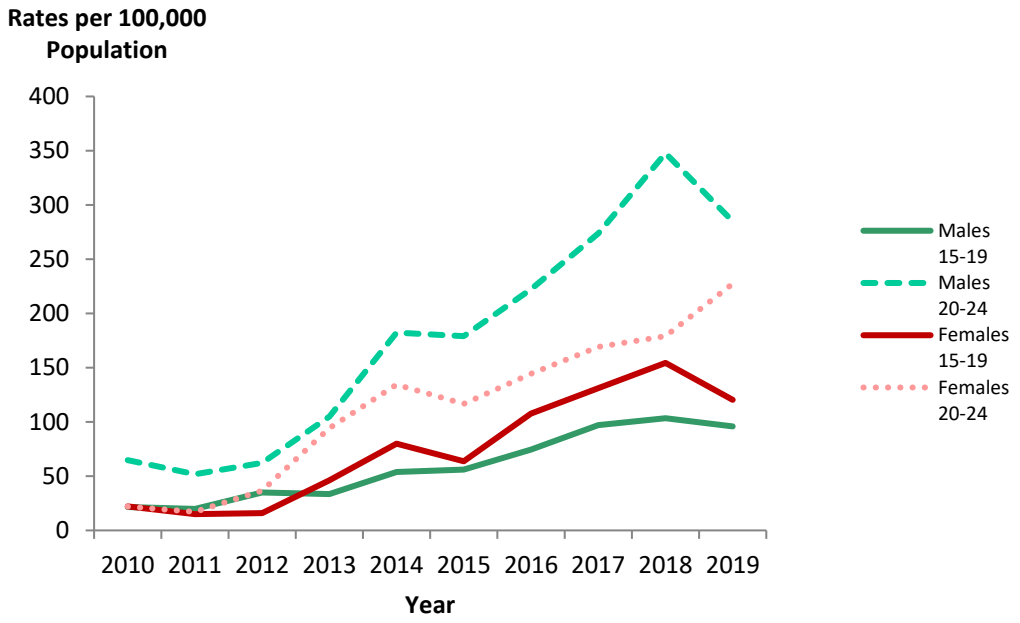
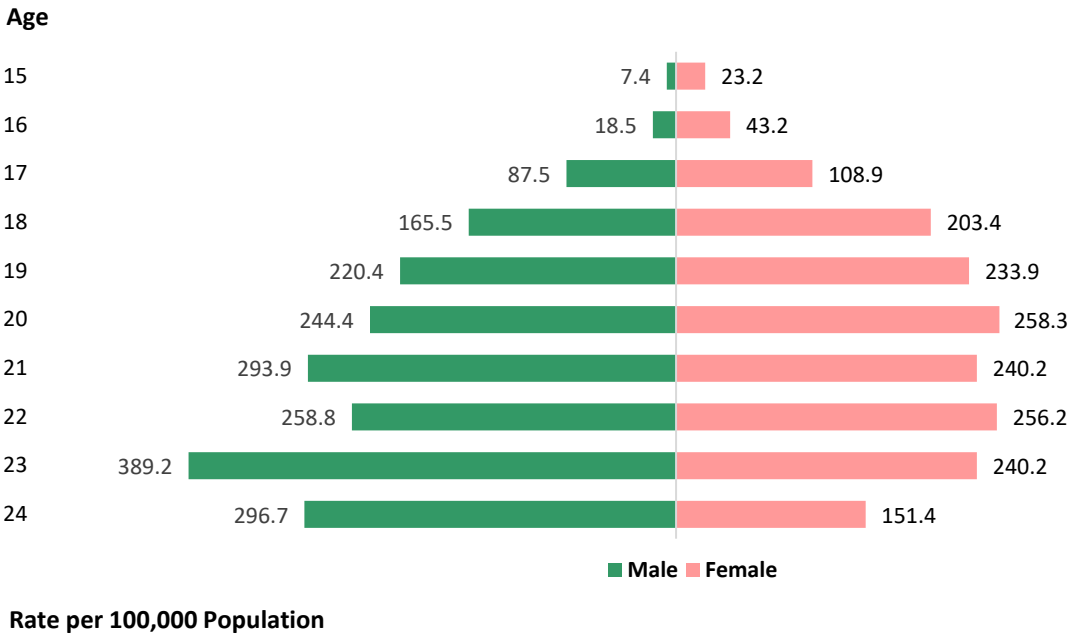


Figure 22. Gonorrhea Rates by Age and Sex in Adolescents and Young Adults, Utah, 2019



TABLES

Table 1. Cases of Sexually Transmitted Diseases and Rates per 100,000 Population, Utah and United States (U.S.), 2010-2019

	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
2010	6,676	240.5	423.6	310	11.2	100.2	65	2.3	4.5
2011	7,055	250.7	453.4	277	9.8	103.3	14	.5	4.5
2012	7,607	266.6	453.3	483	16.9	106.7	44	1.5	5.0
2013	7,501	258.9	443.5	951	32.8	105.3	78	2.7	5.5
2014	8,217	279.8	452.2	1,439	49.0	109.8	51	1.7	6.3
2015	8,611	288.8	475.0	1,560	52.3	123.0	66	2.2	7.4
2016	9,460	311.0	494.7	2,100	69.0	145.0	93	3.1	8.6
2017	10,135	326.8	524.6	2,541	81.9	170.6	117	3.8	9.4
2018	10,558	334.8	539.9	2,895	91.8	179.1	169	5.4	10.8
2019	11,073	345.4		2,884	90.0		138	4.3	

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, 2010-2019

Sex	Age Group (years)	Cases										Rates per 100,000 Population									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
MALE	<1	2	3	5	2	0	0	1	1	2	1	-	-	13.3*	-	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	6	5	5	4	2	8	10	7	7	3	5.1*	4.1*	4.1*	3.2*	-	6.2*	7.6*	5.2*	5.1*	-
	15 to 19	427	426	410	362	458	439	483	534	542	568	382.8	383.5	367.9	319.0	398.1	373.3	399.8	431.7	428.0	439.2
	20 to 24	825	825	875	866	934	979	1,061	1,115	1,185	1,276	722.0	700.8	715.6	692.7	743.4	768.7	824.4	855.2	891.7	939.6
	25 to 29	494	512	544	616	656	646	761	832	801	955	419.3	449.1	493.4	567.6	597.5	578.6	647.9	674.4	631.1	739.3
	30 to 34	237	250	322	316	336	357	463	446	532	522	213.0	219.9	280.2	273.7	293.7	316.1	416.5	406.2	485.3	467.0
	35 to 39	113	114	149	161	194	218	291	256	297	363	123.5	121.5	152.3	157.3	182.3	197.2	254.9	220.1	252.7	309.4
	40 to 44	58	69	71	79	112	121	159	132	145	188	73.1	83.5	83.6	90.6	125.5	132.5	169.0	133.8	140.1	173.9
	45 to 49	22	35	49	45	56	64	92	88	99	97	28.4	46.0	64.7	59.7	73.3	81.3	111.9	103.6	113.1	107.8
	50 to 54	21	14	26	20	44	48	63	46	58	58	27.7	18.2	33.8	25.9	57.2	63.0	83.7	61.2	77.1	75.9
	55 to 59	9	1	8	5	13	33	22	45	42	47	13.5*	-	11.3*	6.9*	17.8	44.4	29.2	59.2	54.9	61.4
	60 to 64	4	3	2	5	3	9	14	9	17	21	-	-	-	8.4*	-	14.0*	20.9	13.0*	24.0	29.1
	65+	0	1	0	3	1	3	7	11	8	14	0.0	-	0.0	-	-	-	4.7*	7.1*	4.9*	8.2
	Unknown	3	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	2,221	2,258	2,466	2,484	2,809	2,925	3,427	3,522	3,735	4,113	159.3	159.7	171.9	170.5	190.2	195.0	223.8	225.5	235.2	254.7
FEMALE	<1	1	0	1	1	0	2	0	1	0	0	-	0.0	-	-	0.0	-	0.0	-	0.0	0.0
	1 to 9	1	0	1	1	0	0	0	0	2	0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0
	10 to 14	43	47	55	37	49	47	53	48	46	43	38.5	41.1	47.2	31.0	40.4	38.2	42.3	37.6	35.5	33.1
	15 to 19	1,540	1,611	1,743	1,651	1,684	1,815	1,898	2,019	2,098	2,051	1,414.9	1,505.5	1,631.0	1,520.8	1,529.5	1,606.7	1,633.9	1,696.2	1,723.1	1,646.9
	20 to 24	1,652	1,860	1,991	1,890	2,088	2,079	2,246	2,499	2,553	2,638	1,453.9	1,590.2	1,657.7	1,549.1	1,700.4	1,695.7	1,832.6	2,014.0	2,023.3	2,047.4
	25 to 29	710	739	706	773	792	871	912	1,053	1,100	1,155	640.2	679.3	664.2	735.5	750.3	809.9	810.9	899.7	917.4	945.2
	30 to 34	295	294	374	382	457	477	473	483	511	474	277.2	269.2	338.0	343.6	412.9	436.6	434.5	447.7	475.3	436.2
	35 to 39	123	145	156	161	187	224	250	284	272	322	139.5	160.4	165.6	163.4	182.6	210.2	227.0	252.2	238.9	282.7
	40 to 44	61	62	66	78	93	89	122	124	136	141	80.1	78.2	80.8	92.8	108.3	101.3	134.7	130.8	136.5	135.4
	45 to 49	19	29	22	24	36	42	46	63	58	75	24.6	38.4	29.6	32.7	48.6	55.1	58.0	76.6	68.3	86.3
	50 to 54	8	7	16	13	14	27	20	16	29	29	10.4*	9.0*	20.5	16.6	17.9	35.1	26.4	21.4	39.1	38.6
	55 to 59	2	3	6	6	6	11	6	14	11	17	-	-	8.3*	8.1*	8.0*	14.4*	7.7*	17.8	13.9*	21.5
	60 to 64	0	0	2	0	2	1	3	6	5	5	0.0	0.0	-	0.0	-	-	-	8.3*	6.8*	6.6*
	65+	0	0	2	0	0	1	2	0	2	2	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	4,455	4,797	5,141	5,017	5,408	5,686	6,031	6,610	6,823	6,952	322.5	342.5	362.3	348.3	370.4	383.8	399.2	429.4	435.9	436.9
TOTAL	<1	3	3	6	3	0	2	1	2	2	1	-	-	11.9*	-	0.0	-	-	-	-	-
	1 to 9	1	0	1	1	0	0	0	0	2	0	-	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0
	10 to 14	49	52	60	41	51	55	63	55	53	46	21.4	22.1	25.1	16.8	20.5	21.8	24.5	20.9	19.9	17.2
	15 to 19	1,967	2,037	2,153	2,013	2,142	2,254	2,383	2,553	2,640	2,620	892.5	934.1	986.2	906.6	951.4	977.6	1,005.6	1,051.7	1,062.8	1,032.1
	20 to 24	2,477	2,685	2,866	2,756	3,022	3,058	3,307	3,615	3,738	3,916	1,086.9	1,144.1	1,182.4	1,115.7	1,216.4	1,223.4	1,316.2	1,420.7	1,442.9	1,479.7
	25 to 29	1,204	1,251	1,250	1,389	1,448	1,517	1,673	1,885	1,901	2,111	526.4	561.5	577.2	650.2	672.4	692.1	727.6	784.1	770.2	839.8
	30 to 34	532	544	696	698	793	834	936	929	1,043	998	244.4	244.1	308.6	308.0	352.3	375.4	425.4	426.8	480.3	452.8
	35 to 39	236	259	305	322	381	442	541	542	569	686	131.3	140.6	158.8	160.3	182.5	203.6	241.2	236.8	245.9	296.7
	40 to 44	119	131	137	157	205	210	281	256	281	329	76.5	80.9	82.2	91.7	117.1	117.2	152.2	132.4	138.3	155.0
	45 to 49	41	64	71	69	92	106	138	151	157	172	26.5	42.2	47.3	46.4	61.2	68.4	85.4	90.3	91.1	97.2
	50 to 54	29	21	42	33	58	75	83	62	87	87	19.0	13.6	27.1	21.2	37.4	49.0	55.0	41.4	58.3	57.4
	55 to 59	11	4	14	11	19	44	28	59	53	64	8.2*	2.9*	9.8	7.5*	12.8	29.1	18.3	38.1	34.1	41.2
	60 to 64	4	3	4	5	5	10	17	15	22	26	3.7*	-	3.4*	4.1*	3.9*	7.6*	12.4	10.6	15.2	17.6
	65+	0	1	2	3	1	4	9	11	10	17	0.0	-	-	-	-	-	2.8*	3.3*	2.9*	4.6
	Unknown	3	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	6,676	7,055	7,607	7,501	8,217	8,611	9,460	10,135	10,558	11,073	240.5	250.7	266.6	258.9	279.8	288.8	311.0	326.8	334.8	345.4

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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.

Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 3. Chlamydia Cases and Rates by Local Health District, Utah, 2010-2019

Local Health District	Cases										Rates per 100,000 Population									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bear River	238	275	295	251	267	348	354	353	394	391	143.5	164.4	175.2	147.6	155.7	200.2	199.4	195.5	214.4	209.3
Central	85	73	81	91	110	91	89	106	123	135	112.0	96.1	107.2	119.9	144.5	118.4	113.9	133.4	152.4	164.7
Davis	706	745	866	891	954	891	968	1,143	1,145	1,155	229.3	238.9	274.1	276.5	290.2	266.3	283.9	329.7	326.1	324.9
Salt Lake	3,515	3,629	3,932	3,792	4,278	4,578	5,107	5,327	5,290	5,709	340.3	346.4	369.6	351.3	392.5	415.3	455.9	468.6	460.5	492.0
San Juan	N/A	N/A	N/A	N/A	N/A	55	54	60	43	55	N/A	N/A	N/A	N/A	N/A	360.9	352.3	392.7	280.0	359.3
Southeastern	103	121	147	168	126	69	69	70	100	91	182.2	214.4	259.9	299.9	225.8	171.2	171.8	176.2	250.5	226.2
Southwest	333	344	356	380	432	411	460	556	653	701	163.5	166.3	169.9	179.1	199.3	185.9	202.0	235.9	268.1	278.1
Summit	65	54	63	74	91	89	120	118	116	132	178.1	144.3	166.4	192.6	232.7	224.5	296.2	285.5	276.9	313.2
Tooele	126	134	118	141	143	164	159	194	186	188	215.4	226.4	197.4	232.5	232.7	261.8	246.1	287.5	265.8	260.2
TriCounty	83	87	90	112	136	118	124	111	147	97	159.0	163.8	164.4	197.2	233.5	197.8	215.3	197.8	261.0	171.3
Utah	720	789	791	774	940	974	1,021	1,180	1,270	1,362	138.5	148.7	146.6	140.4	167.7	170.1	173.0	194.5	204.3	214.1
Wasatch	29	34	42	38	35	29	46	42	46	57	122.7	139.3	165.7	142.9	125.8	99.6	151.4	131.7	139.1	167.2
Weber-Morgan	673	769	823	789	702	794	885	875	1,043	998	278.5	315.8	334.5	317.8	280.0	312.7	342.4	332.2	389.7	366.5
Unknown	0	1	3	0	3	0	4	0	2	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	6,676	7,055	7,607	7,501	8,217	8,611	9,460	10,135	10,558	11,073	240.5	250.7	266.6	258.9	279.8	288.8	311.0	326.8	334.8	345.4

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, 2010-2019

Race/Ethnicity	Cases										Rates per 100,000 Population									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
AI/AK Native	109	171	197	200	174	152	170	161	176	161	400.1	622.7	712.0	716.5	614.3	530.4	585.5	547.2	590.5	529.6
Asian	91	89	115	119	138	133	183	203	212	179	164.4	154.6	189.7	189.6	211.5	197.0	257.6	270.2	271.1	219.2
Black	240	283	300	323	351	326	432	468	516	540	906.5	1,039.5	1,059.5	1,103.5	1,168.1	1,052.3	1,319.1	1,342.5	1,419.4	1,419.0
Hispanic†	1,646	1,784	1,963	1,975	1,934	2,119	2,378	2,543	2,600	2,885	456.5	483.5	521.4	511.6	489.7	521.5	565.1	583.5	578.9	624.4
White	4,365	4,537	4,855	4,684	5,093	4,823	5,433	5,772	5,932	5,755	195.4	200.8	212.6	202.6	218.0	204.1	226.4	237.2	240.8	230.8
Pacific Islander	140	141	145	143	189	190	225	288	277	284	575.3	571.5	571.8	546.9	706.1	687.2	784.9	979.2	908.6	904.7
Multiple	8	11	25	25	33	32	42	73	51	79	17.0*	22.5*	49.0	47.1	59.9	55.9	69.9	115.9	77.7	115.1
Other/Unknown	77	39	7	32	305	836	597	627	794	1,190	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	6,676	7,055	7,607	7,501	8,217	8,611	9,460	10,135	10,558	11,073	240.5	250.7	266.6	258.9	279.8	288.8	311.0	326.8	334.8	345.4

† 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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.

Table 5. Chlamydia Test Results and Percent Positivity by Sex, Utah Public Health Laboratories, Utah, 2010-2019

	Female			Male			Total**		
Year*	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive
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%
2016	1,911	21,016	9.09%	1,580	14,794	10.68%	3,522	36,147	9.74%
2017	2,194	23,660	9.27%	1,669	16,726	9.98%	3,897	40,818	9.55%
2018	2,242	23,800	9.42%	1,607	17,574	9.14%	3,882	41,687	9.31%
2019	2,326	24,766	9.39%	1,635	17,986	9.09%	3,978	42,834	9.29%

* 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, 2010-2019

Sex	Age Group (years)	Cases										Rates per 100,000 Population									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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	1	0	2	0	1	3	0	0	0	0.0	-	0.0	-	0.0	-	-	0.0	0.0	0.0
	15 to 19	24	22	39	38	62	66	90	120	131	124	21.5	19.8	35.0	33.5	53.9	56.1	74.5	97.0	103.4	95.9
	20 to 24	74	61	76	131	229	228	286	357	462	387	64.8	51.8	62.2	104.8	182.3	179.0	222.2	273.8	347.7	285.0
	25 to 29	49	54	65	133	200	265	311	390	423	455	41.6	47.4	59.0	122.5	182.2	237.3	264.8	316.1	333.3	352.2
	30 to 34	34	33	60	100	150	163	257	272	343	332	30.6	29.0	52.2	86.6	131.1	144.3	231.2	247.8	312.9	297.0
	35 to 39	24	19	34	60	97	122	170	219	232	226	26.2	20.2	34.8	58.6	91.1	110.4	148.9	188.3	197.4	192.6
	40 to 44	17	10	27	41	49	70	111	105	139	137	21.4	12.1*	31.8	47.0	54.9	76.7	118.0	106.4	134.3	126.7
	45 to 49	7	9	26	29	40	45	80	95	83	77	9.0*	11.8*	34.3	38.5	52.4	57.2	97.3	111.9	94.8	85.6
	50 to 54	3	1	12	33	28	51	38	53	68	59	-	-	15.6	42.8	36.4	67.0	50.5	70.5	90.4	77.2
	55 to 59	2	1	10	9	13	35	25	35	46	35	-	-	14.1*	12.4*	17.8	47.0	33.2	46.1	60.2	45.7
	60 to 64	1	0	0	2	7	4	11	18	17	23	-	0.0	0.0	-	11.3*	-	16.4*	26.0	24.0	31.9
	65+	0	0	0	0	0	5	2	7	12	13	0.0	0.0	0.0	0.0	0.0	3.5*	-	4.5*	7.4	7.6
	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
	Male Total	235	211	349	578	875	1,055	1,384	1,671	1,956	1,869	16.9	14.9	24.3	39.7	59.2	70.3	90.4	107.0	123.2	115.7
FEMALE	<1	0	0	0	0	1	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	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0
	10 to 14	1	1	3	1	5	6	5	9	11	4	-	-	-	-	4.1*	4.9*	4.0*	7.1*	8.5*	3.1*
	15 to 19	24	16	17	50	88	72	125	156	188	150	22.1	15.0	15.9	46.1	79.9	63.7	107.6	131.1	154.4	120.4
	20 to 24	25	20	44	115	165	143	177	210	226	293	22.0	17.1	36.6	94.3	134.4	116.6	144.4	169.2	179.1	227.4
	25 to 29	15	15	23	82	119	109	160	191	198	210	13.5	13.8	21.6	78.0	112.7	101.4	142.3	163.2	165.1	171.9
	30 to 34	7	6	24	57	102	81	130	129	121	160	6.6*	5.5*	21.7	51.3	92.2	74.1	119.4	119.6	112.5	147.3
	35 to 39	2	6	11	35	52	55	60	85	103	87	-	6.6*	11.7*	35.5	50.8	51.6	54.5	75.5	90.5	76.4
	40 to 44	1	1	4	12	18	20	34	37	52	43	-	-	4.9*	14.3	21.0	22.8	37.5	39.0	52.2	41.3
	45 to 49	0	1	4	4	9	13	16	27	20	38	0.0	-	5.4*	-	12.2*	17.1	20.2	32.8	23.6	43.7
	50 to 54	0	0	4	11	4	5	7	16	10	21	0.0	0.0	-	14.0*	-	6.5*	9.3*	21.4	13.5*	28.0
	55 to 59	0	0	0	3	1	1	1	6	6	5	0.0	0.0	0.0	-	-	-	-	7.6*	7.6*	6.3*
	60 to 64	0	0	0	3	0	0	1	4	2	1	0.0	0.0	0.0	-	0.0	0.0	-	-	-	-
	65+	0	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	-
	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	75	66	134	373	564	505	716	870	939	1,013	5.4	4.7	9.4	25.9	38.6	34.1	47.4	56.5	60.0	63.7
TOTAL	<1	0	0	0	0	1	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	2	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0
	10 to 14	1	2	3	3	5	7	8	9	11	4	-	-	-	-	2.0*	2.8*	3.1*	3.4*	4.1*	1.5*
	15 to 19	48	38	56	88	150	138	215	276	319	274	21.8	17.4	25.7	39.6	66.6	59.9	90.7	113.7	128.4	107.9
	20 to 24	99	81	120	246	394	371	463	567	688	680	43.4	34.5	49.5	99.6	158.6	148.4	184.3	222.8	265.6	256.9
	25 to 29	64	69	88	215	319	374	471	581	621	666	28.0	31.0	40.6	100.6	148.1	170.6	204.8	241.7	251.6	264.9
	30 to 34	41	39	84	157	252	244	387	401	464	493	18.8	17.5	37.2	69.3	112.0	109.8	175.9	184.2	213.7	223.7
	35 to 39	26	25	45	95	149	177	230	304	335	313	14.5	13.6	23.4	47.3	71.4	81.5	102.5	132.8	144.8	135.4
	40 to 44	18	11	31	53	67	90	145	142	191	180	11.6	6.8*	18.6	31.0	38.3	50.2	78.5	73.4	94.0	84.8
	45 to 49	7	10	30	33	49	58	96	122	103	115	4.5*	6.6*	20.0	22.2	32.6	37.4	59.4	73.0	59.7	65.0
	50 to 54	3	1	16	44	32	56	45	69	78	80	-	-	10.3	28.3	20.7	36.6	29.8	46.0	52.3	52.8
	55 to 59	2	1	10	12	14	36	26	41	52	40	-	-	7.0*	8.2	9.4	23.8	17.0	26.5	33.4	25.7
	60 to 64	1	0	0	5	7	4	12	22	19	24	-	0.0	0.0	4.1*	5.5*	-	8.8	15.6	13.1	16.3
	65+	0	0	0	0	0	5	2	7	12	14	0.0	0.0	0.0	0.0	0.0	1.6*	-	2.1*	3.4	3.8
	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
	Total Cases	310	277	483	951	1,439	1,560	2,100	2,541	2,895	2,884	11.2	9.8	16.9	32.8	49.0	52.3	69.0	81.9	91.8	90.0

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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.

Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 7. Gonorrhea Cases and Rates by Local Health District, Utah, 2010-2019

	Cases										Rates per 100,000 Population									
Local Health District	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Bear River	7	3	8	7	35	17	27	49	53	39	4.2*	-	4.8*	4.1*	20.4	9.8	15.2	27.1	28.8	20.9
Central	3	1	3	3	7	8	10	9	24	11	-	-	-	-	9.2*	10.4*	12.8*	11.3*	29.7	13.4*
Davis	38	18	41	64	104	93	138	184	217	229	12.3	5.8	13.0	19.9	31.6	27.8	40.5	53.1	61.8	64.4
Salt Lake	197	198	341	685	1,001	1,048	1,436	1,653	1,909	1,897	19.1	18.9	32.1	63.5	91.8	95.1	128.2	145.4	166.2	163.5
San Juan	0	0	0	0	0	4	6	5	7	16	N/A	N/A	N/A	N/A	N/A	-	39.1*	32.7*	45.6*	104.5
Southeastern	6	6	5	5	7	6	6	19	21	15	10.6*	10.6*	8.8*	8.9*	12.5*	14.9*	14.9*	47.8	52.6	37.3
Southwest	5	10	14	16	23	55	56	88	65	84	2.5*	4.8*	6.7	7.5	10.6	24.9	24.6	37.3	26.7	33.3
Summit	2	2	3	5	9	10	11	7	22	24	-	-	-	13.0*	23.0*	25.2*	27.2*	16.9*	52.5	56.9
Tooele	6	1	3	7	22	28	29	42	26	47	10.3*	-	-	11.5*	35.8	44.7	44.9	62.2	37.1	65.0
TriCounty	0	2	4	6	7	12	6	14	28	25	0	-	-	10.6*	12.0*	20.1	10.4*	25.0	49.7	44.2
Utah	24	19	17	67	97	129	159	201	229	246	4.6	3.6	3.1	12.2	17.3	22.5	26.9	33.1	36.8	38.7
Wasatch	0	0	0	1	2	3	9	8	4	7	0.0	0.0	0.0	-	-	-	29.6*	25.1*	12.1*	20.5*
Weber-Morgan	22	17	44	85	124	147	206	262	290	243	9.1	7.0	17.9	34.2	49.5	57.9	79.7	99.5	108.3	89.2
Unknown	0	0	0	0	1	0	1	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	310	277	483	951	1,439	1,560	2,100	2,541	2,895	2,884	11.2	9.8	16.9	32.8	49.0	52.3	69.0	81.9	91.8	90.0

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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.
Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 8. Gonorrhea Cases and Rates by Race/Ethnicity, Utah, 2010-2019

	Cases										Rates per 100,000 Population									
Race/Ethnicity	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
AI/AK Native	6	5	14	20	17	23	25	33	45	63	22.0*	18.2*	50.6	71.7	60.0	80.3	86.1	112.2	151.0	207.2
Asian	2	2	3	13	21	22	31	42	44	42	-	-	-	20.7	32.2	32.6	43.6	55.9	56.3	51.4
Black	9	20	58	74	102	142	183	189	241	193	34.0*	73.5	204.8	252.8	339.4	458.3	558.8	542.2	662.9	507.1
Hispanic[†]	37	41	84	171	322	308	470	574	584	705	10.3	11.1	22.3	44.3	81.5	75.8	111.7	131.7	130.0	152.6
White	251	205	317	662	928	898	1,210	1,488	1,760	1,639	11.2	9.1	13.9	28.6	39.7	38.0	50.4	61.1	71.4	65.7
Pacific Islander	3	3	5	7	18	22	38	52	51	51	-	-	19.7*	26.8*	67.2	79.6	132.6	176.8	167.3	162.5
Multiple	0	1	1	4	6	5	7	15	19	19	0.0	-	-	-	10.9*	8.7*	11.6*	23.8	29.0	27.7
Other/Unknown	2	0	1	0	25	140	136	148	151	172	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	310	277	483	951	1,439	1,560	2,100	2,541	2,895	2,884	11.2	9.8	16.9	32.8	49.0	52.3	69.0	81.9	91.8	90.0

[†] 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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.
Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 9. Gonorrhea Cases and Percent Among Males by Sexual Orientation, Utah, 2010-2019

	MSM*		Not MSM*		Unknown		Total
Year	Cases	Percent	Cases	Percent	Cases	Percent	Cases
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%	226	39.1%	105	18.2%	578
2014	370	42.3%	353	40.3%	152	17.4%	875
2015	450	42.7%	349	33.1%	256	24.3%	1055
2016	537	38.8%	499	36.1%	348	25.1%	1384
2017	635	38.0%	568	34.0%	468	28.0%	1671
2018	851	43.5%	586	30.0%	519	26.5%	1956
2019	742	39.7%	593	31.7%	534	28.6%	1869

*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, 2010-2019

	Female			Male			Total**		
Year*	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive	Positive Results	Total Results	Percent Positive
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%
2016	254	21,016	1.23%	703	14,794	4.00%	973	36,147	2.45%
2017	310	23,651	0.89%	764	16,735	4.69%	1,095	40,826	2.46%
2018	294	23,800	1.24%	880	17,574	5.01%	1,197	41,687	2.87%
2019	356	24,766	1.44%	769	17,986	4.28%	1,138	42,834	2.66%

* 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, 2010-2019

Sex	Age Group (years)	Cases										Rates per 100,000 Population									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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	0	0	1	3	6	4	8	3	0.0	0.0	0.0	0.0	-	-	5.0*	-	6.3*	-
	20 to 24	11	2	6	10	7	7	15	24	20	20	9.6*	-	4.9*	8.0*	5.6*	5.5*	11.7	18.4	15.0	14.7
	25 to 29	13	1	10	14	9	15	12	22	36	23	11.0	-	9.1*	12.9	8.2*	13.4	10.2	17.8	28.4	17.8
	30 to 34	8	3	10	10	11	8	10	14	31	15	7.2*	-	8.7*	8.7*	9.6*	7.1*	9.0*	12.8	28.3	13.4
	35 to 39	10	3	5	12	6	9	13	18	21	21	10.9*	-	5.1*	11.7	5.6*	8.1*	11.4	15.5	17.9	17.9
	40 to 44	9	0	4	7	4	7	9	9	17	11	11.3*	0.0	-	8.0*	4.5*	7.7*	9.6*	9.1*	16.4	10.2*
	45 to 49	3	2	5	5	2	4	5	6	11	10	-	-	6.6*	6.6*	-	5.1*	6.1*	7.1*	12.6*	11.1*
	50 to 54	2	1	1	8	7	5	12	5	9	12	-	-	-	10.4*	9.1*	6.6*	15.9	6.6*	12.0*	15.7
	55 to 59	4	1	3	7	2	4	4	9	3	7	-	-	-	9.7*	-	5.4*	-	11.8*	-	9.1*
	60 to 64	2	1	0	2	1	1	0	1	0	4	-	-	0.0	-	-	-	0.0	-	0.0	5.6*
	65+	1	0	0	1	0	1	1	1	3	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
	Male Total	63	14	44	76	50	64	87	113	159	126	4.5	1.0	3.1	5.2	3.4	4.3	5.7	7.2	10.0	7.8
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	1	0	1	1	0	1	1	-	0.0	0.0	-	0.0	-	-	0.0	-	-
	20 to 24	1	0	0	0	1	0	2	3	1	2	-	0.0	0.0	0.0	-	0.0	-	-	-	-
	25 to 29	0	0	0	0	0	0	0	1	1	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
	30 to 34	0	0	0	0	0	1	0	0	4	3	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-
	35 to 39	0	0	0	1	0	0	1	0	0	0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	0.0	0.0
	40 to 44	0	0	0	0	0	0	0	0	2	2	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	1	0	0	1	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	1	0	1	1	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	1	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	2	0	0	2	1	2	6	4	10	12	0.1	0.0	0.0	0.1	0.1	0.1	0.4	0.3	0.6	0.8
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	0	1	1	4	7	4	9	4	-	0.0	0.0	-	-	-	3.0*	-	3.6*	1.6*
	20 to 24	12	2	6	10	8	7	17	27	21	22	5.3	-	2.5*	4.0*	3.2*	2.8*	6.8	10.6	8.1	8.3
	25 to 29	13	1	10	14	9	15	12	23	37	24	5.7	-	4.6*	6.6	4.02*	6.8	5.2	9.6	15.0	9.5
	30 to 34	8	3	10	10	11	9	10	14	35	18	3.7*	-	4.4*	4.4*	4.9*	4.1*	4.5*	6.4	16.1	8.2
	35 to 39	10	3	5	13	6	9	14	18	21	21	5.6*	-	2.6*	6.5	2.9*	4.1*	6.2	7.9	9.1	9.1
	40 to 44	9	0	4	7	4	7	9	9	19	13	5.8*	0.0	-	4.1*	2.3*	3.9*	4.9*	4.7*	9.4	6.1
	45 to 49	3	2	5	5	2	4	6	6	11	11	-	-	3.3*	3.4*	-	2.6*	3.7*	3.6*	6.4*	6.2*
	50 to 54	2	1	1	8	7	5	13	5	10	13	-	-	-	5.1*	4.5*	3.3*	8.6	3.3*	6.7*	8.6
	55 to 59	4	1	3	7	2	4	4	9	3	8	3.0*	-	-	4.8*	-	-	-	5.8*	-	5.1*
	60 to 64	2	1	0	2	1	1	0	1	0	4	-	-	0.0	-	-	-	0.0	-	0.0	-
	65+	1	0	0	1	0	1	1	1	3	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
	Total Cases	65	14	44	78	51	66	93	117	169	138	2.3	0.5	1.5	2.7	1.7	2.2	3.1	3.8	5.4	4.3

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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.

Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 12. Primary and Secondary Syphilis Cases and Rates by Local Health District, Utah, 2010-2019

Local Health District	Cases										Rates per 100,000 Population									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bear River	0	0	2	0	0	1	2	2	2	0	0.0	0.0	-	0.0	0.0	-	-	-	-	0.0
Central	1	0	0	1	0	0	0	0	2	1	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-
Davis	3	1	1	6	2	6	5	4	17	15	-	-	-	1.9*	-	1.8*	1.5*	1.2*	4.8	4.2
Salt Lake	54	9	36	66	39	49	70	87	121	97	5.2	0.9*	3.4	6.1	3.6	4.4	6.2	7.7	10.5	8.4
San Juan	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0
Southeastern	0	0	0	0	0	0	0	1	0	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-
Southwest	2	1	1	0	0	1	5	8	4	6	-	-	-	0.0	0.0	-	2.2*	3.4*	-	2.4*
Summit	0	0	0	0	0	0	1	0	0	3	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-
Tooele	0	0	0	1	1	0	0	1	0	0	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0
TriCounty	0	0	0	1	0	0	0	1	0	0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Utah	3	0	3	0	2	6	6	8	7	5	-	0.0	-	0.0	-	1.0*	1.0*	1.3*	1.1*	0.8*
Wasatch	0	0	0	0	1	0	0	0	0	0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Weber-Morgan	2	3	1	3	5	3	4	5	16	9	-	-	-	-	2.0*	-	-	1.9*	6.0	3.3*
Unknown	0	0	0	0	1	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	65	14	44	78	51	66	93	117	169	138	2.3	0.5	1.5	2.7	1.7	2.2	3.1	3.8	5.4	4.3

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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.

Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 13. Primary and Secondary Syphilis Cases and Rates by Race/Ethnicity, Utah, 2010-2019

Race/Ethnicity	Cases										Rates per 100,000 Population									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
AI/AK Native	0	1	1	1	0	0	1	3	0	0	0.0	-	-	-	0.0	0.0	-	-	0.0	0.0
Asian	0	0	3	3	1	1	2	1	4	3	0.0	0.0	-	-	-	-	-	-	-	-
Black	2	0	1	3	6	2	5	7	7	8	-	0.0	-	-	20.0*	-	15.3*	20.1*	19.3*	21.0*
Hispanic†	9	1	3	9	8	20	17	23	44	31	2.5*	-	-	2.3*	2.0*	4.9	4	5.3	9.8	6.7
White	53	12	36	61	34	43	66	78	107	80	2.4	0.5	1.6	2.6	1.5	1.8	2.8	3.2	4.3	3.2
Pacific Islander	1	0	0	0	1	0	1	1	6	7	-	0.0	0.0	0.0	-	0.0	-	-	19.7*	22.3*
Multiple	0	0	0	0	1	0	1	3	1	1	0.0	0.0	0.0	0.0	-	0.0	-	-	-	-
Other/Unknown	0	0	0	1	0	0	0	1	0	8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Total	65	14	44	78	51	66	93	117	169	138	2.3	0.5	1.5	2.7	1.7	2.2	3.1	3.8	5.4	4.3

† 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.

* Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for realiability.

Note: Rate estimates with relative standard errors greater than 50% have been suppressed

Table 14. Primary and Secondary Syphilis Cases and Percent Among Males by Sexual Orientation, Utah, 2010-2019

	MSM*		Not MSM*		Unknown		Total
Year	Cases	Percent	Cases	Percent	Cases	Percent	Cases
2010	59	93.7%	0	0.0%	4	6.3%	63
2011	13	92.9%	0	0.0%	1	7.1%	14
2012	40	90.9%	2	4.5%	2	4.5%	44
2013	69	90.8%	1	1.3%	6	7.9%	76
2014	44	88.0%	4	8.0%	2	4.0%	50
2015	52	81.3%	6	9.4%	6	9.4%	64
2016	77	88.5%	6	6.9%	4	4.6%	87
2017	92	81.4%	12	10.6%	9	8.0%	113
2018	131	82.4%	14	8.8%	14	8.8%	159
2019	109	86.5%	12	9.5%	5	4.0%	126

*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, 2019

	Males		Females		Total	
Age	Cases	Rates	Cases	Rates	Cases	Rates
15	19	70.3	88	340.8	107	202.5
16	45	166.3	223	876.0	268	510.4
17	100	380.6	373	1,504.1	473	926.1
18	173	681.7	623	2,586.0	796	1,609.2
19	231	979.2	744	3,053.1	975	2,032.9
20	283	1,280.6	683	2,672.6	966	2,027.1
21	265	1,052.5	632	2,488.5	897	1,773.6
22	242	834.9	514	1,994.9	756	1,380.8
23	252	1,000.9	442	1,740.4	694	1,226.1
24	234	807.3	367	1,424.4	601	1,091.3

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.

Table 16. Gonorrhea Cases and Rates per 100,000 Population by Age and Sex in Adolescents and Young Adults, Utah, 2019

	Males		Females		Total	
Age	Cases	Rates	Cases	Rates	Cases	Rates
15	2	7.4	6	23.2	8	15.1
16	5	18.5	11	43.2	16	30.5
17	23	87.5	27	108.9	50	97.9
18	42	165.5	49	203.4	91	184.0
19	52	220.4	57	233.9	109	227.3
20	54	244.4	66	258.3	120	251.8
21	74	293.9	61	240.2	135	266.9
22	75	258.8	66	256.2	141	257.5
23	98	389.2	61	240.2	159	280.9
24	86	296.7	39	151.4	125	227.0

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