

Nevada

STD Epidemiologic Profile: 2015



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Office of Public Health Informatics and Epidemiology

Sexually Transmitted Disease (STD) Prevention and Control Program

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DEFINITIONS

All other counties: The category *all other counties* includes Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine Counties.

Chlamydia: Chlamydia is a curable bacterial sexually transmitted disease.

Crude Rate: A crude rate is the total number of cases for a specific geographic area or race/ethnicity divided by the total number of people in the population for the same geographic area or race/ethnicity for a specified time period.

Early Latent Syphilis: Early Latent Syphilis refers to a stage of bacterial infection of the bacterium *Treponema Pallidum*. This stage comes immediately after the infectious stages.

Epidemiologic profile: A document that describes the distribution of STD in various populations and identifies demographic characteristics people in defined geographic areas.

Epidemiology: The study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems.

Estimate: In situations in which precise data are not available, an estimate may be made based on available data and an understanding of how the data can be generalized to larger populations.

Gonorrhea: Gonorrhea is a curable bacterial sexually transmitted disease.

Mean: The sum of values for a variable, a group, or other category divided by the total number of values (e.g., in a dataset). The mean is what many people refer to as an average.

Median: The middle value in a dataset: approximately half the values will be higher, and half will be lower.

Morbidity: The occurrence of an illness, disease, or injury.

Percentage: A proportion of the whole, in which the whole is 100.

Prevalence: The proportion of cases of a disease in a population at risk, measured at a given point in time (often referred to as point prevalence). Prevalence can also be measured over a period of time (e.g., a year; known as period prevalence).

Primary Syphilis: A stage of infection with the bacterium *Treponema Pallidum* that is categorized as infectious.

Quantitative data: Numeric information (e.g., numbers, rates, and percentages).

Race/ Ethnicity: The collection of race/ethnicity data in surveillance follows the guidelines set forth by the Office of Management and Budget (OMB) in 1997.

Ethnicity: There are two ethnicity categories: Hispanic/Latino and not Hispanic/Latino. All people who identified as Hispanic/Latino are classified as Hispanic/Latino regardless of their racial identification.

Race: There are four race categories: White, Black/African American, Asian/Native Hawaiian/Pacific Islander (API), and American Indian/Alaska Native (AI/AN). The categories Asian, Native Hawaiian, and Pacific Islander were combined into the single category API due to their small population size in Nevada. People categorized by race were not Hispanic/Latino.

Range: The smallest and the largest values in a series.

Rate: The rapidity at which a health event occurs as indicated by the number of cases per number of people during a specific time period. In this report, rates were calculated for the 12-month period per 100,000 population using population estimates from the Nevada State Demographer's Office.

Raw data: Data that are in their original form (i.e., not coded or analyzed).

Reliability: Refers to the consistency and dependability of a data-collection instrument or measure.

Secondary Syphilis: A stage of infection with the bacterium *Treponema Pallidum* that is categorized as infectious.

Sociodemographic Factors: Background information about the population of interest.

Small Counts and Relative Standard Error (RSE): Reported numbers less than 12, as well as estimated numbers (and accompanying rates and trends) based on these numbers, should be interpreted with caution because the numbers have underlying relative standard errors greater than 30% and are considered unreliable. Denoted with a ~.

STD*MIS: STD Data Management & Information Technology. A database application provided by the CDC

to the state for use in managing the data received for STD control.

STD Surveillance: The systematic collection, analysis, interpretation, dissemination, and evaluation of population-based information about people with a diagnosis of STDs.

Syphilis: Syphilis is a curable bacterial sexually transmitted disease.

Trend: A long-term movement or change in frequency, usually upward or downward; may be presented as a line graph.

TECHNICAL NOTES

Confidence Intervals (CI)

Lower and upper 95% and 96% confidence limit factors for rates are based on a Poisson variable of 1 through 99 deaths when counts are under 100.¹ Significance and non-significance is determined by overlap. Caution should be taken where CIs slightly overlap. Confidence limits included on the tables in the summary data table section of the profile were used to determine significance in the table and graph interpretations contained on pages four through thirty.

Relative Standard Error (RSE)

Reported numbers less than 12, as well as estimated numbers (and accompanying rates and trends) based on these numbers, should be interpreted with caution because the numbers have underlying relative standard errors greater than 30% and are considered unreliable.

NA

The notation NA is used to represent cases where the data may not meet the criteria for reliability, data quality or confidentiality due to small counts or inability to calculate rates based on an equivalent population.

Crude

Crude is used to represent the total number of events in a population over a specific region's population. It should be noted that all rates in this profile are crude.

ABBREVIATIONS

AI/AN	American Indian/Alaska Native
AOC	All Other Counties
API	Asian/ Hawaiian/Pacific Islander
CC	Clark County
CDC	The Centers for Disease Control and Prevention
CDL	Carson/Douglas/Lyon
DIS	Disease Intervention Specialists
DPBH	Division of Public and Behavioral Health
EPI	Epidemiology
ELSY	Early or Latent Syphilis
NAC	Nevada Administrative Code
NRS	Nevada Revised Statute
OPHIE	Office of Public Health Informatics and Epidemiology
P&S	Primary and Secondary Syphilis
RSE	Relative Standard Error
STD	Sexually Transmitted Disease
STD*MIS	Sexually Transmitted Diseases Management Information System
WC	Washoe County
~	Count under 12 used in the calculation. See RSE.

EXECUTIVE SUMMARY

The Nevada Division of Public and Behavioral Health (DPBH) receives funding from the Centers for Disease Control and Prevention (CDC) for the prevention and management of sexually transmitted disease (STD) among Nevada residents. This publication was created by the Nevada STD Prevention and Control Program within the Office of Public Health Informatics and Epidemiology (OPHIE) which is housed in DPBH. The Sexually Transmitted Disease Prevention and Control Program works with both local and community efforts to interrupt the transmission of Chlamydia, Gonorrhea, Syphilis and other STDs, and reduce the health burden and costs associated with these infections.

Per Nevada Administrative Code (NAC) 441A.040, Chlamydia, Gonorrhea and Syphilis (including congenital Syphilis) are reportable communicable diseases. A diagnosis of Chlamydia, Gonorrhea or Syphilis is reportable to the health authority by providers, medical facilities, and labs as prescribed by Nevada Revised Statute (NRS) 441A.150.

Primary activities of STD Prevention and Control include supporting local health authorities in the testing and treatment of Chlamydia, Syphilis, and Gonorrhea (reportable STDs); surveillance of reportable STDs; providing opportunities for statewide STD stakeholder planning and goal development input; locating and treating contacts of known cases with an STD and providing risk reduction education and material.

Based on the data, there were increases in Nevada from 2011 to 2015 in Chlamydia (at a rate of 17%), Gonorrhea (at a rate of 70%), Primary and Secondary Syphilis (at a rate of 134%), and early latent Syphilis (at rate of 151%). This profile reports the differing statutes in the progression/regression by sex and age. These rates are expressed more in Clark (CC) and Washoe (WC) county and tend to be highest among minority populations for mentioned STDs in this profile from 2011 to 2015.

The 2015 Nevada Epidemiologic Profile provides an outline of Sexually Transmitted Disease (STD) morbidity in Nevada and includes data from between January 1, 2011, to December 31, 2015, for STD's that are reportable communicable diseases under NAC 441A. Data for this profile was gathered in July 2016, from the surveillance system maintained by DPBH, STD*MIS, a database application provided by the CDC to the state for use in managing the data received for STD control. Data from this database comes from medical labs, private and public health providers, clinics, and state and local disease intervention specialists (DIS). This epidemiologic profile is intended for the general public, public health professionals, and researchers.

CHLAMYDIA

Background

Chlamydia is a bacterial STD caused by *Chlamydia Trachomatis* and is the most common STD reported in the United States, per the CDC (1). Chlamydia can lead to serious health issues in both men and women. In men, Chlamydia can cause urethritis or proctitis, while in women, it can cause cervicitis, pelvic inflammatory disease, ectopic pregnancy, pelvic pain, and infertility. Any sexually active person can be infected with Chlamydia.

Chlamydia – Nevada

In 2015, a total of 12,924 Chlamydia infections were reported in Nevada. From 2011-2015, the rate of reported infections increased from 384.7 to 449.7 per 100,000 population, an increase of 17% [Table 1]. Nevada rates have steadily increased from 2011 to 2015 [Table 1, Figure 1]. In 2015, a national increase of 5.9% in reported cases of Chlamydia was observed from the previous year (2). In contrast, Nevada saw a 1.2% increase in 2014, from the 2015 rates (3). This suggests that while Nevada is seeing increases in Chlamydia infections, it is not increasing as quickly as the rest of the nation.

Chlamydia by Sex

It is estimated that 1 in 20 sexually active young women aged 14-19 years currently has Chlamydia (1). From 2011 to 2015, females in Nevada had significantly higher rates of Chlamydia than males [Figure 1]. Comparing the rate changes, it is slightly higher in males than females [Figure 1]. In males, the rate of Chlamydia increased from 241 per 100,000 population in 2011 to 286.9 per 100,000 population in 2015 with a percentage change of 19% [Figure 1, Table 1]. In females, the rate of infection increased from 531.2 per 100,000 population in 2011 to 612.5 per 100,000 population in 2015, with a percent change of 15% [Figure 1, Table 1]. From 2011-2014, both males and females had steady increases in rates of Chlamydia, however, between 2014 and 2015 only females had a decreasing rate. Among males, the highest rate of Chlamydia was in Washoe County (WC) at 340.9 per 100,000 population (18.2% of Nevada) in 2015, while in females it was in Clark County (CC) at 659.9 per 100,000 population (78.7% of Nevada) [Figure 1, Table 1].

Chlamydia by Region

Comparing the Chlamydia rates by region between 2011-2015; the highest rates of Chlamydia were consistently found in CC, followed by WC, then Carson/Douglas/Lyon (CDL) counties and lastly, All Other Counties (AOC). From 2011-2015, CC, WC, and CDL had an increase in rates each year, while AOC saw a slight decrease between 2014 to 2015 after gradual increases between 2011 to 2014 [Figure 2]. Each region had a different rate and percentage change. CC had an increase in rate from 423.0 per 100,000 population in 2011 to 479.4 per 100,000 population in 2015 with a percentage change of 13% [Figure 2, Table 1]. WC had an increase in rate from 352.9 per 100,000 population in 2011 to 461.1 per 100,000 population in 2015 with a percentage change of 31%. CDL had the highest change in rate from 231.2 per 100,000 population in 2011 to 352.8 per 100,000 population in 2015, with a percentage change of 53%. AOC had a very slight increase in rate from 169.0 per 100,000 population in 2011 to 182.3 per 100,000 population in 2015, with a percentage change of 8% [Table 1, Figure 2]. In 2015, the highest rates of Chlamydia were found among females statewide [Figures 3 and 4], where the rates were 659.9 per 100,000 population in CC (298.2 for males), 581.1 per 100,000 population in WC (340.9 for males), 468.8 per 100,000 population in CDL (183.3 for men) and 250.0 per 100,000 population in AOC (118.5 for males).

Chlamydia by Age

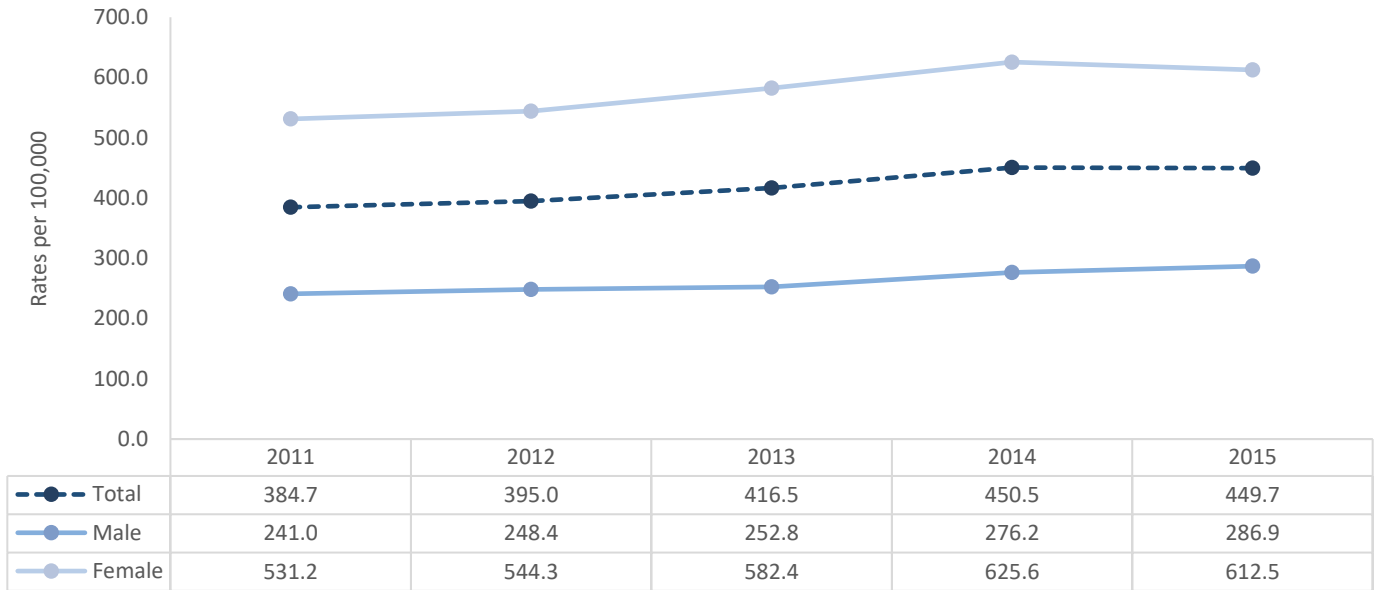
Chlamydia is most common among young people and almost two-thirds of Chlamydia infections are among people aged 15-24, nationally (1). In 2015, people ages 20-24 had the highest reported rates of Chlamydia at 2,467.1 per 100,000 population (37.5%), followed by youth aged 15-19 at 1561.6 per 100,000 population (22.1%). People ages 65+ had the lowest reported rates of Chlamydia at 4.8 per 100,000 population (0.1%) [Figure 5]. Females had significantly higher rates of Chlamydia than males in most age groups, except people aged 40-44 and 45-54 years old, where the rates of cases were comparable, and 55-64 years old where males had slightly higher rates than females [Figure 5].

Chlamydia by Race/Ethnicity

Overall, the highest rates of Chlamydia between 2011 and 2015 were in Blacks followed by AI/AN, and Hispanics. The lowest rates were among API [Figure 6 and Figure 7]. From 2011 to 2015, Blacks, Hispanics and API experienced decreases in rates (977.1 to 769.9 per 100,000, 319.4 to 294.6 per 100,000 population and 164.6 to 159.8 per 100,000 respectively). In contrast, Whites and AI/AN experienced increase in rates (154.5 to 182.0 per 100,000 and 299.6 to 402.9 per 100,000 population respectively).

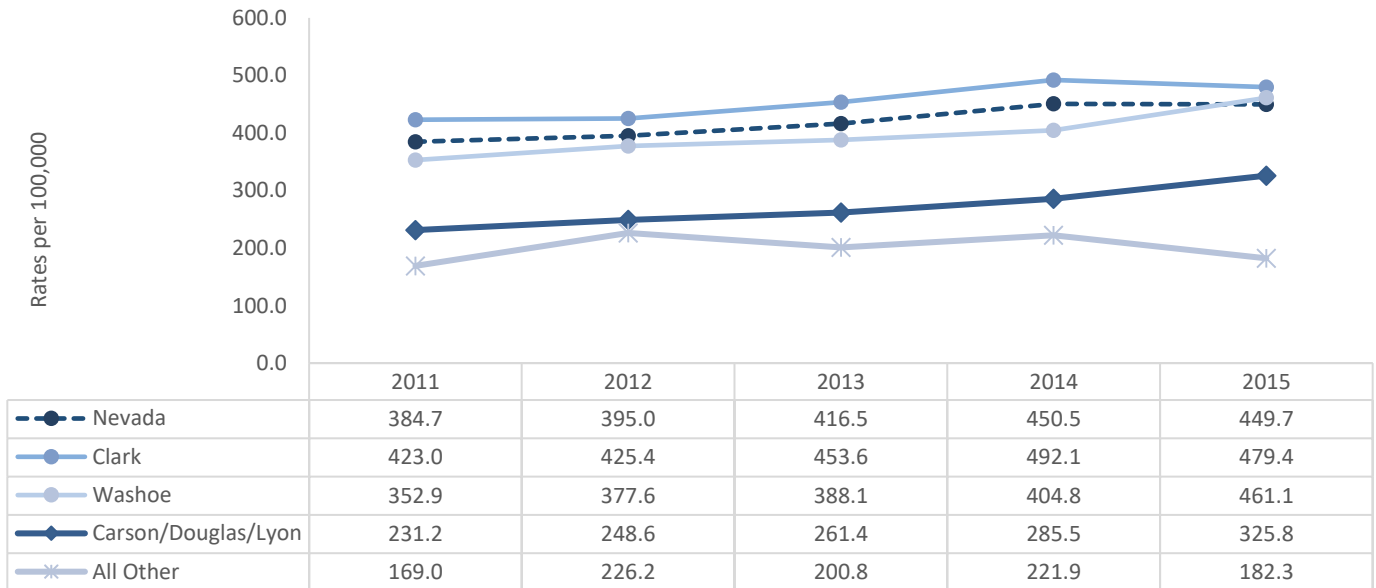
Chlamydia Figures and Tables

Figure 1 | Chlamydia – Rates of Reported Cases by Sex, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data.

Figure 2 | Chlamydia – Rates of Reported Cases by Region of Residence, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.
 **All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

Table 1| Chlamydia -Epidemiological Profile of Nevada, 2011-2015

	2011			2012			2013			2014			2015		
	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*
County at Residence															
Clark County	8,324	79.5%	423.0	8,457	77.9%	425.4	9,215	79.0%	453.6	10,184	79.5%	492.1	10,048	77.7%	479.4
Washoe County	1,488	14.2%	352.9	1,615	14.9%	377.6	1,678	14.4%	388.1	1,768	13.8%	404.8	2,033	15.7%	461.1
Carson/Douglas/Lyon	361	3.4%	231.2	387	3.6%	248.6	408	3.5%	261.4	445	3.5%	285.5	511	4.0%	325.8
All Other Counties**	298	2.8%	169.0	404	3.7%	226.2	363	3.1%	200.8	402	3.1%	221.9	329	2.5%	182.3
Sex															
Male	3,313	31.6%	241.0	3,448	31.7%	248.4	3,571	30.6%	252.8	3,956	30.9%	276.2	4,151	32.1%	286.9
Female	7,156	68.3%	531.2	7,414	68.3%	544.3	8,087	69.3%	582.4	8,827	68.9%	625.6	8,743	67.6%	612.5
Race/Ethnicity															
White, non-Hispanic	2,334	22.3%	154.5	2,555	23.5%	168.7	2,745	23.5%	180.2	2,755	21.5%	180.2	2,785	21.5%	182.0
Black, non-Hispanic	2,171	20.7%	977.1	1,938	17.8%	858.4	2,020	17.3%	867.6	1,984	15.5%	830.9	1,872	14.5%	769.9
Hispanic	2,329	22.2%	319.4	2,291	21.1%	307.4	2,342	20.1%	304.1	2,406	18.8%	303.6	2,390	18.5%	294.6
AI/ AN	95	0.9%	299.6	130	1.2%	407.0	131	1.1%	406.2	95	0.7%	293.0	131	1.0%	402.9
API	376	3.6%	164.6	350	3.2%	150.3	376	3.2%	155.0	394	3.1%	157.0	410	3.2%	159.8
Unknown/Other	3,166	30.2%	NA	3,599	33.1%	NA	4,052	34.7%	NA	5,176	40.4%	NA	5,336	41.3%	NA
Age at Diagnosis															
<9	4	0.0%	1.0	0	0.0%	0.0	6	0.1%	1.6	9	0.1%	2.3	5	0.0%	1.3
10-14	94	0.9%	53.3	113	1.0%	63.3	79	0.7%	43.2	79	0.6%	42.2	92	0.7%	48.1
15-19	3,193	30.5%	1,767.1	3,090	28.4%	1,706.3	3,087	26.5%	1,694.7	3,104	24.2%	1,704.1	2,856	22.1%	1,561.6
20-24	3,865	36.9%	2,106.0	4,019	37.0%	2,141.8	4,242	36.4%	2,189.1	4,792	37.4%	2,424.2	4,844	37.5%	2,467.1
25-29	1,677	16.0%	935.4	1,809	16.7%	998.2	2,121	18.2%	1,130.5	2,435	19.0%	1,259.9	2,534	19.6%	1,274.8
30-34	821	7.8%	420.6	894	8.2%	466.2	1,044	8.9%	551.4	1,106	8.6%	587.3	1,206	9.3%	642.5
35-39	389	3.7%	202.9	413	3.8%	212.8	516	4.4%	258.0	619	4.8%	304.3	646	5.0%	316.8
40-44	219	2.1%	112.1	257	2.4%	131.4	272	2.3%	138.9	307	2.4%	156.5	328	2.5%	166.7
45-54	156	1.5%	41.8	186	1.7%	49.6	234	2.0%	61.6	280	2.2%	72.6	315	2.4%	80.6
55-64	36	0.3%	11.3	54	0.5%	16.7	39	0.3%	11.8	55	0.4%	16.3	77	0.6%	22.4
65+	13	0.1%	3.8	24	0.2%	6.7	18	0.2%	4.8	17	0.1%	4.4	19	0.1%	4.8
Unknown	4	0.0%	NA	4	0.0%	NA	8	0.1%	NA	7	0.1%	NA	2	0.0%	NA
Total	10,471	100.0%	384.7	10,863	100.0%	395.0	11,666	100.0%	416.5	12,810	100.0%	450.5	12,924	100.0%	449.7

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data.

**All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

Figure 3| Chlamydia –Rates of Reported Cases by Region, Male, Nevada, 2015

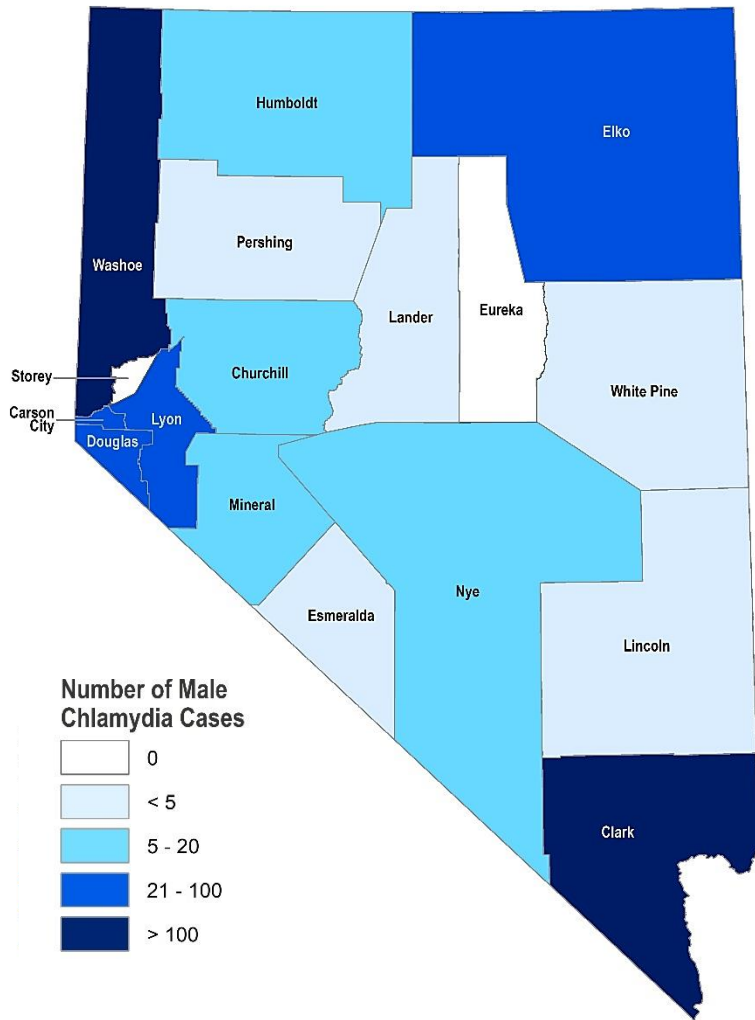


Figure 4| Chlamydia – Number of Reported Cases by Region, Female, Nevada, 2015

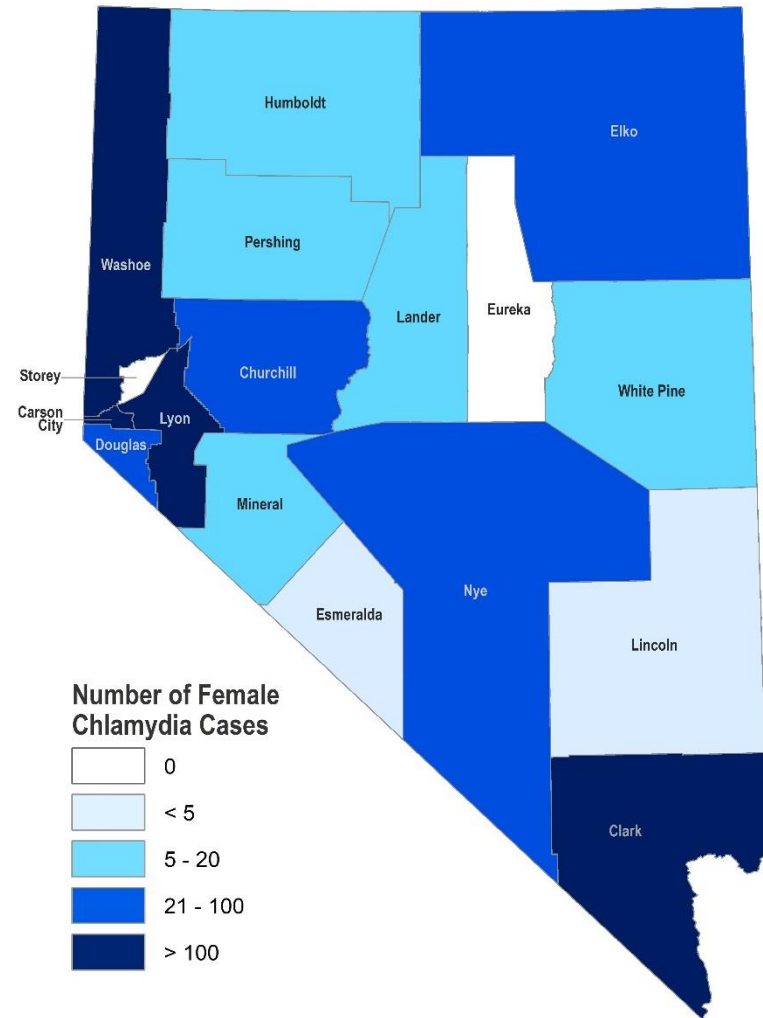
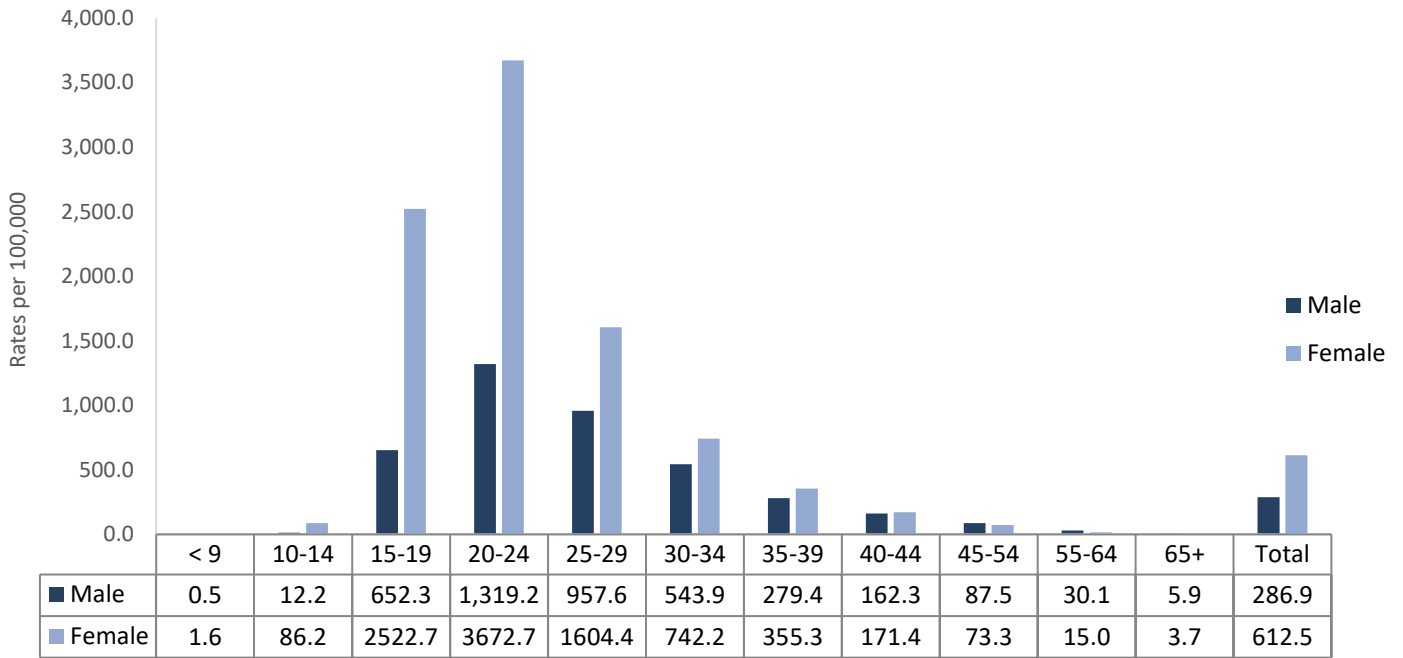


Figure 5 | Chlamydia – Rates of Reported Cases by Age and Sex, Nevada, 2015



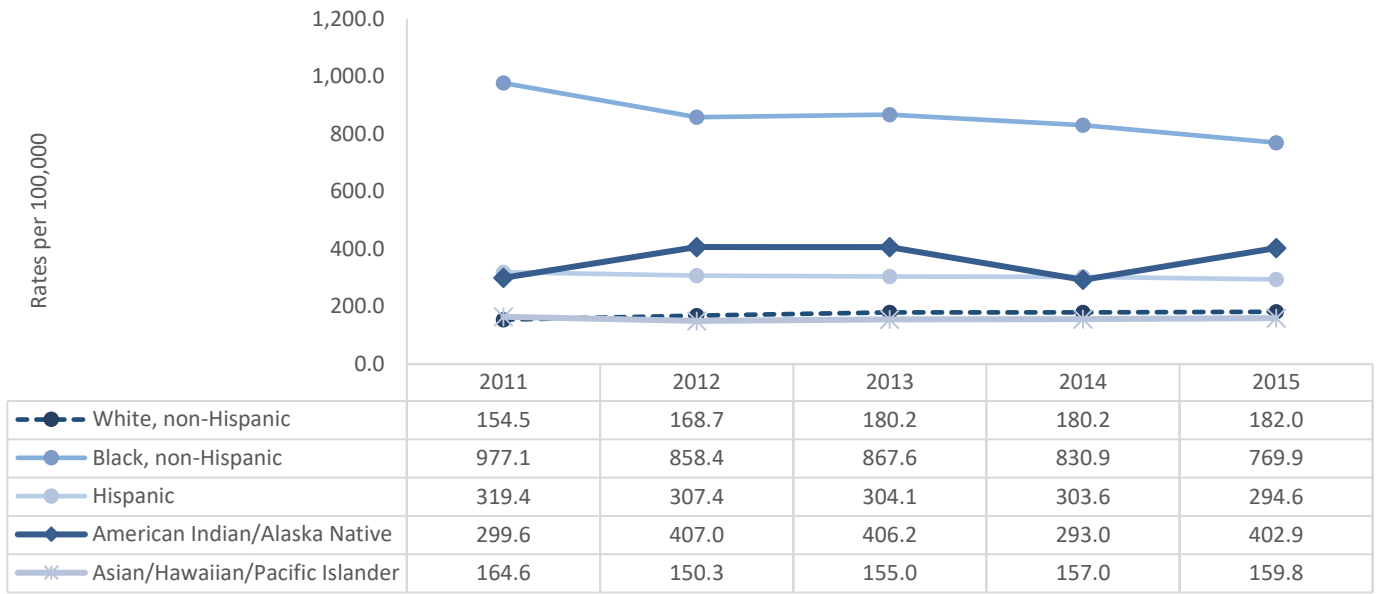
Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.
 ~ The rate for "Males Age <9, Age 65+", "Females Age <9, Age 65+", and "Total Age <9" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 2 | Chlamydia – Number and Rates of Reported Cases by Age and Sex, Nevada, 2015

Age Group by Age at End of Year	Total			Male			Female		
	n	%	Rate*	n	%	Rate*	n	%	Rate*
<9	5	0.0%	1.3	1	0.0%	0.5	3	0.0%	1.6
10-14	92	0.7%	48.1	12	0.3%	12.2	80	0.9%	86.2
15-19	2,856	22.1%	1,561.6	614	14.8%	652.3	2,239	25.6%	2,522.7
20-24	4,844	37.5%	2,467.1	1,338	32.2%	1,319.2	3,486	39.9%	3,672.7
25-29	2,534	19.6%	1,274.8	976	23.5%	957.6	1,554	17.8%	1,604.4
30-34	1,206	9.3%	642.5	519	12.5%	543.9	685	7.8%	742.2
35-39	646	5.0%	316.8	289	7.0%	279.4	357	4.1%	355.3
40-44	328	2.5%	166.7	164	4.0%	162.3	164	1.9%	171.4
45-54	315	2.4%	80.6	175	4.2%	87.5	140	1.6%	73.3
55-64	77	0.6%	22.4	51	1.2%	30.1	26	0.3%	15.0
65 +	19	0.1%	4.8	11	0.3%	5.9	8	0.1%	3.7
Unknown	2	0.0%	NA	1	0.0%	NA	1	0.0%	NA
Total	12,924	100.0%	449.7	4,151	100.0%	286.9	8,743	100.0%	612.5

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.
 ~ The rate for "Males Age <9, Age 65+", "Females Age <9, Age 65+", and "Total Age <9" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 6 | Chlamydia – Rates of Reported Cases by Race/Ethnicity, Nevada, 2011-2015

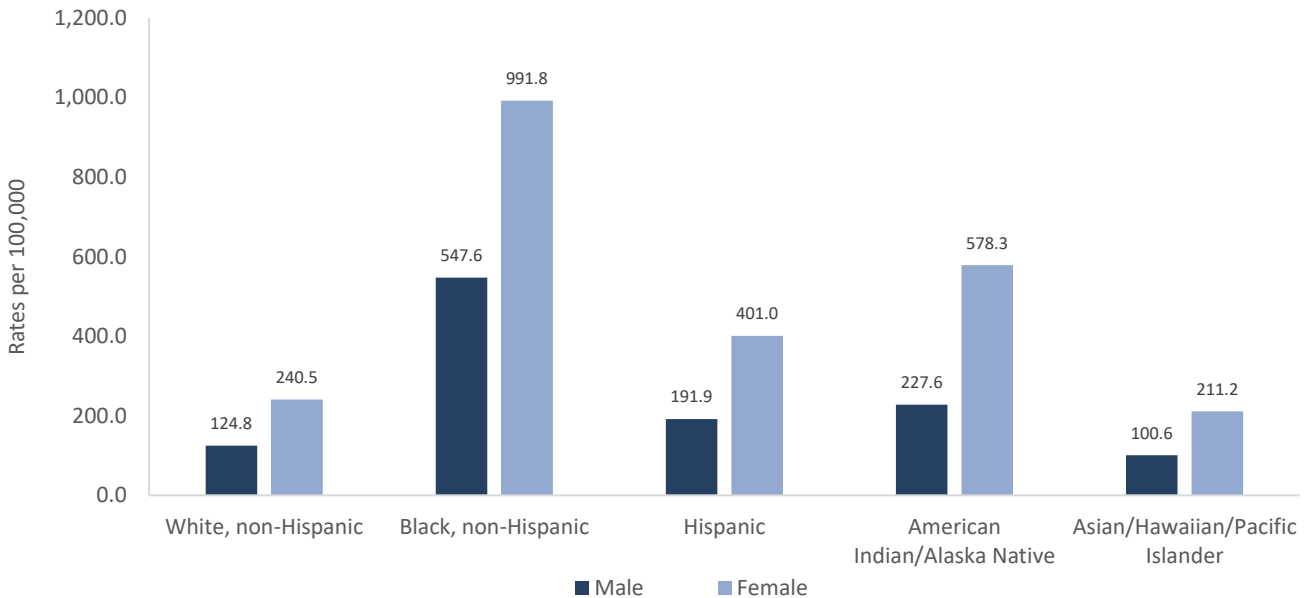


Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

†Rates are unavailable for unknown/other race/ethnicity category (36% of all data). Caution is necessary when interpreting rates of diseases when unknown race/ethnicity cases account for a large proportion of disease.

Figure 7 | Chlamydia – Rates of Reported Cases by Race/Ethnicity, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

GONORRHEA

Background

Gonorrhea is the second most common STD reported in the United States and is caused by *Neisseria gonorrhoeae*. Gonorrhea is curable but can have serious health implications if left untreated according to the CDC (4). In men, Gonorrhea can cause pain and even sterility. In women, it can cause Pelvic Inflammatory Disease, whose complications include the formation of scar tissue in the reproductive organs, ectopic pregnancy, infertility, and long-term pelvic pain.

Gonorrhea – Nevada

In 2015, a total of 3,630 cases of Gonorrhea were reported in Nevada. The rate of Gonorrhea in 2015 was 126.3 per 100,000 population, a 70% increase from 2011, where the rate was 74.4 per 100,000 population [Figure 9 and Table 3]. Nationally, the CDC reported a total of 395,216 cases of Gonorrhea at a rate 123.9 cases per 100,000 population; a 12.8% increase from 2014 (2). In contrast, Gonorrhea increased 6.8% in 2015, from its 2014 rate, suggesting that Gonorrhea rates are increasing less quickly than the rest of the nation (3).

Gonorrhea by Sex

From 2011 to 2015, males in Nevada had significantly higher rates of Gonorrhea than females [Figure 8]. During this time, the rate of Gonorrhea among males increased from 83.1 per 100,000 population to 153.3 per 100,000 population with an 84% change and 65.5 per 100,000 population to 98.2 per 100,000 population for females with a 50% change [Table 3]. From 2011-2014, both males and females saw increases in rates of Gonorrhea in Nevada. However, between 2014 and 2015 females saw a decrease in Gonorrhea, while males continued to see an increase. Among both males and females in 2015, the highest rate of Gonorrhea was in CC at 174.5 per 100,000 population for males (82.8%) and 108.2 per 100,000 population for females (80.5%) [Figure 8, Table 3].

Gonorrhea by Region

From 2011 to 2015, the highest rates of Gonorrhea were consistently found in CC, followed by WC, then the CDL and lastly AOC. Between 2011 and 2015, CC, WC, and CDL had an increase in rates each year, while AOC saw a slight decrease between 2014 to 2015 after gradual increases from 2011 to 2014 [Figure 9]. CC had an increase in rate from 89.9 per 100,000 population in 2011 to 141.9 per 100,000 population in 2015 with a percentage change of 58%. WC had a very high change in rate from 50.3 per 100,000 population in 2011 to 124.1 per 100,000 population in 2015 with a percentage change of 147%. CDL had an increase in rate from 17.9 per 100,000 population in 2011 to 33.2 per 100,000 population in 2015 with a percentage change of 85%. AOC had the highest change in rate from 9.1 per 100,000 population in 2011 to 30.5 per 100,000 population in 2015 with a percentage change of 235% [Table 3, Figure 9].

In 2015, CC had a Gonorrhea rate 141.9 per 100,000 population, four times the rate of AOC (30.5 per 100,000 population) [Figure 9, Table 3]. However, WC saw the greatest increase in Gonorrhea, 147% increase, between 2011 to 2015. In 2015, the highest rates of Gonorrhea were found among males statewide [Figures 10 and 11], where the rates were 174.5 per 100,000 population in CC (108.2 for females), 140.1 per 100,000 population in WC (107.4 for females), 40.7 per 100,000 population in CDL (25.5 for females) and 39.5 per 100,000 population in AOC (20.7 for females) [Figure 9].

Gonorrhea by Age

In 2015, people ages 20-24 had the highest rates of Gonorrhea, followed by people aged 25-29 (485.4 and 423.1 per 100,000 population, respectively) [Table 4]. Among males ages, 25-29 had the highest rates (529.8 per 100,000 population, 24.3%), and among females ages, 20-24, had the highest rates (439.3 per 100,000 population, 29.7%). In

2015, males had higher rates of Gonorrhea than females among all age groups, except for people ages 10-14 and 15-19, where females had higher rates (2.0 versus 11.9 per 100,000 population and 216.7 versus 314.4 per 100,000 population respectively) [Table 4, Figure 12]

Gonorrhea by Race/Ethnicity

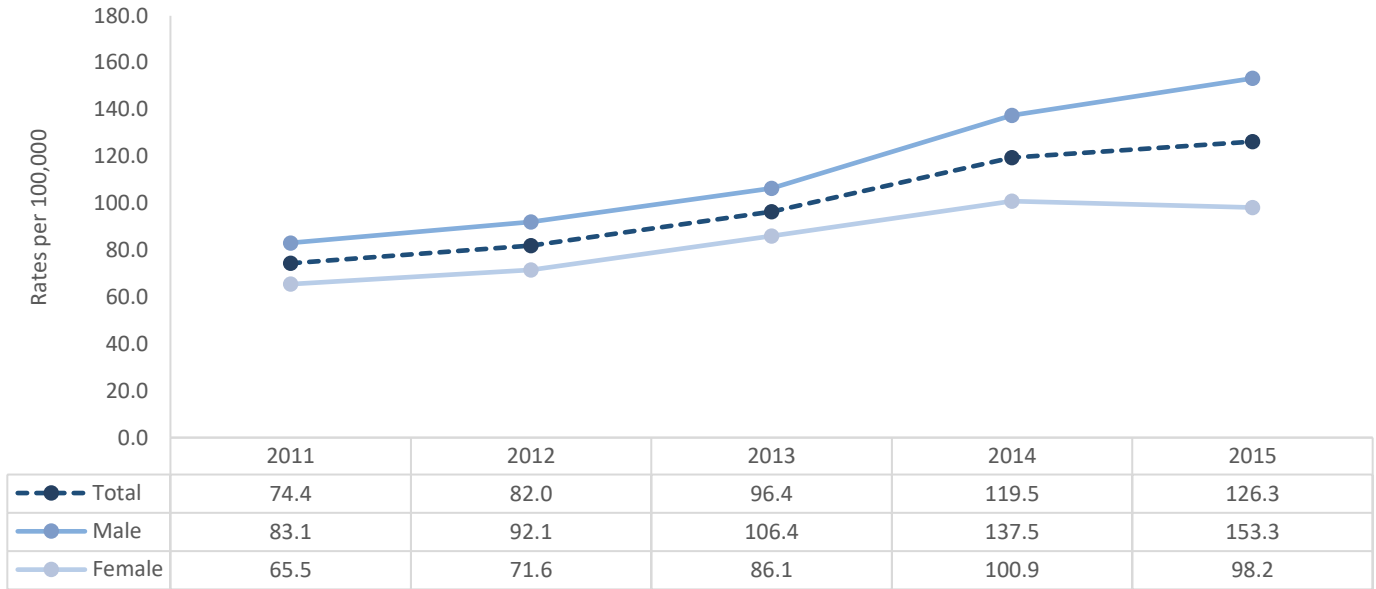
From 2011 to 2015, Blacks had the highest rates of Gonorrhea and API had the lowest rates compared to all other race/ethnicities [Table 3]. In 2015, the rate of Gonorrhea among Blacks (342.6 per 100,000 population) was five times the rate of Whites, Hispanics, and AI/AN (52.5, 66.2 and 64.6 per 100,000 population, respectively) [Figure 13 and Table 3].

Blacks also had the highest number of total cases during this time (4030 cases) compared to Whites (3158), Hispanics (1977 cases), AI/AN (276 cases) and finally the API (103 cases) [Table 3].

When comparing the rate of increase from 2011 to 2015, Whites had the highest increase of 46%, followed by the Hispanics (43% increase), AI/AN (41% increase) and the API (28% increase). Blacks surprisingly decreased by 3% during this time-period [Figure 13 and Table 3].

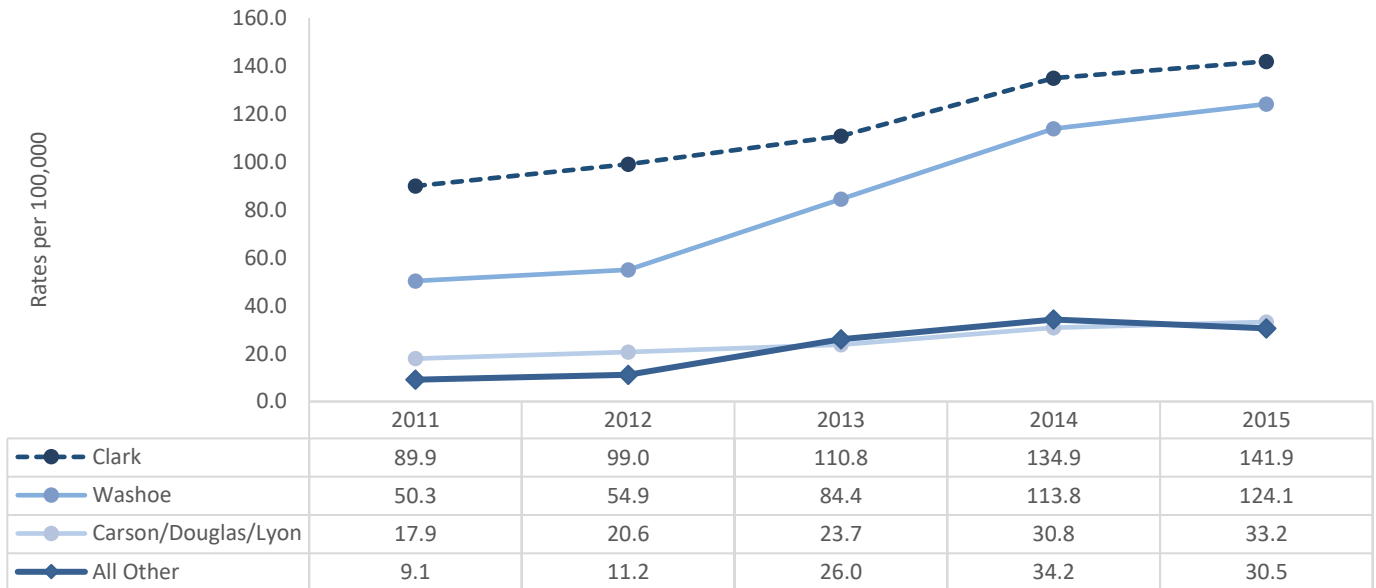
Gonorrhea Figures and Tables

Figure 8 | Gonorrhea – Rates of Reported Cases by Sex, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data.

Figure 9 | Gonorrhea – Rates of Reported Cases by Region of Residence, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.
 **All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

Table 3| Gonorrhea - Epidemiological Profile of Nevada, 2011-2015

	2011			2012			2013			2014			2015		
	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*
County at Residence															
Clark County	1,769	87.4%	89.9	1,968	87.3%	99.0	2,251	83.4%	110.8	2,791	82.1%	134.9	2,975	82.0%	141.9
Washoe County	212	10.5%	50.3	235	10.4%	54.9	365	13.5%	84.4	497	14.6%	113.8	547	15.1%	124.1
Carson/Douglas/Lyon	28	1.4%	17.9	32	1.4%	20.6	37	1.4%	23.7	48	1.4%	30.8	52	1.4%	33.2
All Other Counties**	16	0.8%	9.1	20	0.9%	11.2	47	1.7%	26.0	62	1.8%	34.2	55	1.5%	30.5
Sex															
Male	1,142	56.4%	83.1	1,278	56.7%	92.1	1,503	55.7%	106.4	1,970	58.0%	137.5	2,218	61.1%	153.3
Female	883	43.6%	65.5	975	43.2%	71.6	1,195	44.3%	86.1	1,424	41.9%	100.9	1,402	38.6%	98.2
Race/Ethnicity															
White, non-Hispanic	429	21.2%	28.4	529	23.5%	34.9	613	22.7%	40.2	784	23.1%	51.3	803	22.1%	52.5
Black, non-Hispanic	781	38.6%	351.5	699	31.0%	309.6	816	30.2%	350.5	901	26.5%	377.3	833	22.9%	342.6
Hispanic	275	13.6%	37.7	327	14.5%	43.9	369	13.7%	47.9	469	13.8%	59.2	537	14.8%	66.2
AI/ AN	12	0.6%	37.8	16	0.7%	50.1	29	1.1%	89.9	25	0.7%	77.1	21	0.6%	64.6
API	46	2.3%	20.1	42	1.9%	18.0	49	1.8%	20.2	67	2.0%	26.7	72	2.0%	28.1
Unknown/Other	482	23.8%	NA	642	28.5%	NA	824	30.5%	NA	1,153	33.9%	NA	1,364	37.6%	NA
Age at Diagnosis															
<9	4	0.2%	1.0	0	0.0%	0.0	2	0.1%	0.5	2	0.1%	0.5	0	0.0%	0.0
10-14	26	1.3%	14.7	28	1.2%	15.7	27	1.0%	14.8	29	0.9%	15.5	13	0.4%	6.8
15-19	534	26.4%	295.5	512	22.7%	282.7	583	21.6%	320.1	552	16.2%	303.0	484	13.3%	264.6
20-24	582	28.7%	317.1	672	29.8%	358.1	725	26.9%	374.1	877	25.8%	443.7	953	26.3%	485.4
25-29	322	15.9%	179.6	394	17.5%	217.4	496	18.4%	264.4	722	21.2%	373.6	841	23.2%	423.1
30-34	196	9.7%	100.4	245	10.9%	127.8	338	12.5%	178.5	438	12.9%	232.6	479	13.2%	255.2
35-39	129	6.4%	67.3	121	5.4%	62.3	183	6.8%	91.5	275	8.1%	135.2	321	8.8%	157.4
40-44	106	5.2%	54.2	117	5.2%	59.8	122	4.5%	62.3	185	5.4%	94.3	210	5.8%	106.7
45-54	94	4.6%	25.2	126	5.6%	33.6	166	6.1%	43.7	223	6.6%	57.8	231	6.4%	59.1
55-64	25	1.2%	7.9	32	1.4%	9.9	45	1.7%	13.6	78	2.3%	23.1	84	2.3%	24.5
65+	6	0.3%	1.7	8	0.4%	2.2	12	0.4%	3.2	16	0.5%	4.1	13	0.4%	3.3
Unknown	1	0.0%	NA	0	0.0%	NA	1	0.0%	NA	2	0.1%	NA	1	0.0%	NA
Total	2,025	100.0%	74.4	2,255	100.0%	82.0	2,700	100.0%	96.4	3,399	100.0%	119.5	3,630	100.0%	126.3

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data

**All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

The rate for "Total Age <9, 65+ and unknown" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 10| Gonorrhea –Rates of Reported Cases by Region, Male, Nevada, 2015

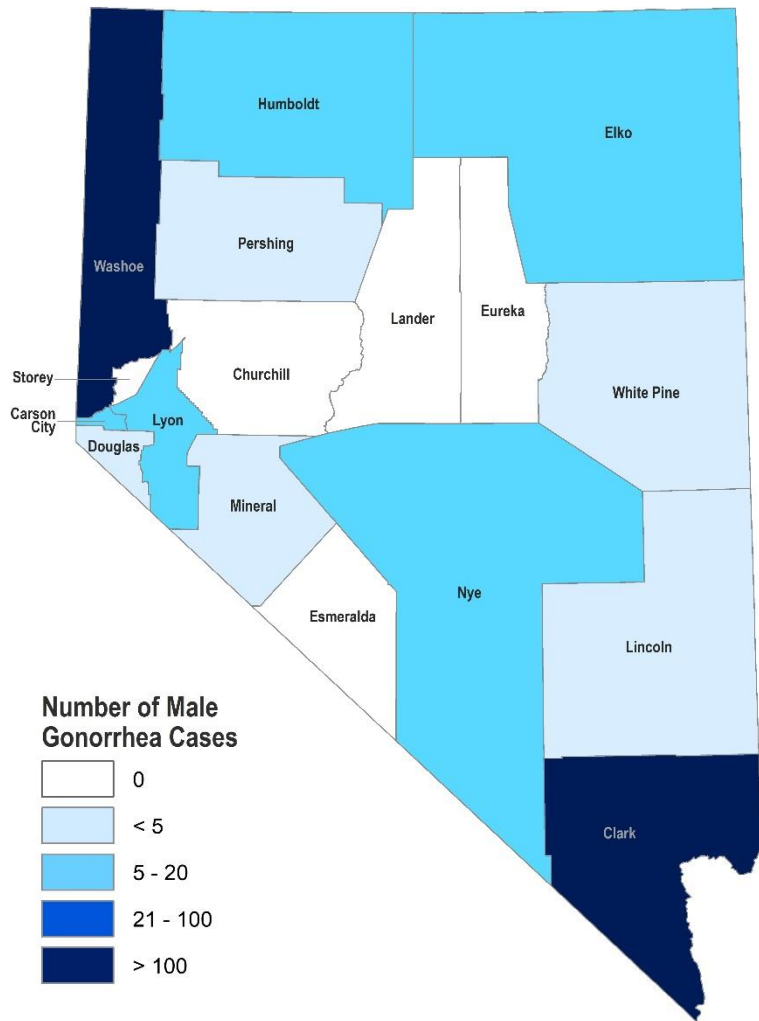


Figure 11| Gonorrhea – Number of Reported Cases by Region, Female, Nevada, 2015

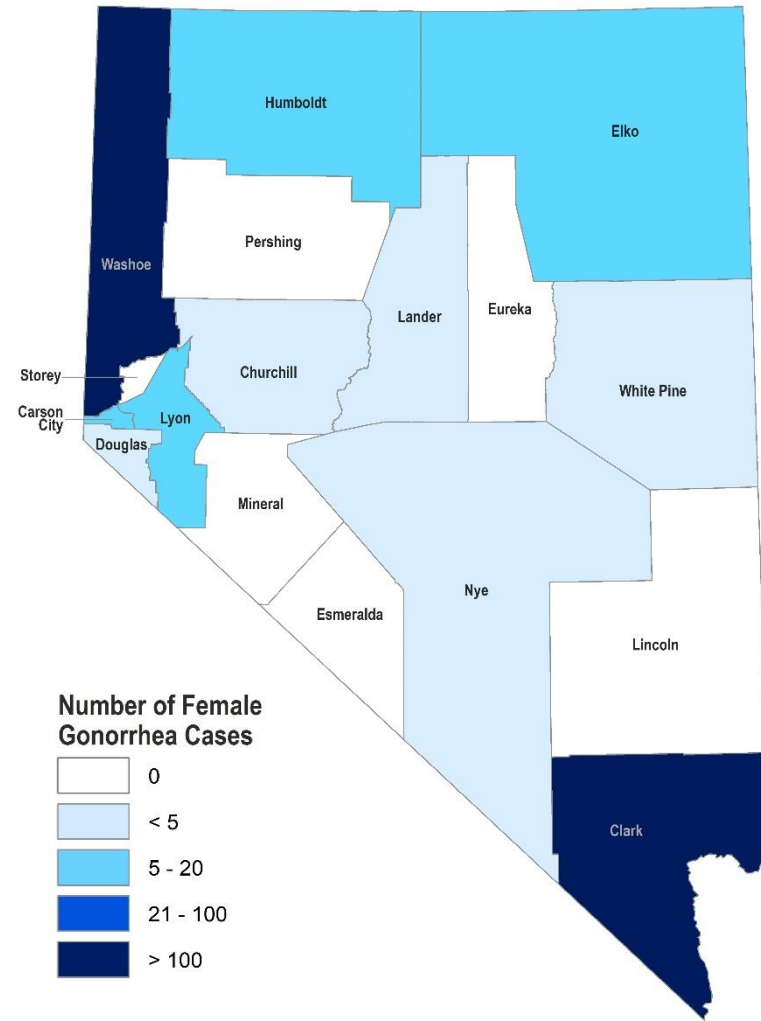
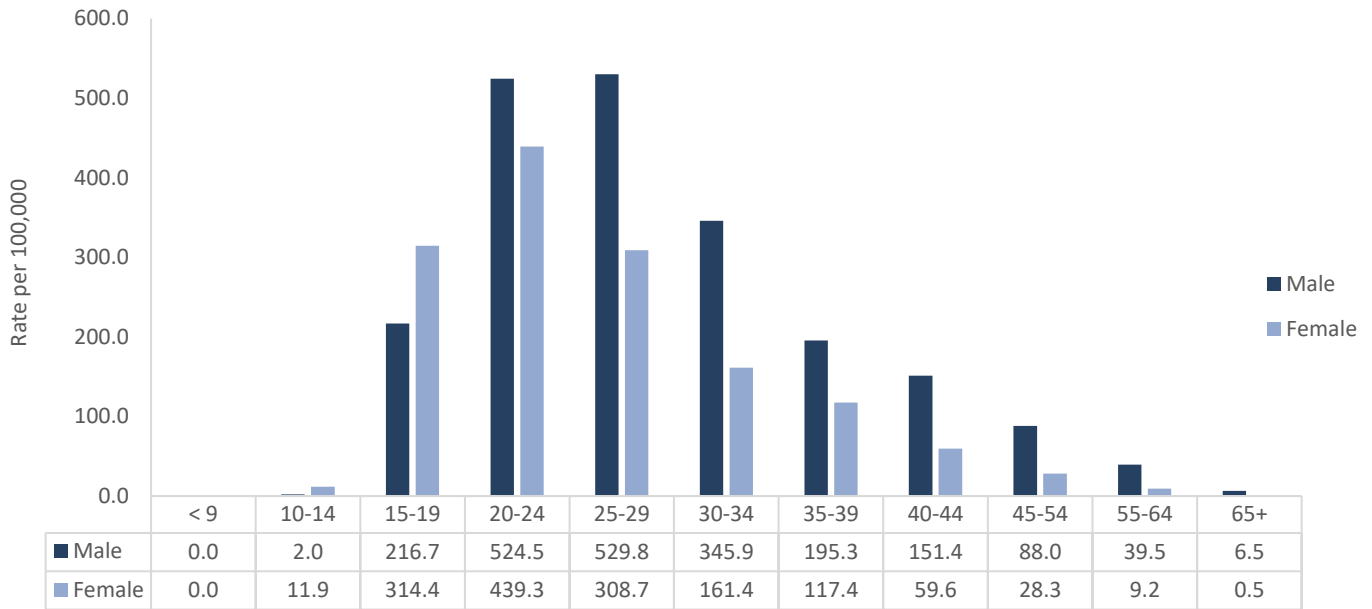


Figure 12| Gonorrhea – Rates of Reported Cases by Age and Sex, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for “Males Age <9, Age 10-14” and “Females Age <9, Age 10-14, Age 65+” have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 4| Gonorrhea – Number and Rates of Reported Cases by Age and Sex, Nevada, 2015

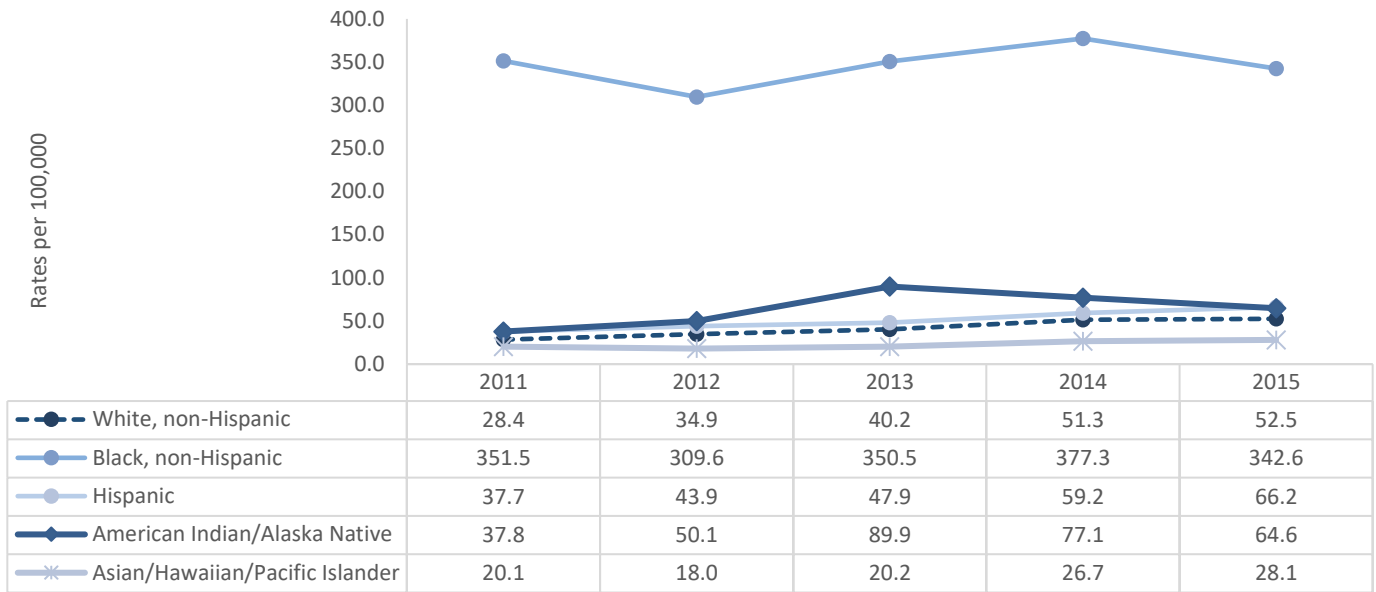
Age Group by Age at End of Year	Total			Male			Female		
	n	%	Rate*	n	%	Rate*	n	%	Rate*
<9	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
10-14	13	0.4%	6.8	2	0.1%	2.0	11	0.8%	11.9
15-19	484	13.3%	264.6	204	9.2%	216.7	279	19.9%	314.4
20-24	953	26.3%	485.4	532	24.0%	524.5	417	29.7%	439.3
25-29	841	23.2%	423.1	540	24.3%	529.8	299	21.3%	308.7
30-34	479	13.2%	255.2	330	14.9%	345.9	149	10.6%	161.4
35-39	321	8.8%	157.4	202	9.1%	195.3	118	8.4%	117.4
40-44	210	5.8%	106.7	153	6.9%	151.4	57	4.1%	59.6
45-54	231	6.4%	59.1	176	7.9%	88.0	54	3.9%	28.3
55-64	84	2.3%	24.5	67	3.0%	39.5	16	1.1%	9.2
65 +	13	0.4%	3.3	12	0.5%	6.5	1	0.1%	0.5
Unknown	1	0.0%	NA	0	0.0%	NA	1	0.1%	NA
Total	3,630	100.0%	126.3	2,218	100.0%	153.3	1,402	100.0%	98.2

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for “Males Age <9, Age 10-14” and “Females Age <9, Age 10-14, Age 65+” have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 5| Gonorrhea – Rates of Reported Cases by Race/Ethnicity, Nevada, 2011-2015

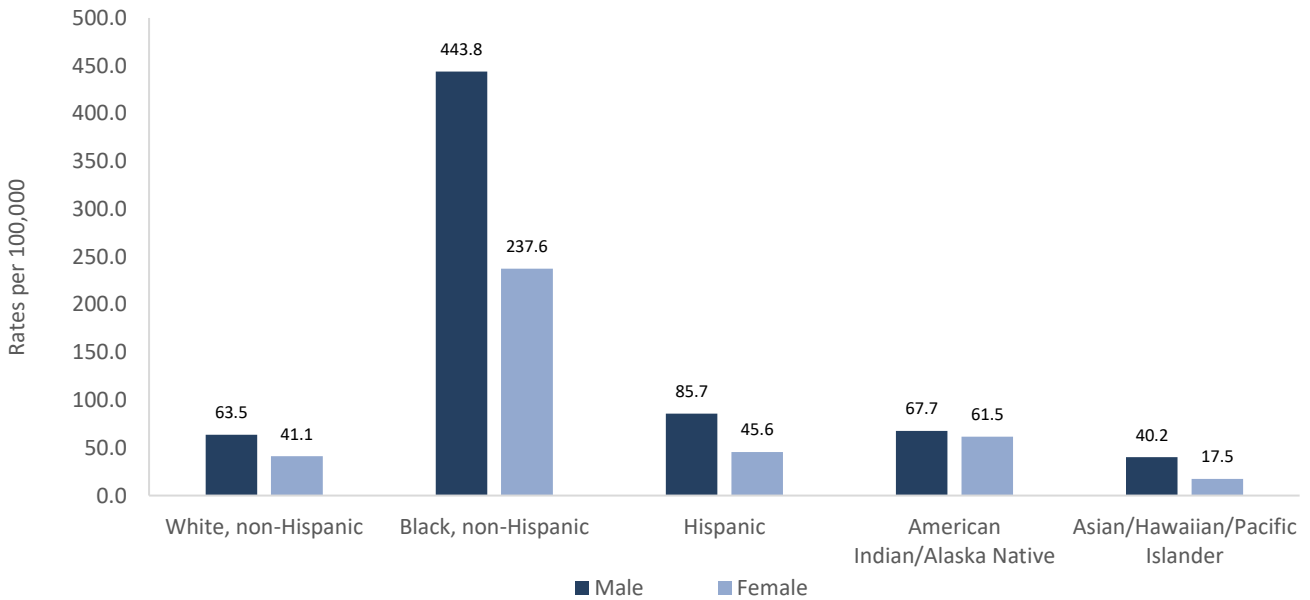


Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

†Rates are unavailable for unknown/other race/ethnicity category (32% of all data). Caution is necessary when interpreting rates of diseases when unknown race/ethnicity cases account for a large proportion of disease.

Figure 13| Gonorrhea – Rates of Reported Cases by Race/Ethnicity, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

PRIMARY & SECONDARY (P&S) SYPHILIS

Background

Primary and secondary (P&S) Syphilis is an STD caused by the bacterium *Treponema Pallidum*. Primary Syphilis is the first stage of many that can occur if the infection is left untreated. It is usually characterized by a painless and itchy sore that appears in the location where the bacteria entered the body (5). Secondary Syphilis, the second stage, typically manifests as a rash on the body and usually on the palms of the hands and soles of the feet (Palmer Plantar rash). During these stages, the infection is curable but highly contagious. Syphilis can cause long-term complications if not treated correctly (5).

Primary & Secondary Syphilis – Nevada

In 2015, a total of 335 P&S Syphilis cases were reported in Nevada. From 2011 to 2015, the rate of reported infections increased from a rate of 5.0 per 100,000 population in 2011 to a rate of 11.7 per 100,000 population in 2015, a 134% increase [Figure 15 and Table 5]. The rate of P&S Syphilis in Nevada has more than doubled between 2011 and 2015 [Table 5]. In comparison to national data, the CDC reported a total of 23,872 cases of P&S Syphilis at a rate of 7.5 cases per 100,000 population (a 19.0% increase nationally, from 2014). However, Nevada saw only a 6.7% increase in Primary and Secondary Syphilis from 2014 (3). This suggests that Primary and Secondary Syphilis while increasing, are still increasing more slowly than the rest of the nation.

Primary & Secondary Syphilis by Sex

From 2011 to 2015, females had significantly lower rates of P&S Syphilis compared to males [Figure 15 and Table 5]. The rate of P&S Syphilis among males has more than doubled in 2015 compared to 2011, from a rate of 9.5 per 100,000 population in 2011 to 21.6 per 100,000 in 2015 (females had such low numbers prior to 2013, it should be noted those rates should be compared to with caution). Among males, the highest rates were in CC at 27.4 per 100,000 population in 2015, while in females it was in WC at 2.3 per 100,000 population [Figure 17 and 18].

Primary & Secondary Syphilis by Region

From 2011 to 2015, CC had the highest rates of P&S Syphilis, followed by WC, AOC and finally the CDL. Additionally, the rates have increased each year in CC, from 8.0 per 100,000 population in 2013 to 14.6 per 100,000 in 2015 with a percentage change of 83%. During the same period, the rest of the state saw only an increase between 2013 -2014 and saw decreases in rates between 2014- 2015 [Figure 16 and Table 5]. The greatest improvement was seen in CDL counties where the rate of the infection dropped from 3.2 per 100,000 in 2014 to 0.6 per 100,000 population in 2015 with a percent change of -81%.

Overall, CC had an increase in rate from 6.5 per 100,000 population in 2011 to 14.6 per 100,000 population in 2015 with a percentage change of 125%. WC had the highest increase in rate from 1.9 per 100,000 population in 2011 to 6.1 per 100,000 population in 2015 with a percentage change of 221%. CDL counties had no cases the first couple of years with a rate of 2.6 per 100,000 in 2013 and decreased further to 0.6 per 100,000 population in 2015 with a rate change of -77%. AOC had a somewhat stable rate with a rate of 1.1 per 100,000 in 2011, followed by a steady increase and then again went back to 1.1 per 100,000 in 2015 [Table 5, Figure 16].

In 2015, the highest rates of P&S Syphilis were found among males statewide [Figures 17 and 18] where the rates were 27.4 per 100,000 population in CC (1.6 for females), 9.9 per 100,000 population in WC (2.3 for females), 1.3 per 100,000 in CDL counties (0 for females) and almost equal rates in AOC (1.1 per 100,000 for males and 1.2 for females) [Figure 16].

Primary & Secondary Syphilis by Age

In 2015, people ages 25-29 had the highest reported rates of P&S Syphilis at 41.3 per 100,000 population, followed by people aged 20-24 at 39.2 per 100,000 population. People aged less than 9 years of age and 10-14 years of age had the lowest reported rates of P&S Syphilis at 0 per 100,000 population and 0.5 per 100,000 population respectively. at 8.2 per 100,000 population [Table 5]. P&S Syphilis rates were highest among males ages 25-29 (74.6 per 100,000 population) followed by males ages 20-24 (71.0 per 100,000 population). In females, the highest rates were found in related categories of 25-29 years of age and 20-24 years of age with the rate of 6.2 per 100,000 population and 5.3 per 100,000 population respectively [Figure 19].

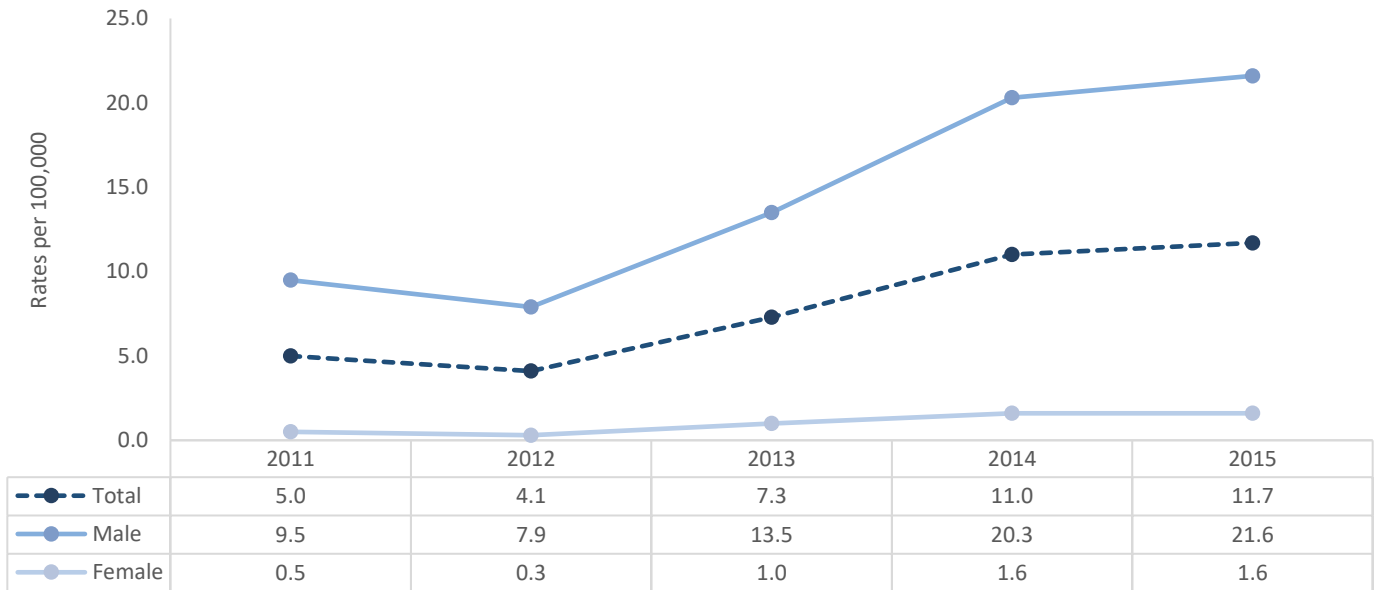
Primary & Secondary Syphilis by Race/Ethnicity

From 2011 to 2015, Blacks had the highest rates of P&S Syphilis compared to all race/ethnicities). However, Whites had the highest number of cases during this time (464 cases compared to Blacks with 228 cases in the same time- period). The lowest number of reported cases were among AI/AN (3 cases reported between 2011 and 2015). Since 2012, all race/ethnicities except AI/AN have seen increases in rates [Figure 20 and Table 5].

Overall in 2015, Whites had the highest number of cases (138) with a percentage increase of 125% from 2011. Blacks had similar percentage increase of 125% with 74 cases in 2015. Hispanics had the highest increase in percentage with 89 cases in 2015 (206% increase) compared to 2011. AI/AN had no cases in 2015 and API had 18 cases in 2015 with a 100% increase from 2011 [Table 5].

Primary & Secondary Syphilis Figures and Tables

Figure 14| Primary & Secondary Syphilis – Rates of Reported Cases by Sex, Nevada, 2011-2015

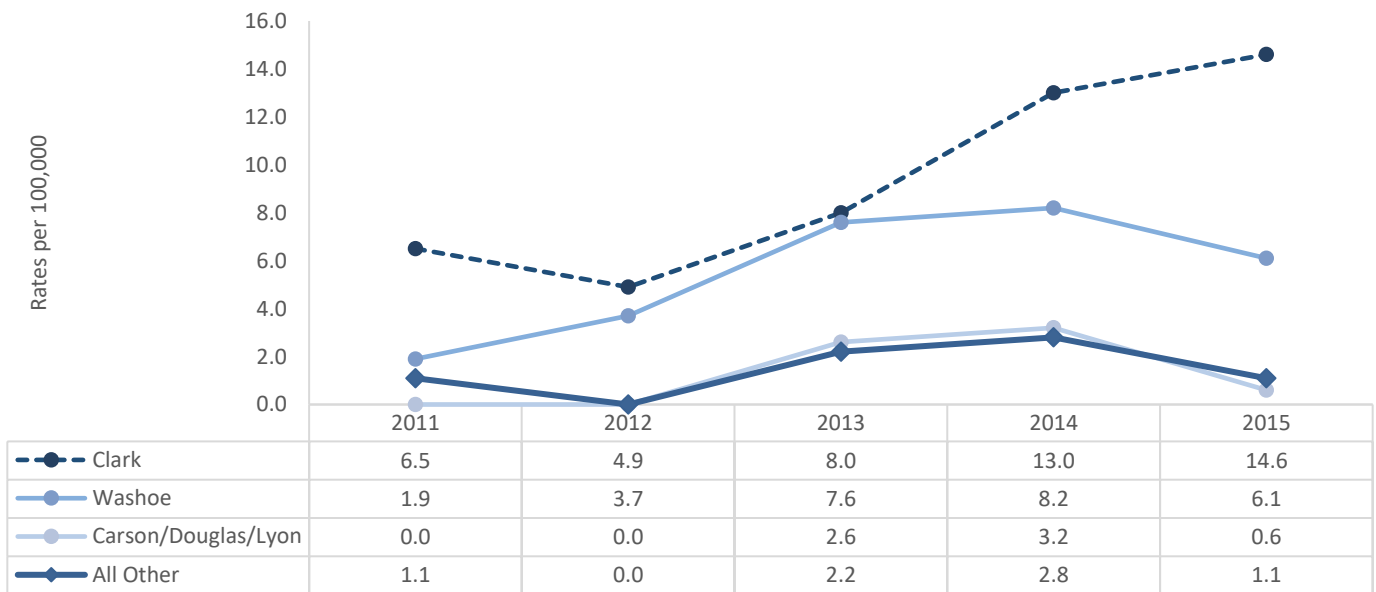


Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data.

~ The rate for Females-2011 and 2012 have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 15| Primary & Secondary Syphilis – Rates of Reported Cases by Region of Residence, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

**All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

~ The rate for "Washoe 2011" and "All Other Counties 2011-2015" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 6| Primary and Secondary Syphilis- Epidemiological Profile of Nevada, 2011-2015

	2011			2012			2013			2014			2015		
	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*
County at Residence															
Clark County	127	92.7%	6.5	97	85.8%	4.9	163	79.9%	8.0	268	85.4%	13.0	305	91.0%	14.6
Washoe County	8	5.8%	1.9	16	14.2%	3.7	33	16.2%	7.6	36	11.5%	8.2	27	8.1%	6.1
Carson/Douglas/Lyon	0	0.0%	0.0	0	0.0%	0.0	4	2.0%	2.6	5	1.6%	3.2	1	0.3%	0.6
All Other Counties**	2	1.5%	1.1	0	0.0%	0.0	4	2.0%	2.2	5	1.6%	2.8	2	0.6%	1.1
Sex															
Male	130	94.9%	9.5	109	96.5%	7.9	190	93.1%	13.5	291	92.7%	20.3	312	93.1%	21.6
Female	7	5.1%	0.5	4	3.5%	0.3	14	6.9%	1.0	23	7.3%	1.6	23	6.9%	1.6
Race/Ethnicity															
White, non-Hispanic	61	44.5%	4.0	58	51.3%	3.8	77	37.7%	5.1	130	41.4%	8.5	138	41.2%	9.0
Black, non-Hispanic	30	21.9%	13.5	20	17.7%	8.9	37	18.1%	15.9	67	21.3%	28.1	74	22.1%	30.4
Hispanic	26	19.0%	3.6	25	22.1%	3.4	62	30.4%	8.1	90	28.7%	11.4	89	26.6%	11.0
AI/ AN	2	1.5%	6.3	0	0.0%	0.0	0	0.0%	0.0	1	0.3%	3.1	0	0.0%	0.0
API	8	5.8%	3.5	3	2.7%	1.3	12	5.9%	4.9	13	4.1%	5.2	18	5.4%	7.0
Unknown/Other	10	7.3%	NA	7	6.2%	NA	16	7.8%	NA	13	4.1%	NA	16	4.8%	NA
Age at Diagnosis															
<9	1	0.7%	0.3	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
10-14	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0	1	0.3%	0.5
15-19	7	5.1%	3.9	4	3.5%	2.2	9	4.4%	4.9	8	2.5%	4.4	14	4.2%	7.7
20-24	28	20.4%	15.3	17	15.0%	9.1	46	22.5%	23.7	67	21.3%	33.9	77	23.0%	39.2
25-29	29	21.2%	16.2	23	20.4%	12.7	45	22.1%	24.0	66	21.0%	34.1	82	24.5%	41.3
30-34	19	13.9%	9.7	16	14.2%	8.3	25	12.3%	13.2	53	16.9%	28.1	49	14.6%	26.1
35-39	13	9.5%	6.8	15	13.3%	7.7	23	11.3%	11.5	39	12.4%	19.2	34	10.1%	16.7
40-44	13	9.5%	6.7	8	7.1%	4.1	16	7.8%	8.2	22	7.0%	11.2	22	6.6%	11.2
45-54	23	16.8%	6.2	23	20.4%	6.1	29	14.2%	7.6	41	13.1%	10.6	43	12.8%	11.0
55-64	2	1.5%	0.6	6	5.3%	1.9	9	4.4%	2.7	16	5.1%	4.7	8	2.4%	2.3
65+	2	1.5%	0.6	1	0.9%	0.3	2	1.0%	0.5	2	0.6%	0.5	5	1.5%	1.3
Unknown	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA
Total	137	100.0%	5.0	113	100.0%	4.1	204	100.0%	7.3	314	100.0%	11.0	335	100.0%	11.7

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data.

**All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

Figure 16| Primary & Secondary Syphilis –Rates of Reported Cases by Region, Male, Nevada, 2015

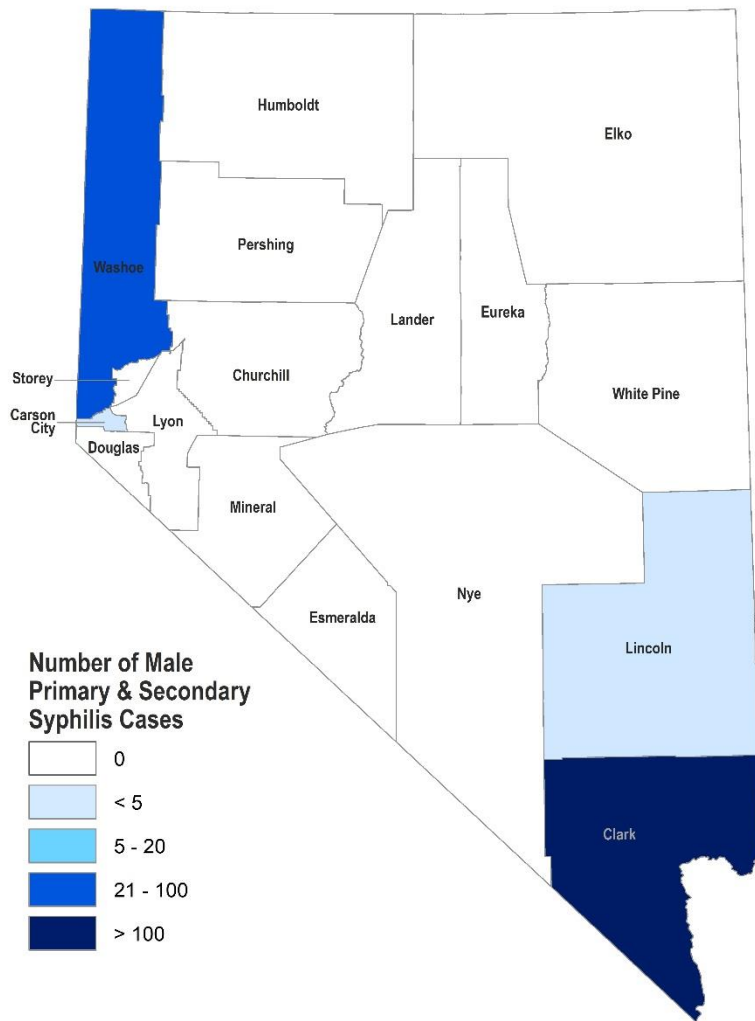


Figure 17| Primary & Secondary Syphilis – Number of Reported Cases by Region, Female, Nevada, 2015

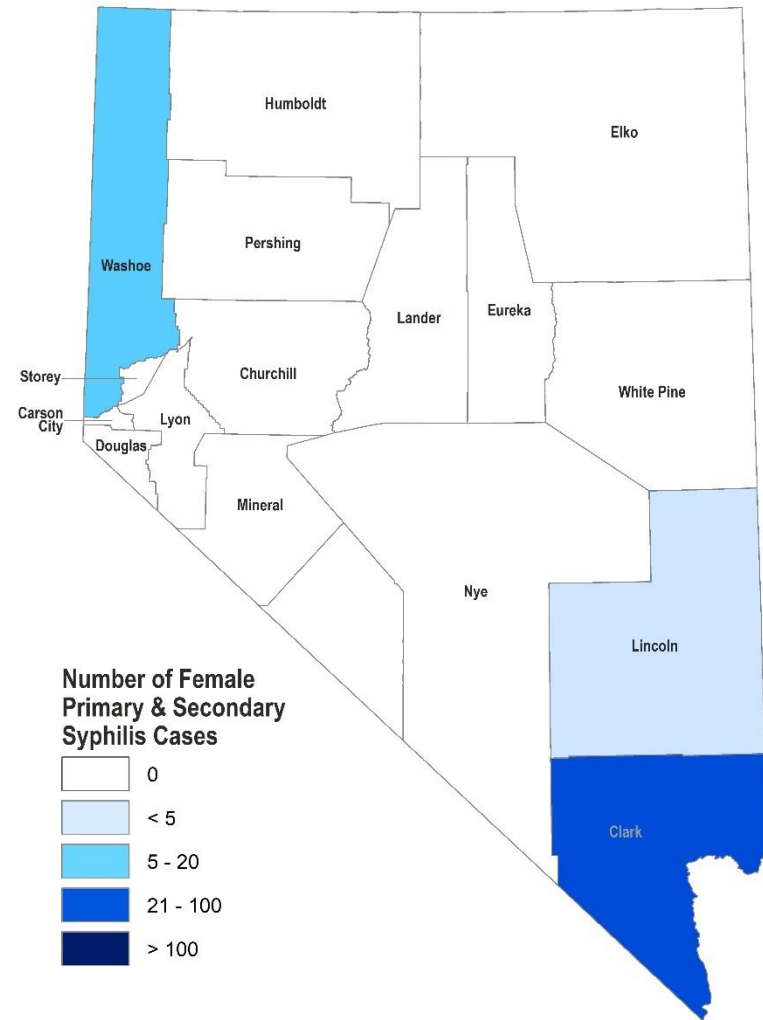
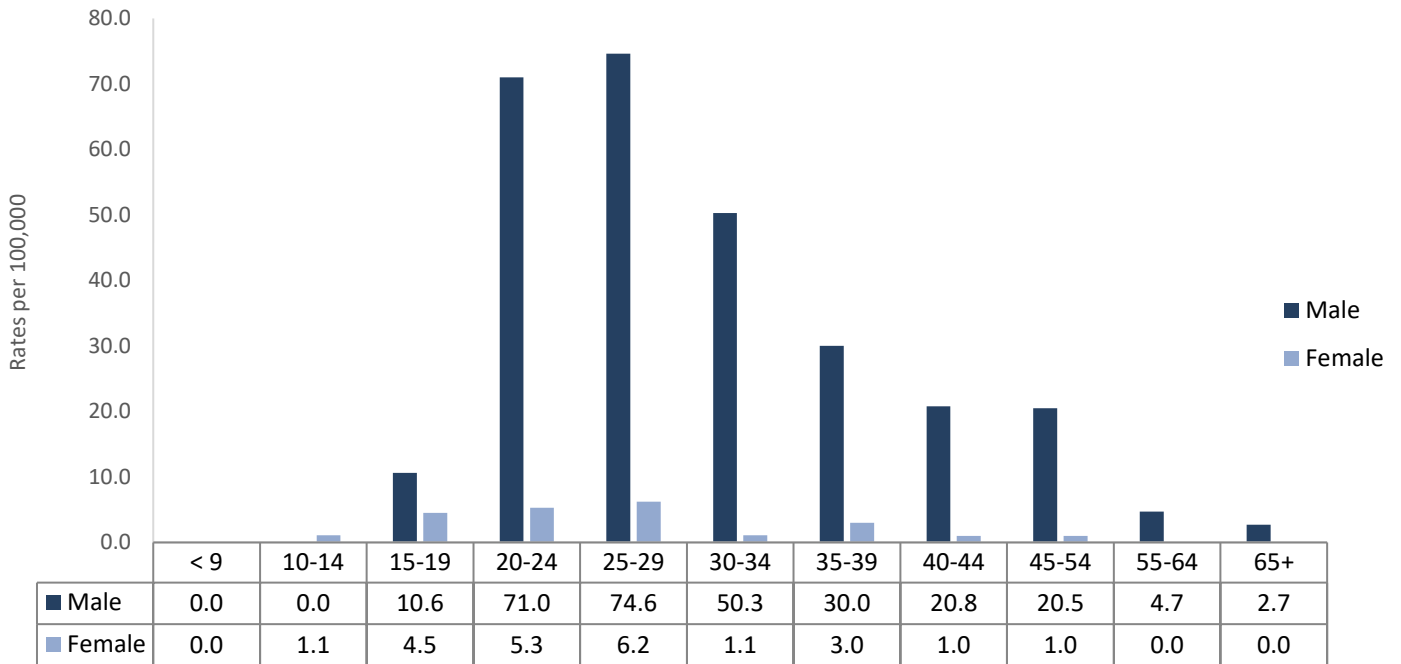


Figure 18| Primary & Secondary Syphilis – Rates of Reported Cases by Age and Sex, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for "Males Ages <9, 10-14, 15-19, 55-64, 65+" and "Females All Ages" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 7| Primary & Secondary Syphilis – Number and Rates of Reported Cases by Age and Sex, Nevada, 2015

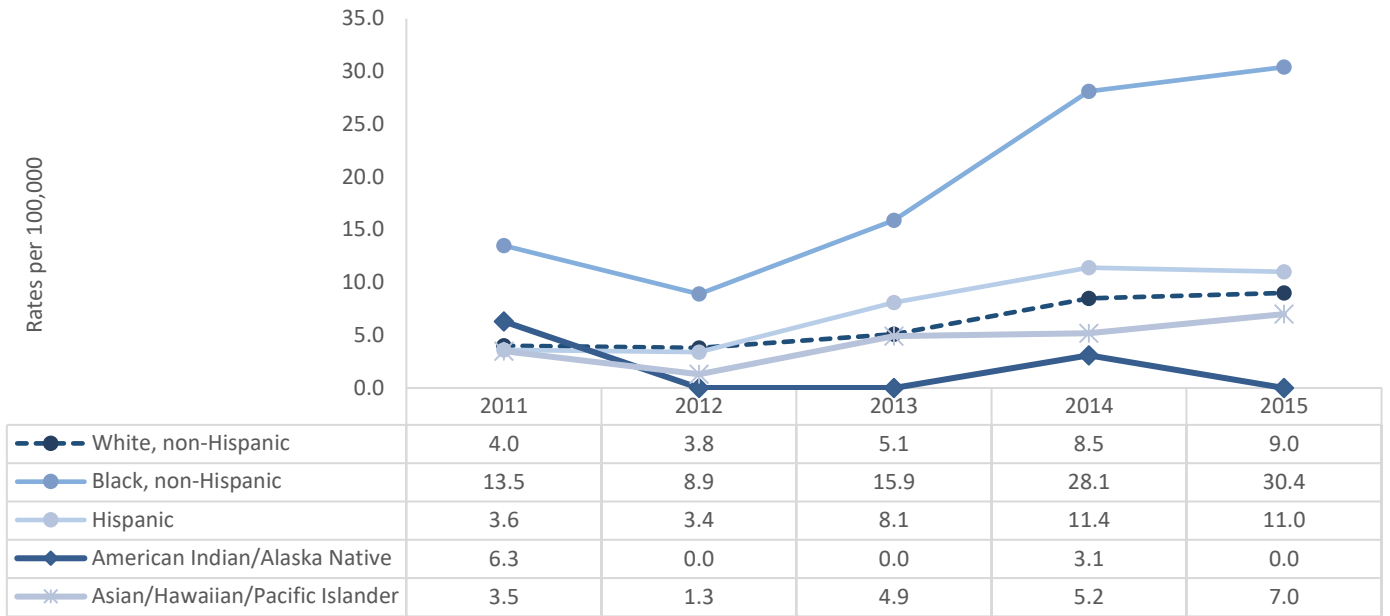
Age Group by Age at End of Year	Total			Male			Female		
	n	%	Rate*	n	%	Rate*	n	%	Rate*
<9	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
10-14	1	0.3%	0.5	0	0.0%	0.0	1	4.3%	1.1
15-19	14	4.2%	7.7	10	3.2%	10.6	4	17.4%	4.5
20-24	77	23.0%	39.2	72	23.1%	71.0	5	21.7%	5.3
25-29	82	24.5%	41.3	76	24.4%	74.6	6	26.1%	6.2
30-34	49	14.6%	26.1	48	15.4%	50.3	1	4.3%	1.1
35-39	34	10.1%	16.7	31	9.9%	30.0	3	13.0%	3.0
40-44	22	6.6%	11.2	21	6.7%	20.8	1	4.3%	1.0
45-54	43	12.8%	11.0	41	13.1%	20.5	2	8.7%	1.0
55-64	8	2.4%	2.3	8	2.6%	4.7	0	0.0%	0.0
65 +	5	1.5%	1.3	5	1.6%	2.7	0	0.0%	0.0
Unknown	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA
Total	335	100.0%	11.7	312	100.0%	21.6	23	100.0%	1.6

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for "Males Ages <9, 10-14, 15-19, 55-64, 65+" and "Females All Ages" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 19| Primary & Secondary Syphilis – Rates of Reported Cases by Race/Ethnicity, Nevada, 2011-2015



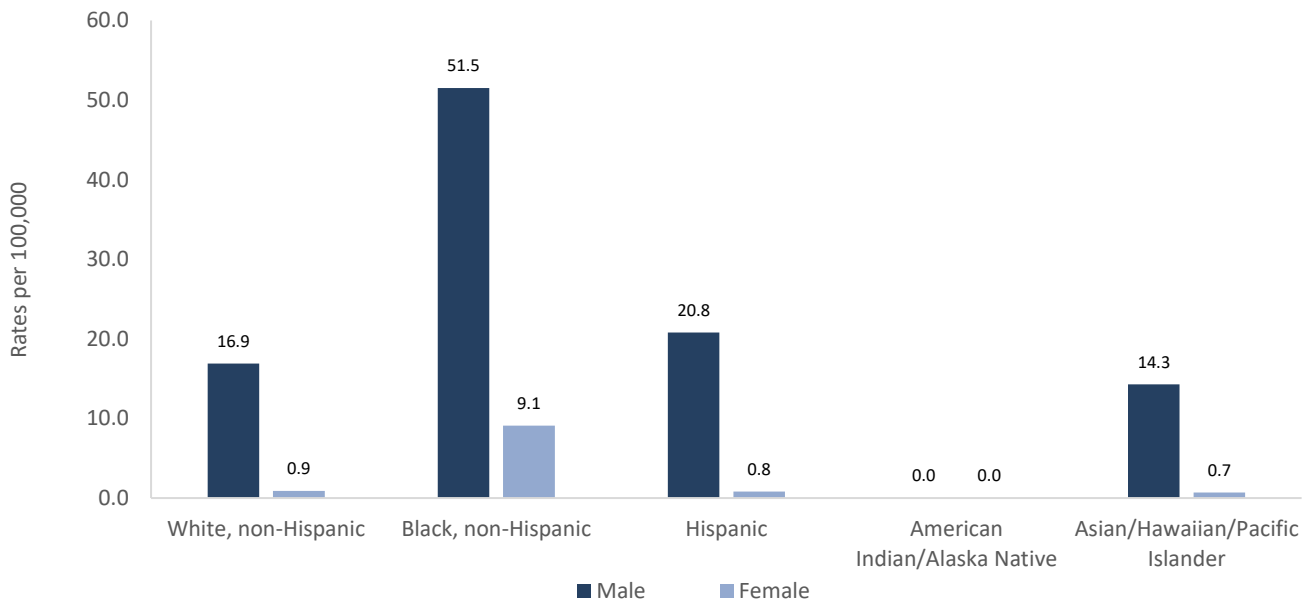
Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

†Rates are unavailable for unknown/other race/ethnicity category (6% of data). Caution is necessary when interpreting rates of diseases when unknown race/ethnicity cases account for a large proportion of disease.

~ The rate for “AI/AN 2011-2015” and “API 2011, 2012, 2014” have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 20| Primary & Secondary Syphilis – Rates of Reported Cases by Race/Ethnicity, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for “AI/AN 2015” has been calculated using counts under 12, please refer to the definition of small counts for guidance

EARLY LATENT SYPHILIS

Background

Early Latent Syphilis is a stage in the progression of a bacterially transmitted STD caused by the bacterium *Treponema Pallidum*. This is one of many stages of Syphilis that can occur if the infection is left untreated. Syphilis is deemed to be early latent when someone has had a previous negative test within 12 months, but they are no longer in the primary or secondary (symptomatic) stages (5). Early latent infection stage signifies that the infection date cannot be determined due to lack of symptoms. Although people with early latent Syphilis are asymptomatic, since they were recently (within 12 months) infected, treatment is the same as primary and secondary Syphilis.

Early Latent Syphilis – Nevada

In 2015, there were a total of 439 early latent Syphilis cases reported in Nevada. From 2011 to 2015, there has been an increase in rate statewide from 6.1 per 100,000 population in 2011 to 15.3 per 100,000 population in 2015 with a tremendous rate change of 151% [Table 7]. Early Latent Syphilis rates increased gradually from 2011 to 2013 and have increased more sharply since 2013 [Figure 22 and Table 7].

Early Latent Syphilis by Sex

From 2011 to 2015, males in Nevada had higher rates and cases of early latent Syphilis compared to females [Figure 22 and Table 7]. In 2015, the rate of early latent Syphilis in males (25.2 per 100,000 population) was almost five times the rate of females (5.2 per 100,000 population) [Figure 22 and Table 7]. Among both males and females in 2015, the highest rate of early latent Syphilis was in CC at 33.0 per 100,000 population for males and 6.3 per 100,000 population for females [Figure 24 and 25].

Early Latent Syphilis by Region

From 2011 to 2015, the highest rates of early latent Syphilis were consistently found in CC, followed by WC, and lastly the CDL counties and AOC [Figure 23]. The rates of early latent Syphilis in CC were almost 4 times the rates in WC in 2015. Additionally, from 2011 to 2015, the rates have steadily increased in CC and WC. In CC, the rate has increased from 8.2 per 100,000 in 2011 to 19.7 per 100,000 population in 2015 with a percentage change of 140%. WC had the highest change from 0.7 per 100,000 in 2011 to 5.9 per 100,000 in 2015 with a percentage change of 743%. CDL has not had a single case during the period of 2011-2015. AOC had one case from 2011-2013 with a rate of 0.6 per 100,000 and no case thereafter in 2014-2015 [Table 7, Figure 23].

In 2015, the highest rates of early latent Syphilis were found among males statewide [Figures 24 and 25], where the rates were 33.0 per 100,000 population in CC (6.3 for females), 8.1 per 100,000 population in WC (3.7 for females) and no cases in CDL counties and AOC.

Early Latent Syphilis by Age

In 2015, people ages 25-29 had the highest rates of early latent Syphilis at 46.8 per 100,000 population, followed by people ages 20-24 at 39.7 per 100,000. In fact, those between the ages of 20 and 39 comprise 67% of the cases of early latent Syphilis in 2015 (Table 15). Males had the highest rates compared to females among all age groups except 10-14 years with a rate of 0 vs 1.1 per 100,000 population. In males, Early Latent Syphilis rates were highest among people aged 25-29 (75.6 per 100,000 population) followed by people aged 20-24 (62.1 per 100,000 population). In females, the highest rates were found in similar categories of 25-29 years of age and 20-24 years of age with the rate of 16.5 per 100,000 population and 15.8 per 100,000 population respectively [Figure 26].

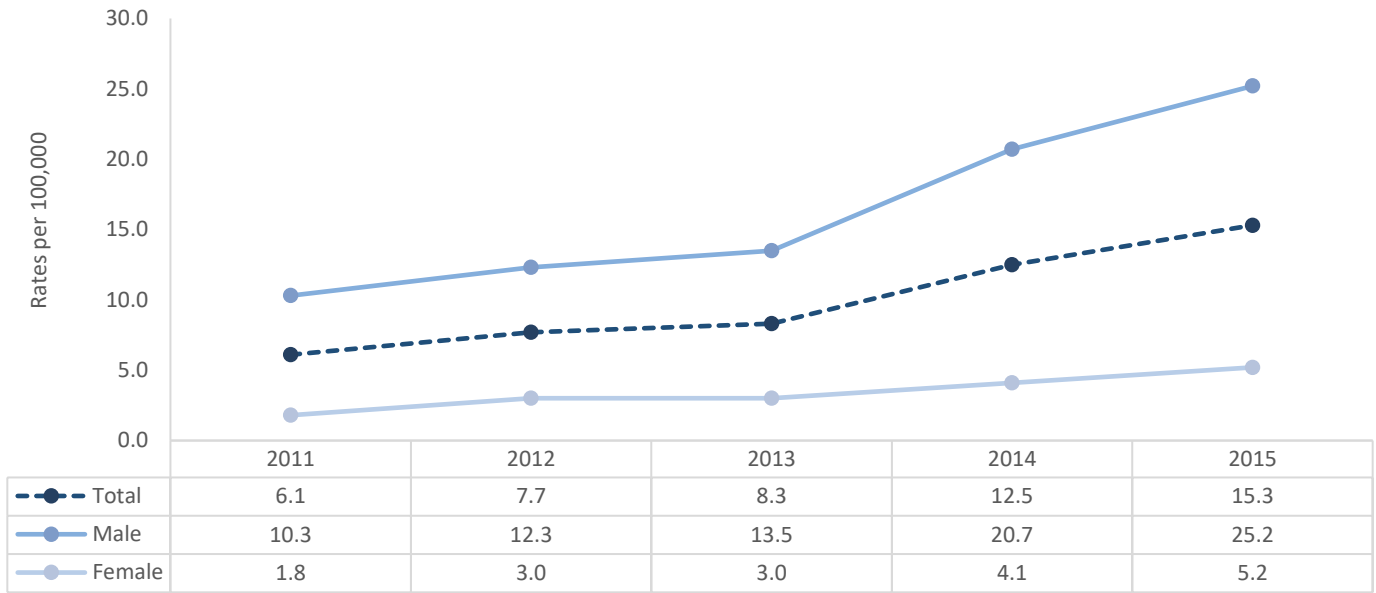
Early Latent Syphilis by Race/Ethnicity

From 2011 to 2015, Blacks had the highest rates of early latent Syphilis compared to all other race/ethnicities. In 2015, Blacks had the highest rates (43.2 per 100,000 population), followed by Hispanics (16.8 per 100,000 population), and API (13.3 per 100,000 population) [Table 7]. AI/AN had the lowest rates (6.2 per 100,000 population) along with the Whites (9.2 per 100,000). AI/AN have consistently such low numbers reported, it should be noted those rates should be compared to with caution). However, Whites had the highest number of cases during this time, 456 cases compared to Blacks with 354 cases in the same time- period. The Hispanics had a high number too with 422 cases and the lowest number of reported cases were among API and AI/AN with 79 cases and 7 cases respectively.

From 2011 to 2015, API had the highest percentage change of 202% (4.4 per 100,000 to 13.3 per 100,000), followed by Hispanics with a percentage change of 151% (6.7 per 100,000 to 16.8 per 100,000), Whites had a percentage change of 149% (3.7 per 100,000 to 9.2 per 100,000), followed by the Blacks with a percentage change of 123% (19.4 per 100,000 to 43.2 per 100,000). AI/AN had the lowest percentage change of 94% (3.2 per 100,000 to 6.2 per 100,000) [Table 7 and Figure 27].

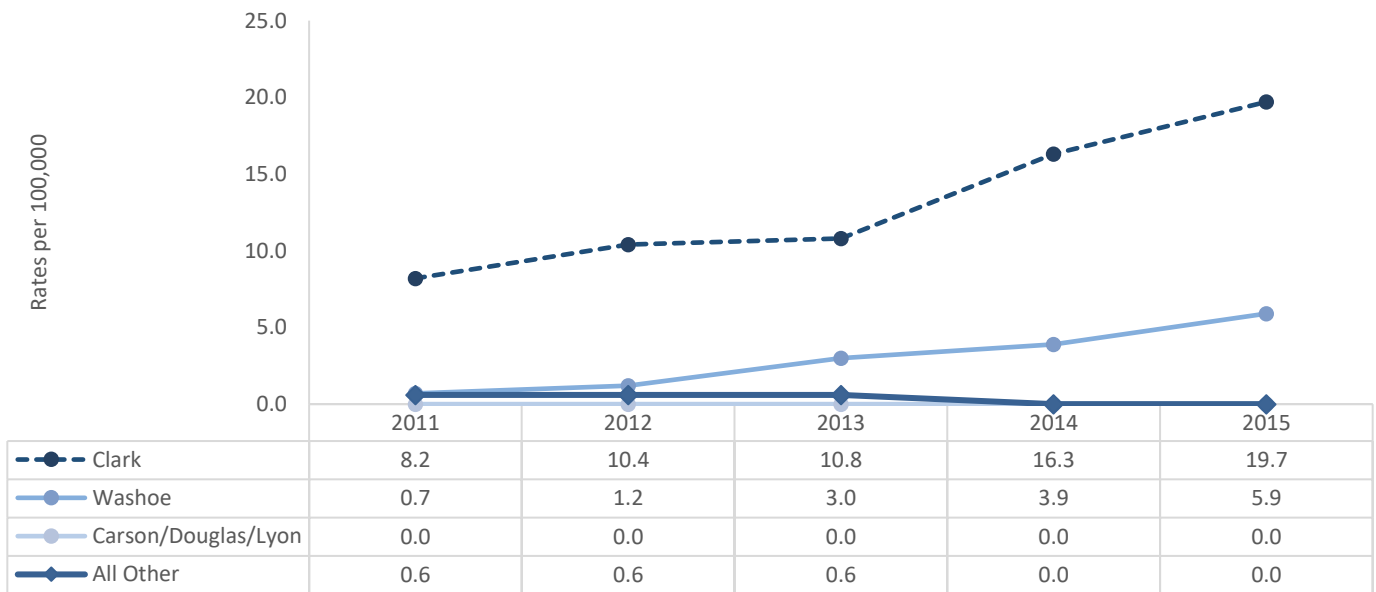
Early Latent Syphilis Figures and Tables

Figure 21| Early Latent Syphilis – Rates of Reported Cases by Sex, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015 data.

Figure 22| Early Latent Syphilis – Rates of Reported Cases by Region of Residence, Nevada, 2011-2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.
 *Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.
 **All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.
 ~ The rate for "Washoe 2011, 2012" and "All Other Counties 2011-2015" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 8 | Early Latent Syphilis – Epidemiological Profile of Nevada, 2011-2015

	2011			2012			2013			2014			2015		
	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*	n	%	Rate*
County at Residence															
Clark County	162	97.6%	8.2	206	97.2%	10.4	219	94.0%	10.8	338	95.2%	16.3	413	94.1%	19.7
Washoe County	3	1.8%	0.7	5	2.4%	1.2	13	5.6%	3.0	17	4.8%	3.9	26	5.9%	5.9
Carson/Douglas/Lyon	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
All Other Counties**	1	0.6%	0.6	1	0.5%	0.6	1	0.4%	0.6	0	0.0%	0.0	0	0.0%	0.0
Sex															
Male	142	85.5%	10.3	171	80.7%	12.3	191	82.0%	13.5	296	83.4%	20.7	365	83.1%	25.2
Female	24	14.5%	1.8	41	19.3%	3.0	42	18.0%	3.0	58	16.3%	4.1	74	16.9%	5.2
Race/Ethnicity															
White, non-Hispanic	56	33.7%	3.7	67	31.6%	4.4	77	33.0%	5.1	115	32.4%	7.5	141	32.1%	9.2
Black, non-Hispanic	43	25.9%	19.4	56	26.4%	24.8	65	27.9%	27.9	85	23.9%	35.6	105	23.9%	43.2
Hispanic	49	29.5%	6.7	58	27.4%	7.8	60	25.8%	7.8	119	33.5%	15.0	136	31.0%	16.8
AI/ AN	1	0.6%	3.2	1	0.5%	3.1	2	0.9%	6.2	1	0.3%	3.1	2	0.5%	6.2
API	10	6.0%	4.4	12	5.7%	5.2	9	3.9%	3.7	14	3.9%	5.6	34	7.7%	13.3
Unknown/Other	7	4.2%	NA	18	8.5%	NA	20	8.6%	NA	21	5.9%	NA	21	4.8%	NA
Age at Diagnosis															
<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
10-14	0	0.0%	0.0	1	0.5%	0.6	1	0.4%	0.5	0	0.0%	0.0	1	0.2%	0.5
15-19	9	5.4%	5.0	5	2.4%	2.8	6	2.6%	3.3	8	2.3%	4.4	14	3.2%	7.7
20-24	27	16.3%	14.7	30	14.2%	16.0	54	23.2%	27.9	55	15.5%	27.8	78	17.8%	39.7
25-29	26	15.7%	14.5	43	20.3%	23.7	43	18.5%	22.9	70	19.7%	36.2	93	21.2%	46.8
30-34	30	18.1%	15.4	31	14.6%	16.2	33	14.2%	17.4	63	17.7%	33.5	62	14.1%	33.0
35-39	16	9.6%	8.3	19	9.0%	9.8	16	6.9%	8.0	52	14.6%	25.6	61	13.9%	29.9
40-44	19	11.4%	9.7	29	13.7%	14.8	27	11.6%	13.8	21	5.9%	10.7	37	8.4%	18.8
45-54	28	16.9%	7.5	46	21.7%	12.3	35	15.0%	9.2	67	18.9%	17.4	74	16.9%	18.9
55-64	10	6.0%	3.1	5	2.4%	1.5	15	6.4%	4.5	16	4.5%	4.7	15	3.4%	4.4
65+	1	0.6%	0.3	3	1.4%	0.8	3	1.3%	0.8	3	0.8%	0.8	4	0.9%	1.0
Unknown	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA
Total	166	100.0%	6.1	212	100.0%	7.7	233	100.0%	8.3	355	100.0%	12.5	439	100.0%	15.3

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

**All other counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine. ~ The rate for "Washoe 2011, 2012" and "All Other Counties 2011-2015" have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 23| Early & Latent Syphilis –Rates of Reported Cases by Region, Male, Nevada, 2015

Figure 24| Early & Latent Syphilis – Number of Reported Cases by Region, Female, Nevada, 2015

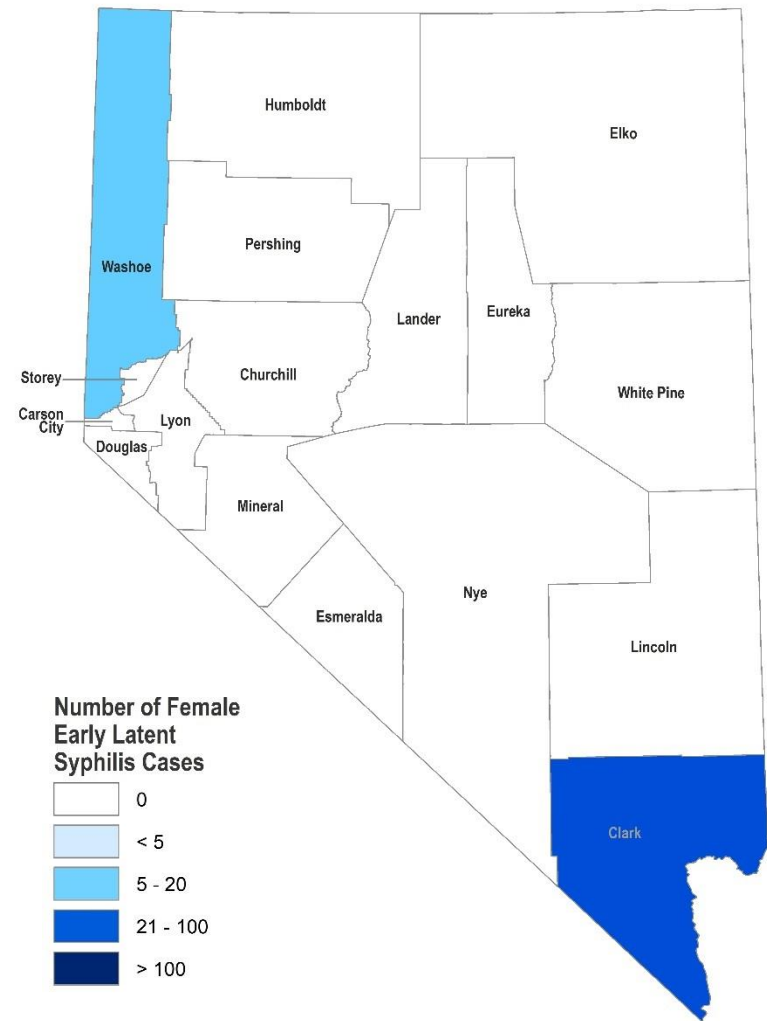
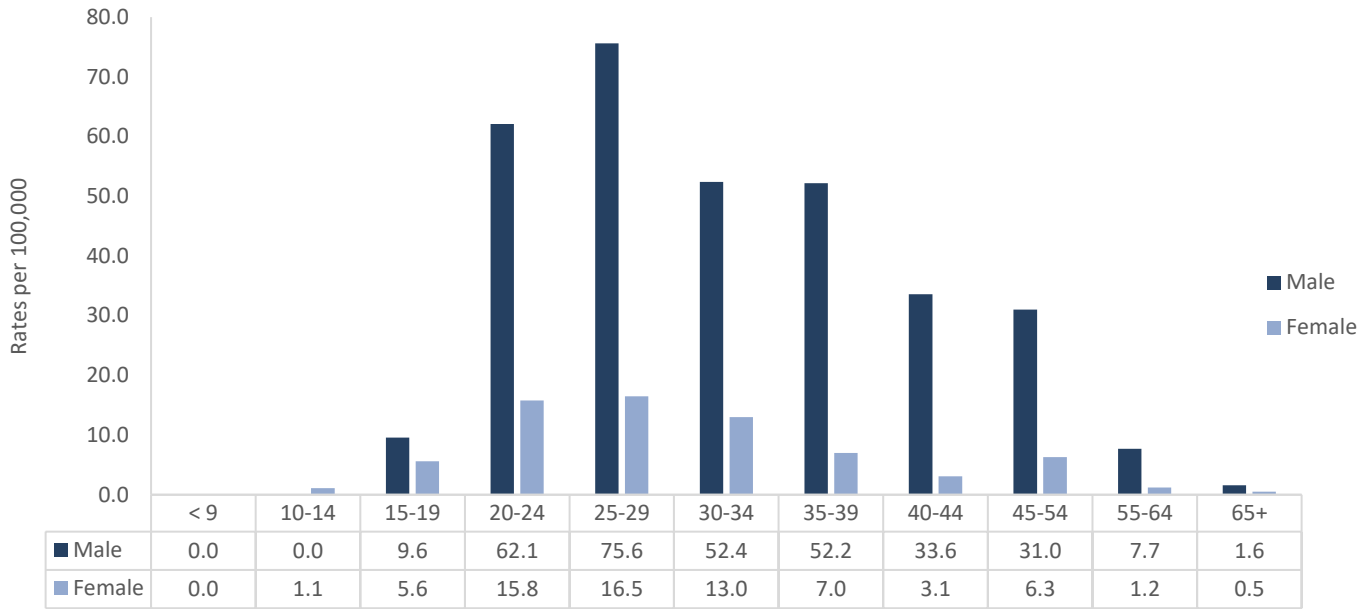


Figure 25| Early Latent Syphilis – Rates of Reported Cases by Age and Sex, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for “Males Age <9, 10-14, 65+” and “Females Ages <9, 10-14, 15-19, 35-39, 40-44, 55-64, 65+” have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Table 9| Early Latent Syphilis – Number and Rates of Reported Cases by Age and Sex, Nevada, 2015

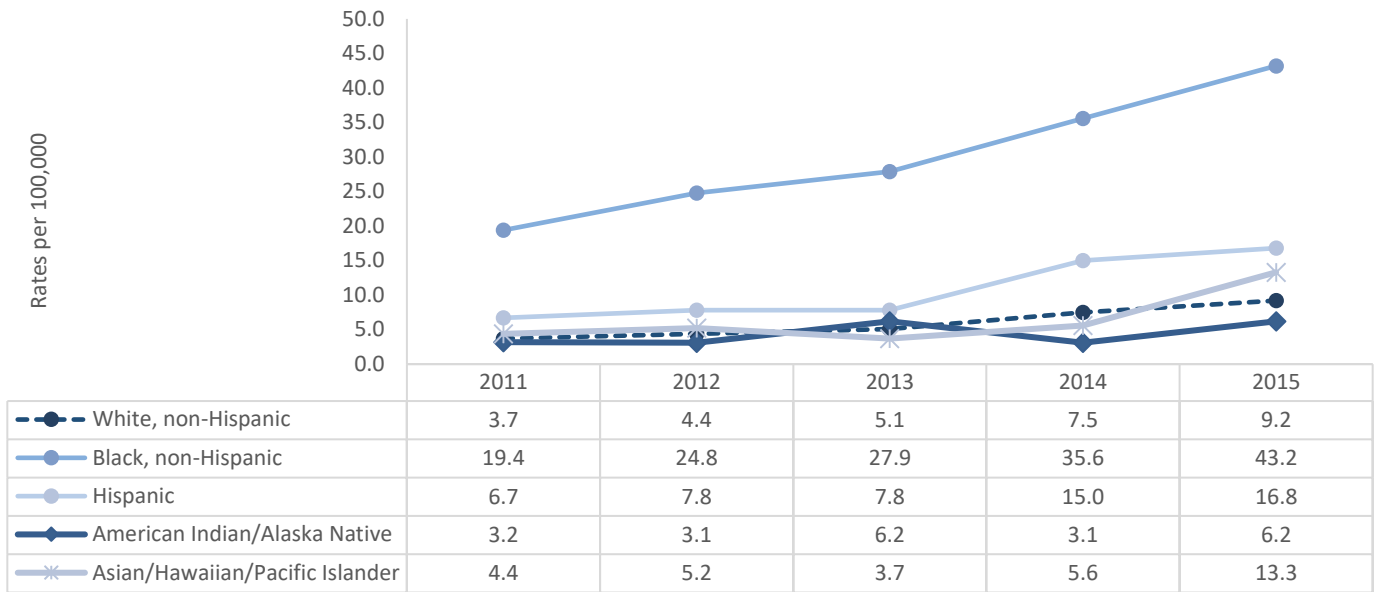
Age Group by Age at End of Year	Total			Male			Female		
	n	%	Rate*	n	%	Rate*	n	%	Rate*
<9	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
10-14	1	0.2%	0.5	0	0.0%	0.0	1	1.4%	1.1
15-19	14	3.2%	7.7	9	2.5%	9.6	5	6.8%	5.6
20-24	78	17.8%	39.7	63	17.3%	62.1	15	20.3%	15.8
25-29	93	21.2%	46.8	77	21.1%	75.6	16	21.6%	16.5
30-34	62	14.1%	33.0	50	13.7%	52.4	12	16.2%	13.0
35-39	61	13.9%	29.9	54	14.8%	52.2	7	9.5%	7.0
40-44	37	8.4%	18.8	34	9.3%	33.6	3	4.1%	3.1
45-54	74	16.9%	18.9	62	17.0%	31.0	12	16.2%	6.3
55-64	15	3.4%	4.4	13	3.6%	7.7	2	2.7%	1.2
65 +	4	0.9%	1.0	3	0.8%	1.6	1	1.4%	0.5
Unknown	0	0.0%	NA	0	0.0%	NA	0	0.0%	NA
Total	439	100.0%	15.3	365	100.0%	25.2	74	100.0%	5.2

Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for “Males Age <9, 10-14, 65+”, “Females Ages <9, 10-14, 15-19, 35-39, 40-44, 55-64, 65+”, and “Total Ages <9, 10-14, 65+” have been calculated using counts under 12, please refer to the definition of small counts for guidance.

Figure 26| Early Latent Syphilis – Rates of Reported Cases by Race/Ethnicity, Nevada, 2011-2015

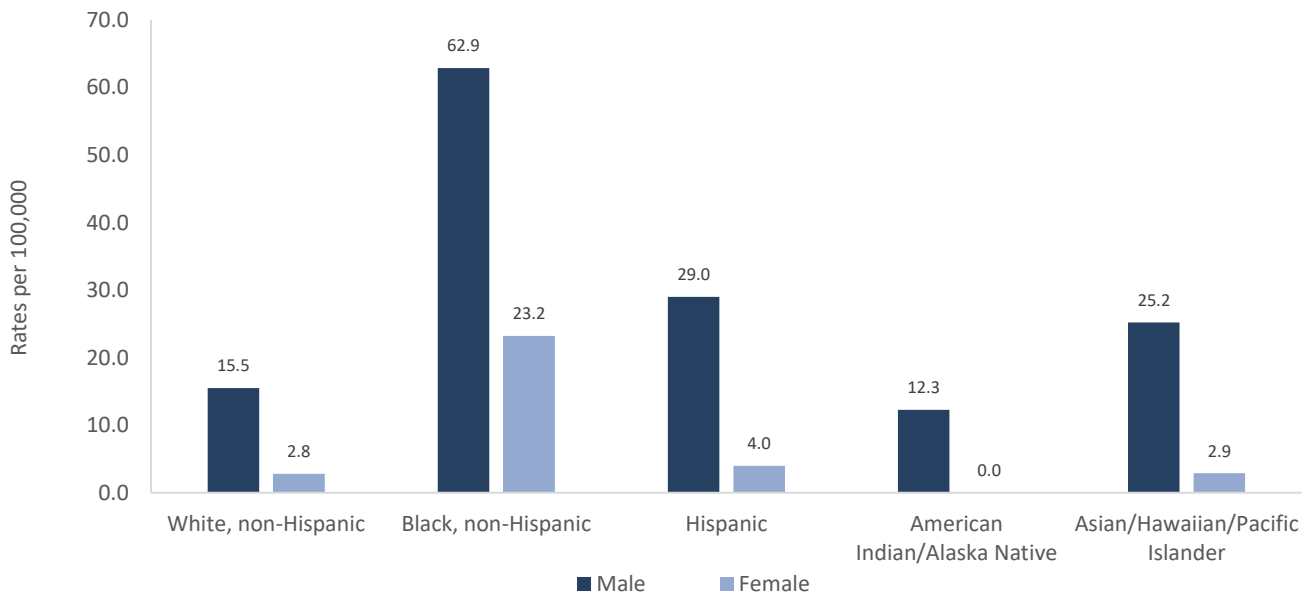


Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

†Rates are unavailable for unknown/other race/ethnicity category (6% of data). Caution is necessary when interpreting rates of diseases when unknown race/ethnicity cases account for a large proportion of disease. ~ The rate for “AI/AN 2011-2015” and “API 2011, 2013” have been calculated using counts under 12, please refer to the definition of small counts for guidance

Figure 27| Early Latent Syphilis – Rates of Reported Cases by Race/Ethnicity and Sex, Nevada, 2015



Source: Division of Public and Behavioral Health, Sexually Transmitted Disease Management Information Systems (STD*MIS), data as of July 2016.

*Crude rates per 100,000 population were calculated using 2015 population projections from the Nevada State Demographer vintage 2015.

~ The rate for “AI/AN 2015” has been calculated using counts under 12, please refer to the definition of small counts for guidance

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