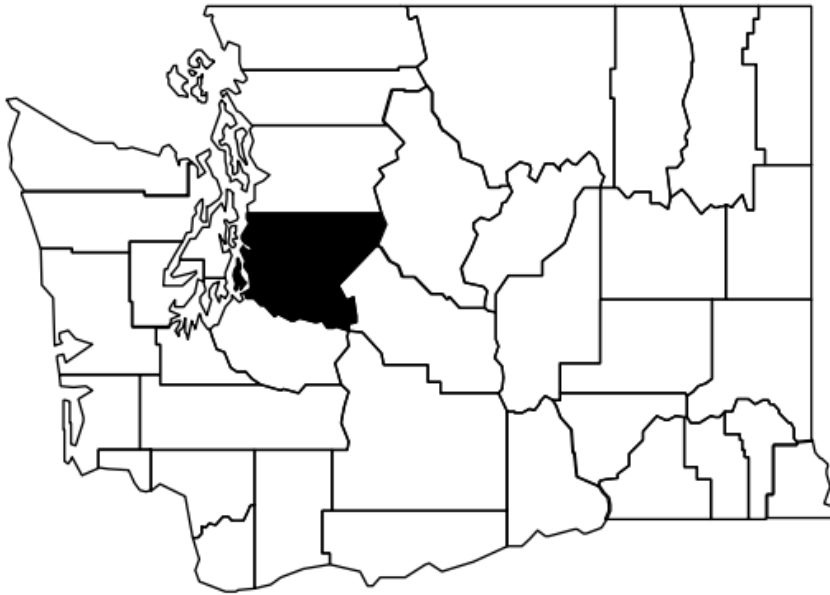


Sexually Transmitted Infection Profile

King County 2020



Disease Control and Health Statistics
Infectious Disease Assessment Unit



DOH 150-156

Sexually Transmitted Infection Profile

King County 2020



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Infectious Disease Assessment Unit
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Introduction

Sexually transmitted infections (STIs) continue to be the most frequently diagnosed and reported notifiable conditions in Washington State. This report describes the STI burden in King County. Data are presented for the more commonly reported diseases of chlamydial infection, gonorrhea, primary and secondary syphilis, and genital herpes. Figures are presented for chlamydial infection, gonorrhea, and primary and secondary syphilis, when at least ten (10) cases were diagnosed in 2020. The corresponding incidence rates are presented graphically when there are greater than sixteen (16) cases diagnosed within one year. The report concludes with tables containing a decade of historical data by age group and gender for chlamydial infection, gonorrhea, and primary and secondary syphilis, when at least twenty (20) cases were diagnosed in 2020. To protect patient confidentiality, data within these tables is suppressed if stratified counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Due to small number standards, gender data is only stratified by people who identify as male or female. People who identify as transgender, nonbinary, or other gender identity are included within the annual total case count. For this reason, total annual case counts may appear higher than the sum of individual cells.

Data Sources, Definitions and Limitations

Cases: Surveillance cases are the number of new episodes of disease (not unique persons) diagnosed in a given year. Cases are identified and submitted by health care providers to local health jurisdictions and entered into the Washington State Department of Health Public Health Information Management System – Sexually Transmitted Diseases (PHIMS-STD) data system. Additionally, cases of chlamydial infection reported through electronic lab reporting (ELR) alone are included in the final chlamydia case counts. To be included in surveillance reporting, each case must meet disease definitions (see below). Data presented in this report represent new cases of infection diagnosed during a given year and reported as of June 1, 2021.

Disease Definitions:

- Chancroid – A sexually transmitted infection caused by the bacterium *Haemophilus ducreyi* that may include the symptoms of painful genital sores and swollen pelvic lymph nodes. Cases are defined by laboratory detection of *H. ducreyi* from a clinical specimen.
- Chlamydia (CT) – A sexually transmitted infection caused by the bacterium *Chlamydia trachomatis* that may include the symptoms of swelling and pain in internal sexual organs, though the infection often has no symptoms in women. Cases are defined by laboratory detection of *C. trachomatis* from a clinical specimen.
- Genital Herpes (HSV) – A sexually transmitted infection caused by the herpes simplex viruses type 1 and type 2 that may include the symptoms of blisters or sores in the genital area. Cases are defined by laboratory detection of herpes simplex virus (HSV1 or HSV2) or positive antibody response from a clinical specimen. Reportable cases include only adult genital initial infection and neonatal infection.

- Gonorrhea (GC) – A sexually transmitted infection caused by the bacterium *Neisseria gonorrhoeae* that may include the symptoms of swelling and pain in internal sexual organs, though the infection sometimes has no symptoms. Cases are defined by laboratory detection of the bacterium *N. gonorrhoeae* from a clinical specimen.
- Granuloma Inguinale (GI) – A sexually transmitted infection caused by the bacterium *Klebsiella granulomatis* that may include the symptoms of slowly increasing genital sores and swollen pelvic lymph nodes. Cases are defined by microscopic examination of a clinical specimen.
- Lymphogranuloma Venereum (LGV) – A sexually transmitted infection caused by three strains of *Chlamydia trachomatis* that may include the symptoms of genital sores and swollen pelvic lymph nodes. Cases are defined by laboratory detection of the L1, L2 and L3 serovars of *C. trachomatis* from a clinical specimen.
- Syphilis – A sexually transmitted infection caused by the bacterium *Treponema pallidum* that may include many kinds of symptoms or none at all, depending upon the stage of disease. Cases are defined and assigned a stage by a combination of positive blood tests, symptoms, and history of previous treatment. The U.S. Centers for Disease Control and Prevention (CDC) provides guidelines with additional details of surveillance definitions and staging criteria. The stages of primary and secondary (P&S) syphilis are grouped together for analysis in this report; these stages are the most infectious and the best indicators of recent infection.
- Primary* – identified by the presence of one or many painless sores.
- Secondary* – identified by the presence of a rash on one or more areas of the body, often with fever, fatigue or other symptoms at the same time.
- Other Stages* – additional stages of syphilis include early non-primary non-secondary, unknown duration or late, congenital, and syphilitic stillbirths. See CDC guidelines for specific criteria: www.cdc.gov/std/

Incidence Rates: Incidence rates in this report are calculated as the number of new episodes of a disease (not unique persons) diagnosed in a given year divided by the total population (age- and sex-adjusted) for that year, expressed as a rate per 100,000. Incidence rates allow comparisons between two or more populations by standardizing the denominator and are the most appropriate statistic to use when investigating differences between groups. Rates are not presented when there were fewer than 17 cases of disease reported due to statistical instability concerns.

Limitations: The data presented in this report may be subject to a number of limiting factors. Clinically diagnosed cases (without laboratory confirmation) may be missed through public health surveillance systems. Depending upon diagnosing practices, completeness of reporting may vary by the source of health care. In addition, the diagnosing practitioner is responsible for providing the case information including the patient demographic data items of age and gender upon which many of the analyses in this report depend. Biases could exist in the data due to under-reporting, inability of certain populations to access medical services, errors in laboratory reporting, or differential reporting or screening by disease and source of care. Also, small increases or decreases in numbers from year to year can look large if the actual number of cases is small. Care should be taken in interpreting these data in light of known limitations.

Population: Denominator population estimates for 2001-2020 incidence rates are from Washington State Adjusted Population Estimates, Office of Financial Management (OFM), <http://www.ofm.wa.gov/pop/>. Denominator population estimates for 2020 are based on 6-year (2014-2019) extrapolations.

Tabular Data: The data tables are provided in hopes that community and local partners will use these historical data as a resource for future health planning. Data tables for additional years previous are available upon request.

Anyone with specific questions about how these data should be interpreted is encouraged to contact the Infectious Disease Assessment Unit's STI Surveillance team at 360-236-3445.

King County STI Disease Trends

Table 1. Washington State Reportable Sexually Transmitted Infections, King County, 2020

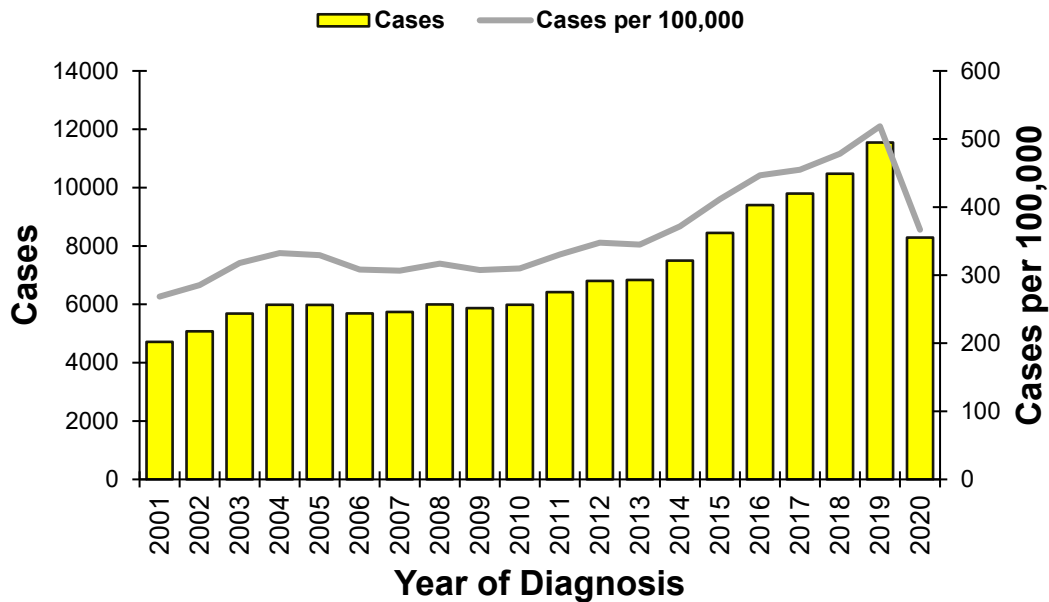
Disease	County Cases	County Rate§	WA State Rate
Chlamydia	8,290	366.7	410.4
Gonorrhea	4,277	189.2	151.2
P&S Syphilis	335	14.8	10.9
Genital Herpes	9	+	18.0
Chancroid/GI/LGV	0		
Total	12,911		

§ Crude incidence rate per 100,000 population.

+ Rates are suppressed for counts under 17 with a corresponding RSE >25% due to statistical instability.

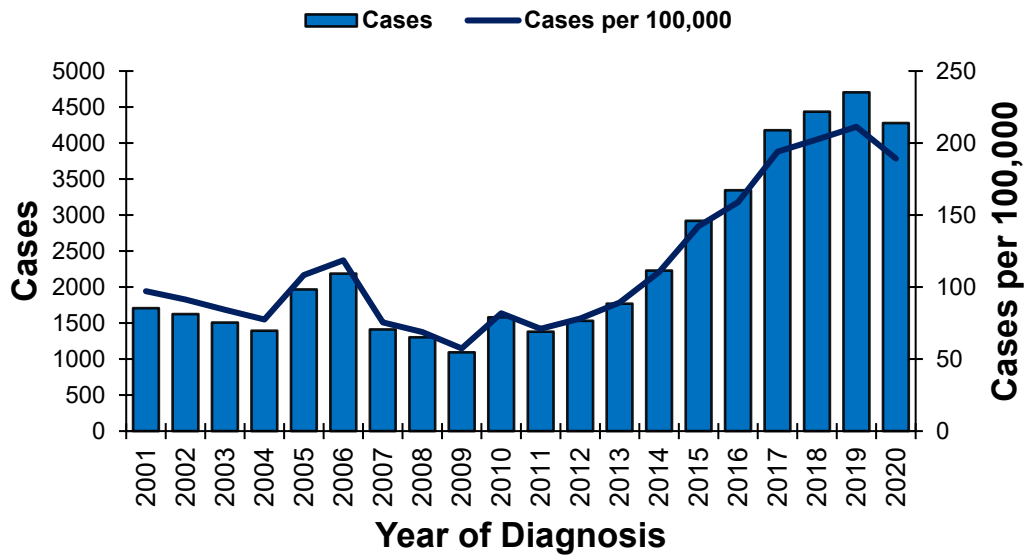
Chlamydia

Figure 1. Chlamydia Cases, King County, 2001-2020



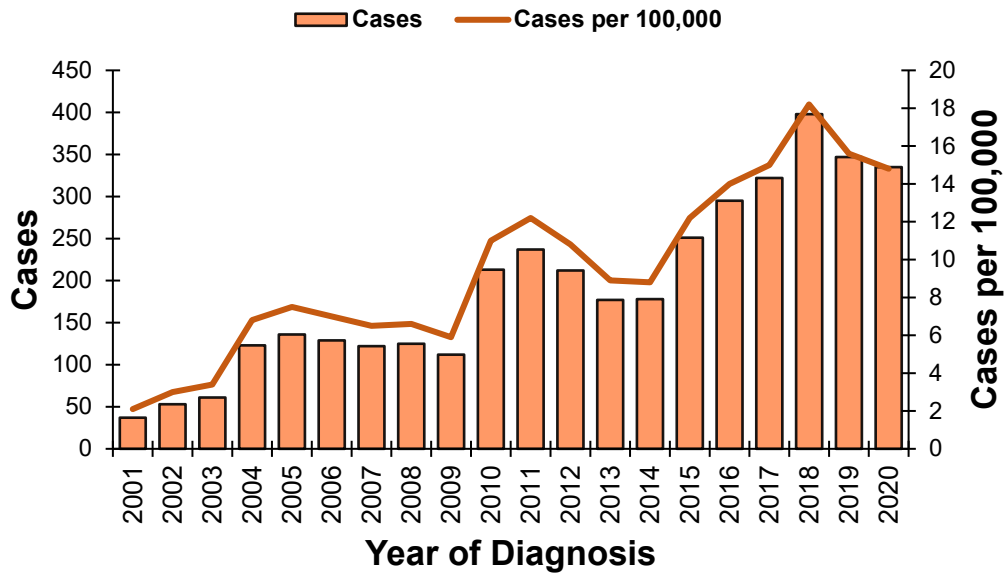
Gonorrhea

Figure 2. Gonorrhea Cases, King County, 2001-2020



Primary and Secondary Syphilis

Figure 3. Primary and Secondary Syphilis Cases, King County, 2001-2020



Data Tables

Table 2. Chlamydia Cases and Incidence Rates by Gender and Age Group, 2011-2020

	Age Group	Total		Males		Females	
		Cases	Rate	Cases	Rate	Cases	Rate
2011	0-14	62	17.9	+	+	+	+
	15-24	3755	1556.2	922	751.5	2833	2388.6
	25-34	1749	555.9	796	496.7	953	617.4
	35-44	608	204.5	406	267.4	202	138.8
	45+	241	32.4	+	+	+	+
	Missing	4	+	3	+	1	+
	All Ages	6419	330.4	2327	240.4	4092	419.9
2012	0-14	43	12.4	+	+	+	+
	15-24	3837	1596.3	1040	852.2	2797	2363.8
	25-34	1963	629.3	965	606.9	998	652.7
	35-44	674	226.4	452	297.2	222	152.4
	45+	286	37.7	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	6803	347.6	2685	275.2	4118	419.7
2013	0-14	35	10.0	+	+	+	+
	15-24	3696	1521.7	953	775.0	2743	2287.5
	25-34	2070	652.6	970	598.5	1100	709.2
	35-44	667	223.3	438	287.2	229	156.7
	45+	369	47.8	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	6837	345.0	2659	268.9	4178	420.7
2014	0-14	44	12.4	10	+	34	19.5
	15-24	3860	1557.3	1079	861.0	2781	2269.4
	25-34	2419	730.3	1185	698.9	1234	763.3
	35-44	822	274.2	541	353.5	281	191.5
	45+	351	44.9	288	76.4	63	15.5
	Missing	2	+	0	0.0	2	+
	All Ages	7498	371.7	3103	308.2	4395	434.9
2015	0-14	60	16.63	+	+	+	+
	15-24	4104	1622.14	1208	946.76	2896	2309.3
	25-34	2857	833.40	1471	836.47	1386	830.2
	35-44	959	317.55	648	420.09	311	210.5
	45+	467	58.80	+	+	+	+
	Missing	1	+	0	0.00	1	+
	All Ages	8448	411.54	3717	362.65	4731	460.3

+Data has been suppressed where counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Additionally, incidence rates calculated based off counts less than seventeen (17) are suppressed due to statistical instability.

Continued Table 2. Chlamydia

	Age Group	Total		Males		Females	
		Cases	Rate	Cases	Rate	Cases	Rate
2016	0-14	43	11.72	+	+	+	+
	15-24	4589	1740.07	1338	1009.19	3251	2479.0
	25-34	3071	803.82	1669	848.88	1401	755.5
	35-44	1143	371.73	779	496.05	363	241.3
	45+	555	70.72	+	+	+	+
	Missing	0	0.00	0	0.00	0	0.0
	All Ages	9401	446.58	4249	404.08	5150	488.8
2017	0-14	52	13.90	10	+	42	22.9
	15-24	4751	1773.24	1445	1073.71	3304	2477.7
	25-34	3272	811.76	1818	875.90	1453	743.2
	35-44	1144	359.92	793	487.71	351	226.1
	45+	575	72.72	482	126.61	93	22.7
	Missing	2	+	0	0.00	2	+
	All Ages	9796	454.85	4548	422.52	5245	486.9
2018	0-14	45	11.88	13	+	32	17.3
	15-24	4703	1748.96	1446	1072.72	3254	2426.4
	25-34	3628	875.64	2170	1017.17	1455	723.9
	35-44	1390	420.65	986	581.58	402	249.8
	45+	710	89.02	605	157.51	104	25.2
	Missing	1	+	1	+	0	0.0
	All Ages	10477	478.36	5221	476.69	5247	479.2
2019	0-14	40	10.5	+	+	+	+
	15-24	5068	1871.2	1534	1129.7	3534	2616.8
	25-34	3941	927.6	2257	1033.0	1684	816.1
	35-44	1430	416.0	988	558.6	442	264.8
	45+	874	108.7	+	+	+	+
	Missing	157	+	59	+	98	+
	All Ages	11547	518.7	5553	498.5	5957	535.5
2020	0-14	33	8.6	+	+	+	+
	15-24	3663	1341.5	1048	765.0	2615	1922.0
	25-34	2964	683.9	1626	730.3	1338	634.8
	35-44	1034	290.0	728	396.2	306	177.1
	45+	564	69.4	+	+	+	+
	Missing	1	+	0	+	1	+
	All Ages	8290	366.7	3855	340.7	4404	390.0

+Data has been suppressed where counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Additionally, incidence rates calculated based off counts less than seventeen (17) are suppressed due to statistical instability.

Note: Due to small number standards, gender data is only stratified by people who identify as male or female. People who identify as transgender, nonbinary, or other gender identity are included within the annual total case count. For this reason, total annual case counts may appear higher than the sum of individual cells.

Table 3. Gonorrhea Cases and Incidence Rates by Gender and Age Group, 2011-2020

	Age Group	Total		Males		Females	
		Cases	Rate	Cases	Rate	Cases	Rate
2011	0-14	+	+	0	0.0	+	+
	15-24	474	196.4	232	189.1	242	204.0
	25-34	485	154.2	383	239.0	102	66.1
	35-44	258	86.8	225	148.2	33	22.7
	45+	+	+	148	41.5	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	1380	71.0	988	102.1	392	40.2
2012	0-14	+	+	0	0.0	+	+
	15-24	483	200.9	292	239.3	191	161.4
	25-34	538	172.5	450	283.0	88	57.5
	35-44	318	106.8	284	186.7	34	23.3
	45+	+	+	178	48.8	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	1531	78.2	1204	123.4	327	33.3
2013	0-14	+	+	0	0.0	+	+
	15-24	552	227.3	315	256.2	237	197.6
	25-34	645	203.4	532	328.2	113	72.9
	35-44	354	118.5	312	204.6	42	28.7
	45+	+	+	204	54.9	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	1770	89.3	1363	137.9	407	41.0
2014	0-14	12	+	0	0.0	12	+
	15-24	734	296.1	420	335.2	314	256.2
	25-34	856	258.4	669	394.6	187	115.7
	35-44	386	128.7	333	217.6	53	36.1
	45+	242	30.9	219	58.1	23	5.7
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	2230	110.5	1641	163.0	589	58.3
2015	0-14	19	5.3	+	+	+	+
	15-24	881	348.2	471	369.1	410	326.9
	25-34	1150	335.5	901	512.3	249	149.1
	35-44	541	179.1	459	297.6	82	55.5
	45+	329	41.4	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	2920	142.2	2132	208.0	788	76.7

+Data has been suppressed where counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Additionally, incidence rates calculated based off counts less than seventeen (17) are suppressed due to statistical instability.

Continued Table 3. Gonorrhea

	Age Group	Total		Males		Females	
		Cases	Rate	Cases	Rate	Cases	Rate
2016	0-14	+	+	+	+	+	+
	15-24	952	361.0	541	408.1	411	313.4
	25-34	1269	332.2	1019	518.3	250	134.8
	35-44	688	223.8	592	377.0	96	63.8
	45+	+	+	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	3346	158.9	2547	242.2	799	75.8
2017	0-14	17	4.5	+	+	+	+
	15-24	1129	421.4	656	487.4	472	354.0
	25-34	1575	390.7	1272	612.8	302	154.5
	35-44	885	278.4	763	469.3	122	78.6
	45+	572	72.3	+	+	+	+
	Missing	1	+	1	+	0	0.0
	All Ages	4179	194.0	3205	297.8	972	90.2
2018	0-14	15	+	+	+	+	+
	15-24	1034	384.5	610	452.5	422	314.7
	25-34	1734	418.5	1422	666.5	311	154.7
	35-44	1009	305.3	836	493.1	172	106.9
	45+	642	80.5	+	+	+	+
	Missing	1	+	0	0.0	1	+
	All Ages	4435	202.5	3453	315.3	978	89.3
2019	0-14	13	+	+	+	+	+
	15-24	1104	407.6	626	461.0	477	353.2
	25-34	1952	459.5	1588	726.8	362	175.4
	35-44	1001	291.2	834	471.5	166	99.5
	45+	635	78.9	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	4705	211.3	3597	322.9	1103	99.2
2020	0-14	16	+	+	+	+	+
	15-24	1030	377.2	528	385.4	500	367.5
	25-34	1757	405.4	1346	604.6	402	190.7
	35-44	967	271.2	756	411.4	208	120.4
	45+	507	62.4	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	4277	189.2	3070	271.3	1190	105.4

+Data has been suppressed where counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Additionally, incidence rates calculated based off counts less than seventeen (17) are suppressed due to statistical instability.

Table 4. P&S Syphilis Cases and Incidence Rates by Gender and Age Group, 2011-2020

Age Group	Total		Males		Females		
	Cases	Rate	Cases	Rate	Cases	Rate	
2011	0-14	0	0.0	0	0.0	0	0.0
	15-24	14	+	14	+	0	0.0
	25-34	70	22.2	+	+	+	+
	35-44	85	28.6	+	+	+	+
	45+	68	9.1	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	237	12.2	+	+	+	+
2012	0-14	0	0.0	0	0.0	0	0.0
	15-24	23	9.6	+	+	+	+
	25-34	69	22.1	+	+	+	+
	35-44	74	24.9	74	48.7	0	0.0
	45+	46	6.1	46	12.6	0	0.0
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	212	10.8	+	+	+	+
2013	0-14	0	0.0	0	0.0	0	0.0
	15-24	23	9.5	+	+	+	+
	25-34	54	17.0	54	33.3	0	0.0
	35-44	50	16.7	+	+	+	+
	45+	50	6.5	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	177	8.9	+	+	+	+
2014	0-14	0	0.0	0	0.0	0	0.0
	15-24	38	15.3	+	+	+	+
	25-34	53	16.0	+	+	+	+
	35-44	44	14.7	+	+	+	+
	45+	43	5.5	43	11.4	0	0.0
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	178	8.8	168	16.7	10	+
2015	0-14	0	0.0	0	0.0	0	0.0
	15-24	37	14.6	+	+	+	+
	25-34	106	30.9	106	60.3	0	0.0
	35-44	63	20.9	+	+	+	+
	45+	45	5.7	45	11.8	0	0.0
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	251	12.2	+	+	+	+

+Data has been suppressed where counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Additionally, incidence rates calculated based off counts less than seventeen (17) are suppressed due to statistical instability.

Continued Table 4. P&S Syphilis

	Age Group	Total		Males		Females	
		Cases	Rate	Cases	Rate	Cases	Rate
2016	0-14	0	0.0	0	0.0	0	0.0
	15-24	30	11.4	+	+	+	+
	25-34	102	26.7	+	+	+	+
	35-44	84	27.3	+	+	+	+
	45+	79	10.1	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	295	14.0	+	+	+	+
2017	0-14	0	0.0	0	0.0	0	0.0
	15-24	38	14.2	+	+	0	0.0
	25-34	125	31.0	+	+	+	+
	35-44	90	28.3	+	+	+	+
	45+	69	8.7	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	322	15.0	+	+	+	+
2018	0-14	0	0.0	0	0.0	0	0.0
	15-24	61	22.7	51	37.8	10	+
	25-34	154	37.2	144	67.5	10	+
	35-44	101	30.6	+	+	+	+
	45+	82	10.3	80	20.8	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	398	18.2	372	34.0	25	2.3
2019	0-14	0	0.0	0	0.0	0	0.0
	15-24	40	14.8	+	+	+	+
	25-34	130	30.6	+	+	+	+
	35-44	90	26.2	+	+	+	+
	45+	87	10.8	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	347	15.6	326	29.3	21	1.9
2020	0-14	0	0.0	0	0.0	0	0.0
	15-24	39	14.3	+	+	+	+
	25-34	124	28.6	107	48.1	13	+
	35-44	93	26.1	+	+	+	+
	45+	79	9.7	+	+	+	+
	Missing	0	0.0	0	0.0	0	0.0
	All Ages	335	14.8	292	25.8	38	3.4

+Data has been suppressed where counts are less than ten (10) or could be used to deduce other counts that are less than ten (10). Additionally, incidence rates calculated based off counts less than seventeen (17) are suppressed due to statistical instability.