

Sexually Transmitted Infections in Colorado



Colorado Department of Public Health and Environment

2012 Annual Report

Colorado 2012 Sexually Transmitted Infection Morbidity

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Executive Summary

The 2012 Sexually Transmitted Infection Surveillance Report presents statistics and trends for reportable sexually transmitted infections (STIs) in Colorado. These include chlamydia, gonorrhea and syphilis. STIs are the most commonly reported diseases in Colorado, and are among the world's most common diseases, with an annual incidence exceeded only by diarrheal diseases, malaria, and lower respiratory infections. In 2012, 24,855 persons in Colorado were reported as having chlamydia, gonorrhea or early syphilis. This report describes trends in reportable STIs in Colorado by person, place and time.

STI surveillance data are used to detect outbreaks, prioritize resources, develop and target interventions, and evaluate the effectiveness of interventions. Among the reasons for preventing and controlling STIs include high rates of complications and adverse health outcomes, STIs facilitate the transmission of HIV and STIs are closely related to other co-morbidities such as substance abuse and mental illness.

Data Sources, Methods and Limitations

Under Colorado law, health care providers and laboratories must report all diagnosed cases of chlamydia and gonorrhea to the Colorado Department of Public Health and Environment (CDPHE) within seven days and all syphilis cases within 24 hours. These case reports are entered into the statewide STI reporting database. Case reports entered into this database are the primary data source for diagnosed cases of STIs in Colorado. Chlamydia, gonorrhea and syphilis cases most often require laboratory confirmation; all laboratories report and all major laboratories report STIs electronically via secure data networks.

Attributable to a change in strategy for obtaining demographic data in 2011, the unknown race/ethnicity category decreased from 55.7 percent in 2010 to 36.6 percent in 2011 and further decreased to 28.1 percent in 2012 for chlamydia cases. As for gonorrhea, the unknown race/ethnicity category decreased from 37.7 percent in 2010 to 18.2 percent in 2011 and also continued to decrease in 2012 to 13.9 percent. Due to this change, race/ethnicity will be presented for these diseases.

Beginning in January 2009, Colorado began using a new STI reporting system. This system allows for electronic disease reporting and helps to reduce the reporting delays of the former paper-based case reporting processes. This has led to an improvement in the speed of partner management and treatment activities. Case information is updated as provider reports are received and interviews with patients are completed. Additionally, STI related reports are now geocoded, providing assurance that cases are attributed to the right jurisdiction for official reporting purposes and allowing for more accurate calculation of incidence rates at a geographic level.

Crude incidence rates in this report are calculated based on cases diagnosed in the calendar year per 100,000 persons. The 2012 disease incidence rates for all Colorado counties are calculated by dividing the number of cases diagnosed for that county in 2012 by the estimated 2012 census population for each county and multiplying by 100,000.

Rates based on a small number of cases are often statistically unreliable, especially for counties with small populations or where rates are calculated for age, gender or race with small cell sizes. Crude age and gender-specific incidence rates are used for this report. The counts presented are summations of all valid data reported in the 2012 reporting year.

Guidelines to Prevent Misuse of Data

The following guidelines are provided to help prevent data misuse and misunderstanding and should always be considered when reviewing data from any source.

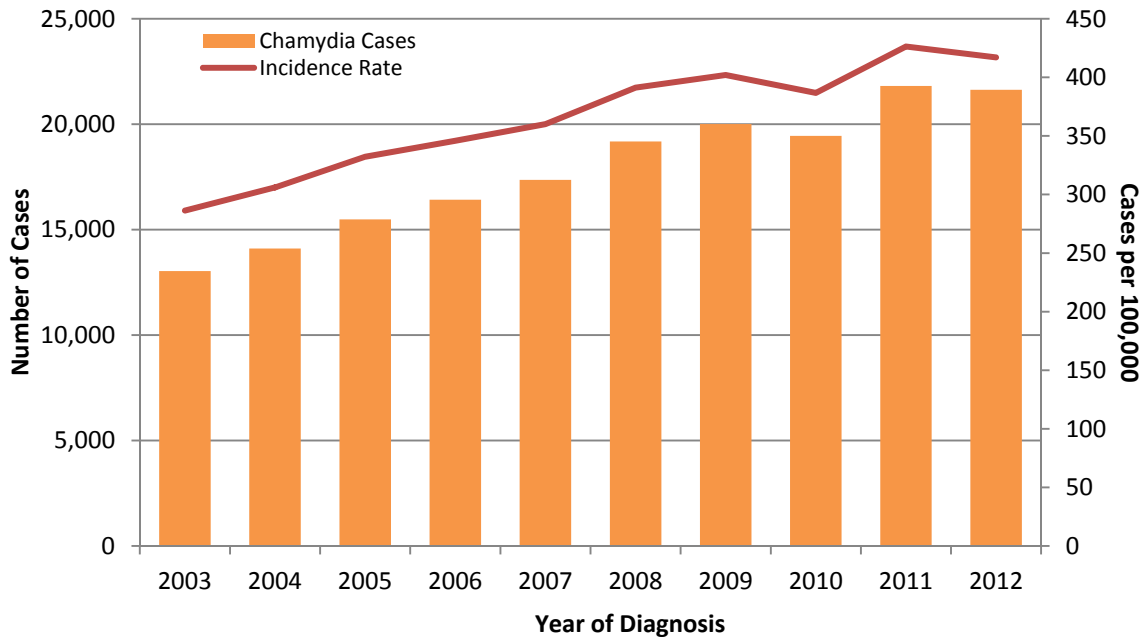
1. Data in this report are primarily reported for new cases of STIs diagnosed in 2012. They are not for unique persons diagnosed with disease, e.g. a person may have more than one infection in a single year.
2. Data in this report are based on cases reported to the STI/HIV Surveillance Program, Disease Control and Environmental Epidemiology Division, CDPHE. These data represent infections among persons seeking and receiving care for STIs.
3. Small changes in numbers from year to year can appear dramatic if the actual number of cases is small. For example, if two cases of gonorrhea are counted in a county in one year and three cases are counted the next year, this is an increase of 50 percent. While this may sound significant, a change of one case does not represent a meaningful increase in the burden of disease. Although disease rates were calculated for counties reporting fewer than five cases, rates based on low case counts are considered statistically unreliable. Caution is recommended in interpreting trends or comparing across counties.
4. Factors that impact the completeness and accuracy of STI data include:
 - Level of STI screening by health care providers
 - Individual test-seeking behavior
 - Sensitivity of diagnostic tests
 - Compliance with case reporting
 - Completeness of case reporting
 - Timeliness of case reporting
5. Increases and decreases in STI rates can be due to actual changes in disease occurrence and/or changes in one or more of the above factors.
6. CDPHE does not maintain statistics for other, non-reportable STIs, e.g. herpes, HPV/genital warts.

Anyone with questions about how these data should be interpreted is encouraged to contact the STI/HIV Surveillance Program at (303) 692-2700.

Chlamydia Infections

Chlamydia remains the most commonly reported STI in Colorado. In 2012, there were 21,631 cases diagnosed for a statewide crude incidence rate of 416.98 per 100,000 persons. Figure 1 shows annual rates of chlamydia in Colorado from 2003 to 2012. Cases and rates have increased steadily from 2003 through 2012.

Figure 1: Chlamydia Cases and Incidence Rates, Colorado, 2003-2012

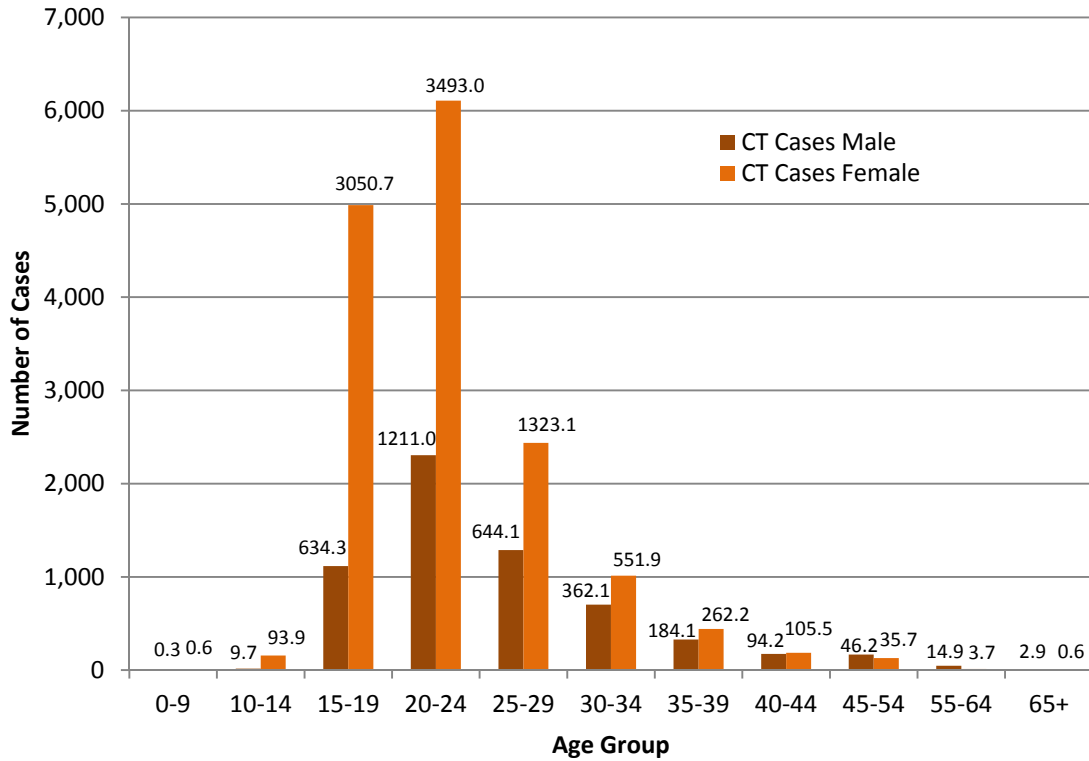


Case rates per 100,000 vary significantly by gender and age. The chlamydia incidence rate is more than two and a half times greater among females, 598.9 per 100,000, than males, 236.4 per 100,000 in 2012 (Tables 2 & 3).

Figure 2 shows age and gender case counts for chlamydia diagnosed in 2012. Females account for nearly three-quarters (71.5%) of the chlamydia cases. Among 20-24 year olds, the chlamydia rate for females, 3493.0 per 100,000, is nearly three times greater than the rate for males, 1211.0 per 100,000.

The marked difference in case rates between males and females is primarily an artifact of screening efforts which target females in reproductive health settings. To a lesser degree, this difference may also reflect the natural history of chlamydia infections. Males may be less susceptible to infection, are generally asymptomatic, and are less likely to access health services and receive routine screening. The result of these factors is the burden of chlamydia infections among males remains largely undiagnosed, untreated and unreported. Rates of reported chlamydia infections among women have been increasing annually since the late 1980s when public programs for screening and treatment of women were first established to prevent pelvic inflammatory disease (PID) and related complications.

Figure 2: Chlamydia Cases and Rates by Gender and Age Group, Colorado, 2012



*Rates per 100,000 population on the top of the bar.

Persons of color continue to be disproportionately affected by STIs. Non Hispanic Blacks represent less than four percent of Colorado’s population, but represent 10.1 percent of reported chlamydia cases in 2012. Figure 3 shows chlamydia case numbers by race/ethnicity for 2012. In 2012, chlamydia rates were 5.8 times higher for Non Hispanic Blacks compared to Whites, 1093.3 cases per 100,000 and 189.9 cases per 100,000, respectively. Compared to Hispanic of all races, the rate for Non Hispanic Black is 2.1 times higher. Due to a change in strategy for obtaining demographic data in 2011 the unknown race/ethnicity category decreased from 55.7 percent in 2010 to 36.6 percent in 2011 to 28.1 percent in 2012 for chlamydia cases.

Figure 3: Chlamydia Infections by Race/Ethnicity, Colorado 2012

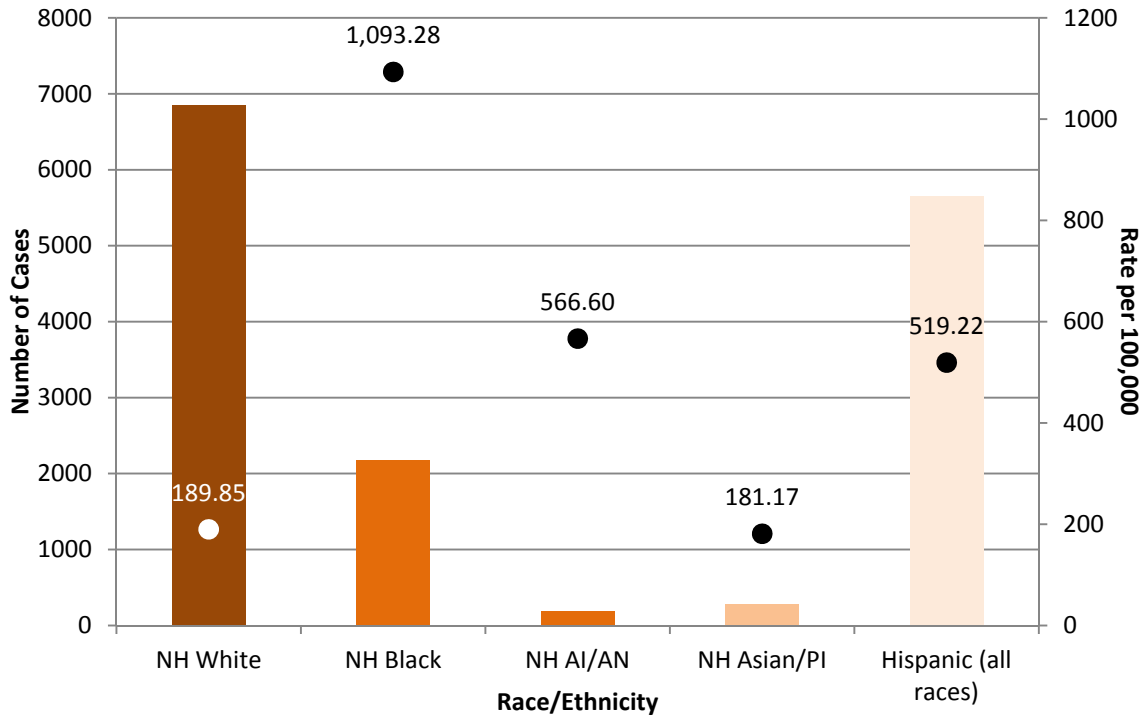


Figure 4 shows chlamydia infection rates by county for 2012. Denver, Arapahoe and Pueblo counties had the three highest rates of reported chlamydia infections and accounted for 44.5 percent of chlamydia diagnoses in 2012. Figure 5 shows the geographical distribution of chlamydia incidence rates for Colorado at the county level. As shown in both Figures 4 & 5 chlamydia infections are largely concentrated in Denver County. In 2012, only three rural counties had no reported chlamydia infections.

Figure 4: Chlamydia Incidence Rates by County, Colorado, 2012

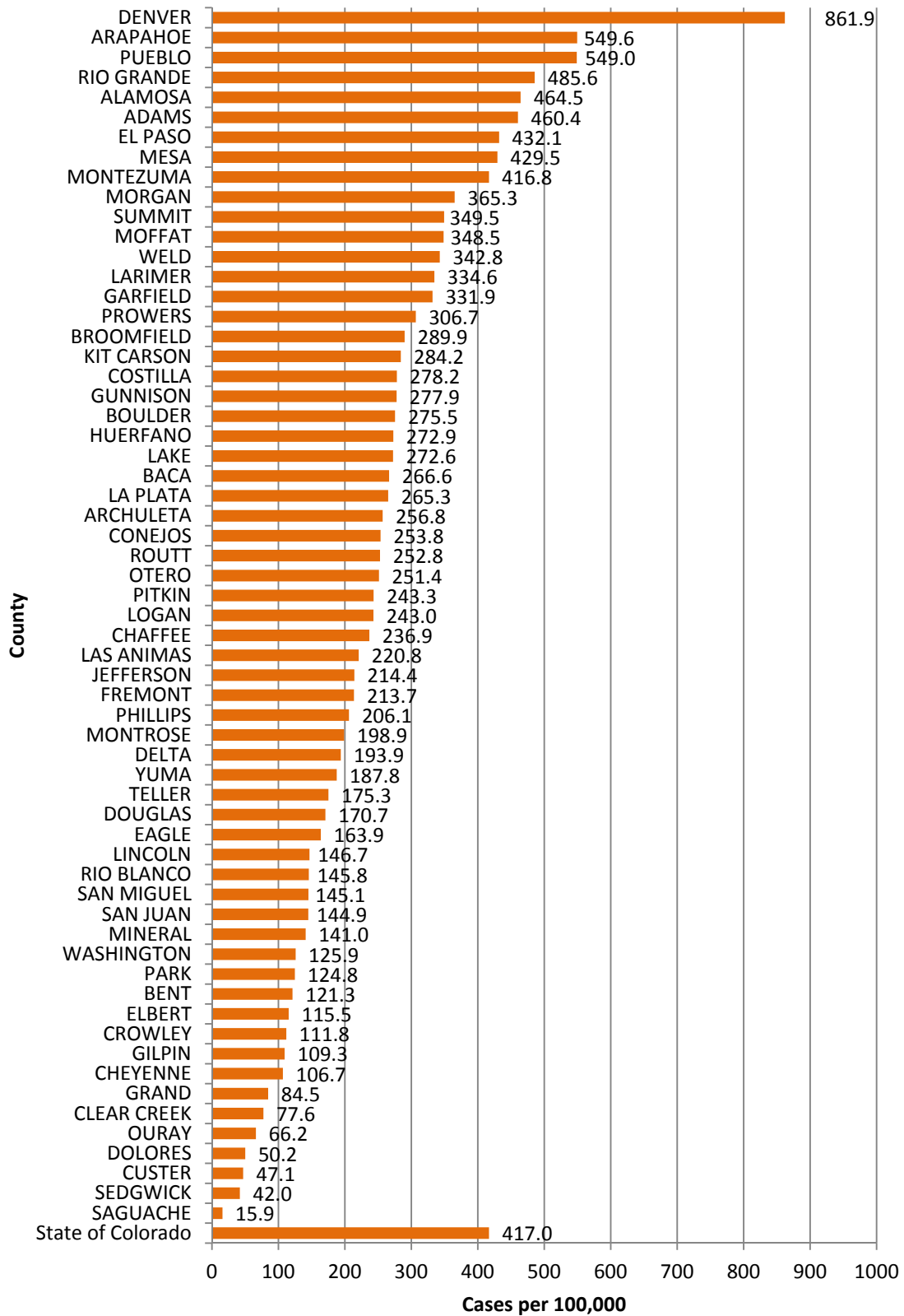
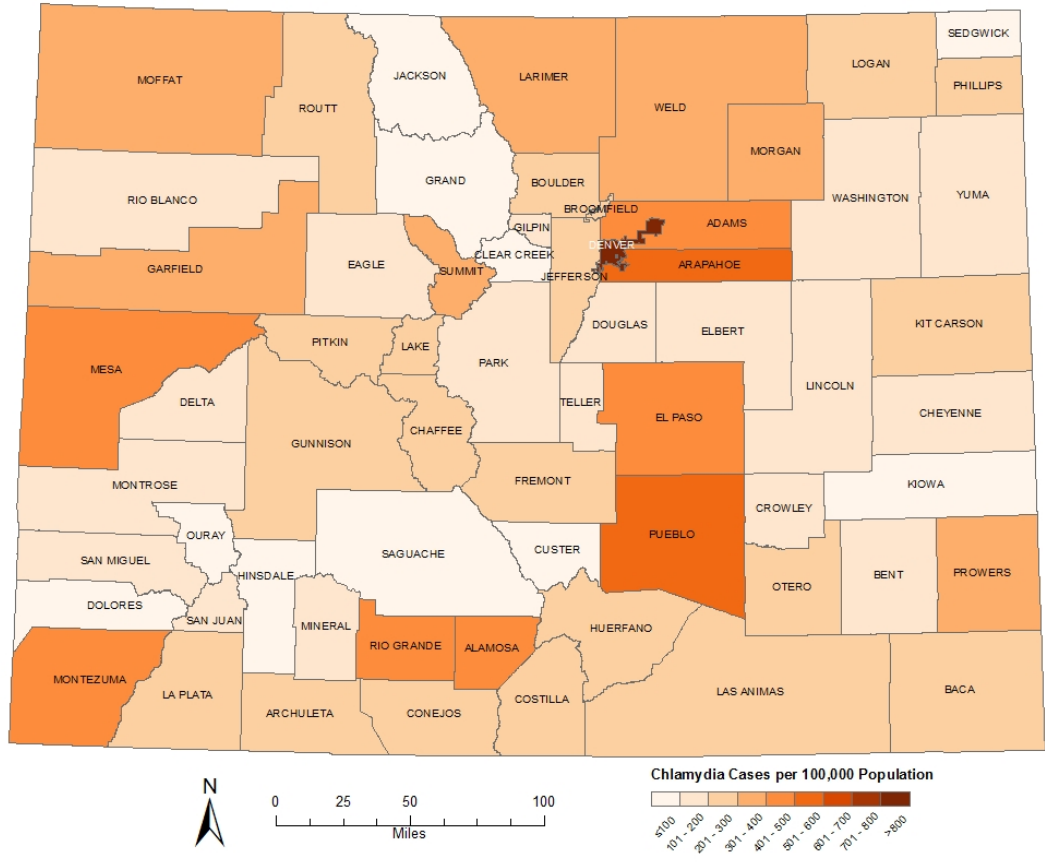


Figure 5: Chlamydia Incidence Rates by County, Colorado, 2012



Gonorrhea

Gonorrhea remains the second most commonly reported STI in Colorado with 2,822 cases reported in 2012, yielding a rate of 54.40 per 100,000 population. There was an increase in reported gonorrhea cases in 2012 compared to 2011 when 2,363 cases were reported for a rate of 46.18 per 100,000 population. According to the Centers for Disease Control (CDC), the US gonorrhea rate increased from 100.8 per 100,000 reported in 2010 to 104.2 per 100,000 in 2011.¹

Figure 6: Gonorrhea Cases and Incidence Rates, Colorado, 2003-2012

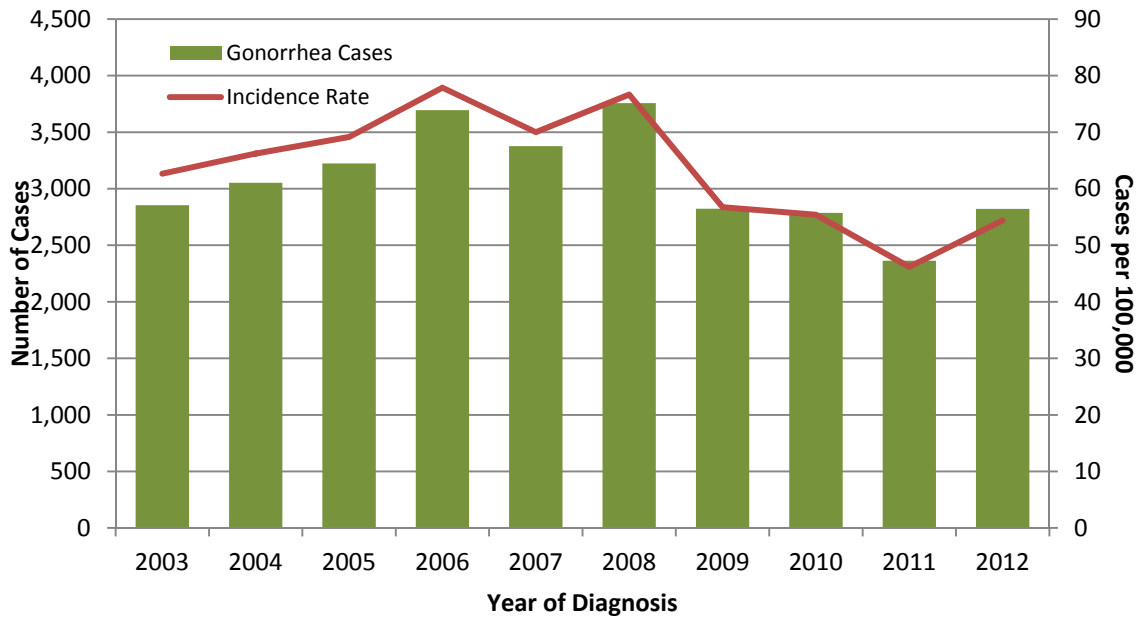
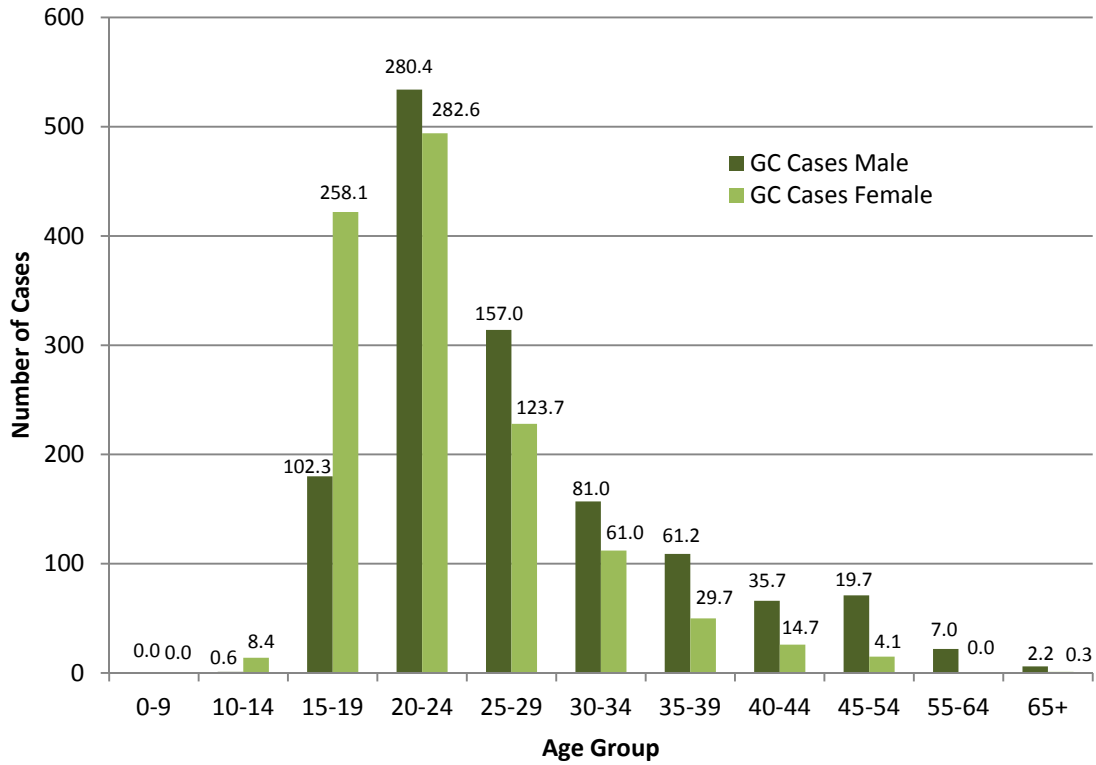


Figure 6 shows cases diagnosed each year and the incidence rate per 100,000 from 2003 to 2012. Over this ten year period, overall gonorrhea rates remained relatively consistent through 2008, with a noted decrease in 2009.

Figure 7 shows age and gender case counts for gonorrhea diagnosed in 2012. There is an even split of cases by gender with females accounting for 48.3 percent. Among 15-19 year olds, the gonorrhea rate for females, 258.1 per 100,000, is two and a half times greater than the rate for males, 102.3 per 100,000.

Figure 7: Gonorrhea Cases and Rates by Gender and Age Group, Colorado, 2012



*Rates per 100,000 population on the top of the bar.

Once again Blacks are disproportionately affected by gonorrhea infections. They represent less than four percent of Colorado’s population, but represent 27.3 percent of reported gonorrhea cases in 2012. Figure 8 shows gonorrhea case numbers by race/ethnicity for 2012. Racial disparities are seen between Blacks and other races. The gonorrhea rate for Blacks compared with Whites was 17.4 times higher. Compared to Hispanics of all races, the rate for Blacks is 5.7 times higher. Due to a change in strategy for obtaining demographic data in 2011 the unknown race/ethnicity category decreased from 37.7 percent in 2010 to 18.2 percent in 2011 to 13.9 percent in 2012 for gonorrhea cases.

Figure 8: Gonorrhea Infections by Race/Ethnicity, Colorado 2012

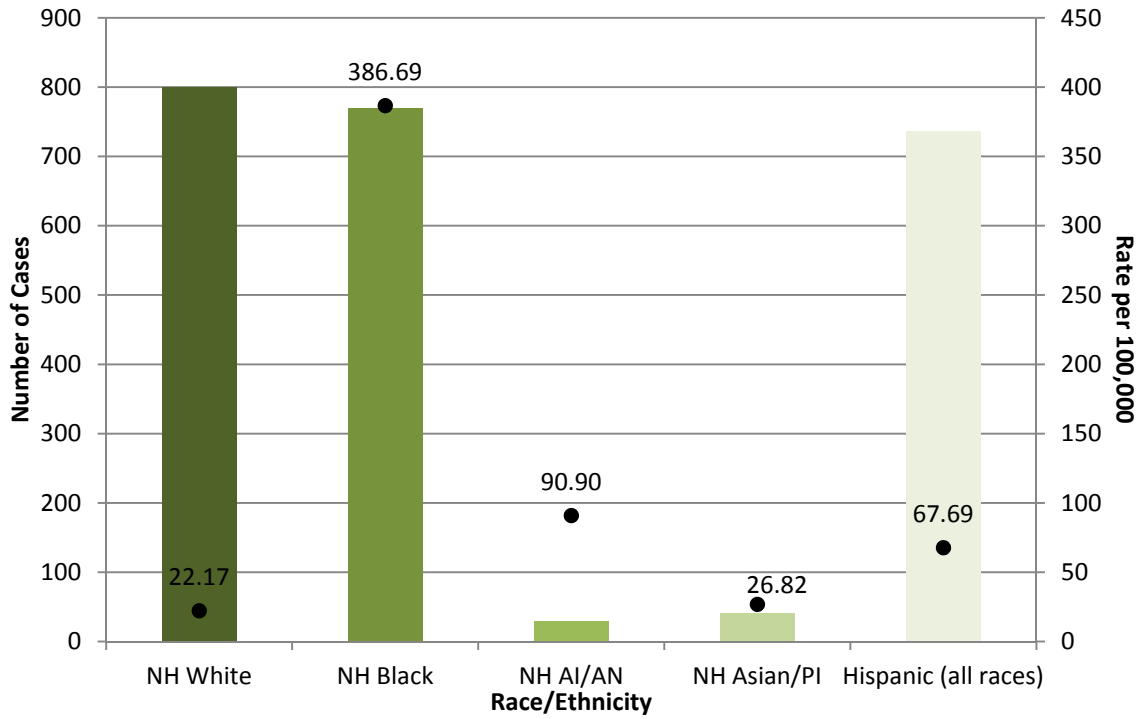


Figure 9 & 10 describes the geographical distribution of gonorrhea incidence rates for Colorado at the county level. The map shows gonorrhea infections are not as widespread as chlamydia. Twenty four rural counties did not report any gonorrhea cases in 2012, 73.0 percent were reported in just three counties: Denver, Arapahoe and El Paso, with Denver County accounting for 38.7 percent of reported cases.

Figure 9: Gonorrhoea Incidence Rates by County, Colorado, 2012

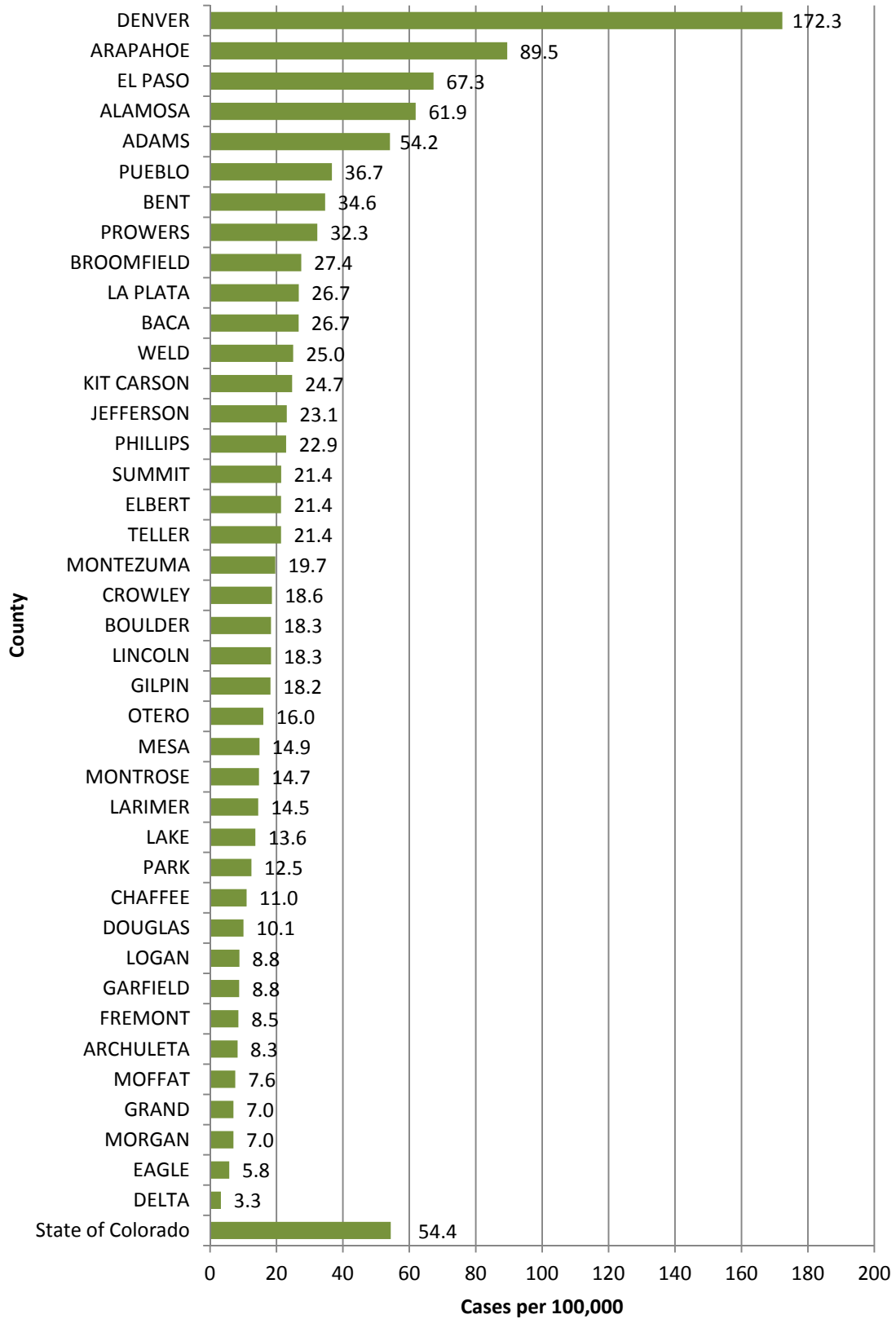
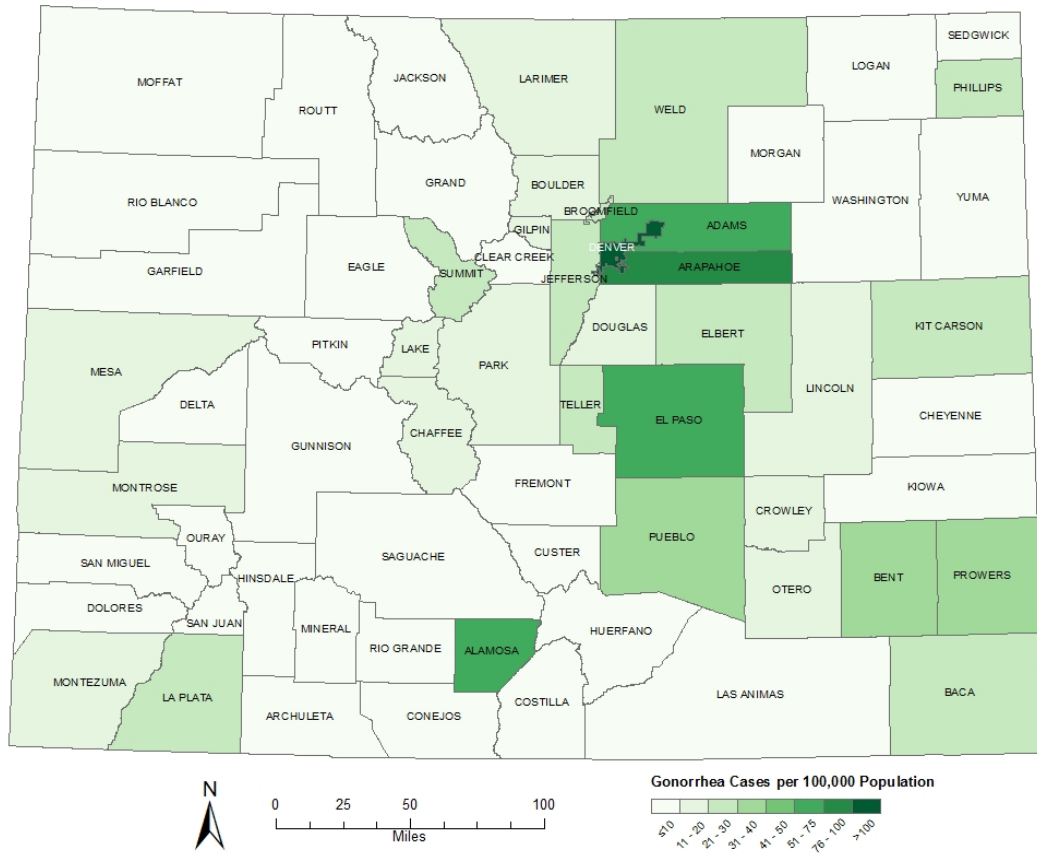


Figure 10: Gonorrhea Incidence Rates by County, Colorado, 2012



Primary and Secondary Syphilis

There were 208 cases of primary and secondary (P&S) syphilis diagnosed and reported in 2012. From 2003 to 2012, Colorado reported a 300 percent increase in P&S syphilis cases, as shown in Figure 11.

The syphilis epidemic is primarily occurring in non-Hispanic White males, representing 57.2 percent of reported cases. Additionally, 86.3 percent of cases were among men who have sex with men (MSM). In 2012, 59.3 percent of P&S syphilis diagnoses who reported MSM risk, were co-infected with HIV.

Figure 11: Primary & Secondary Syphilis Cases and Incidence Rates, Colorado, 2003-2012

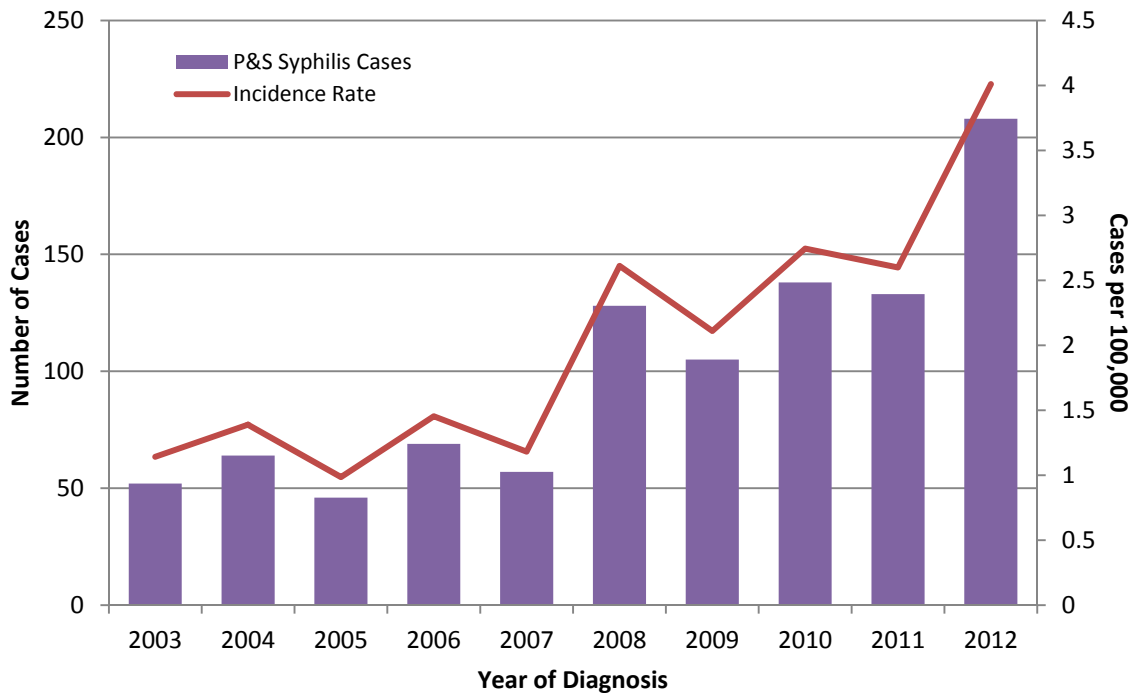
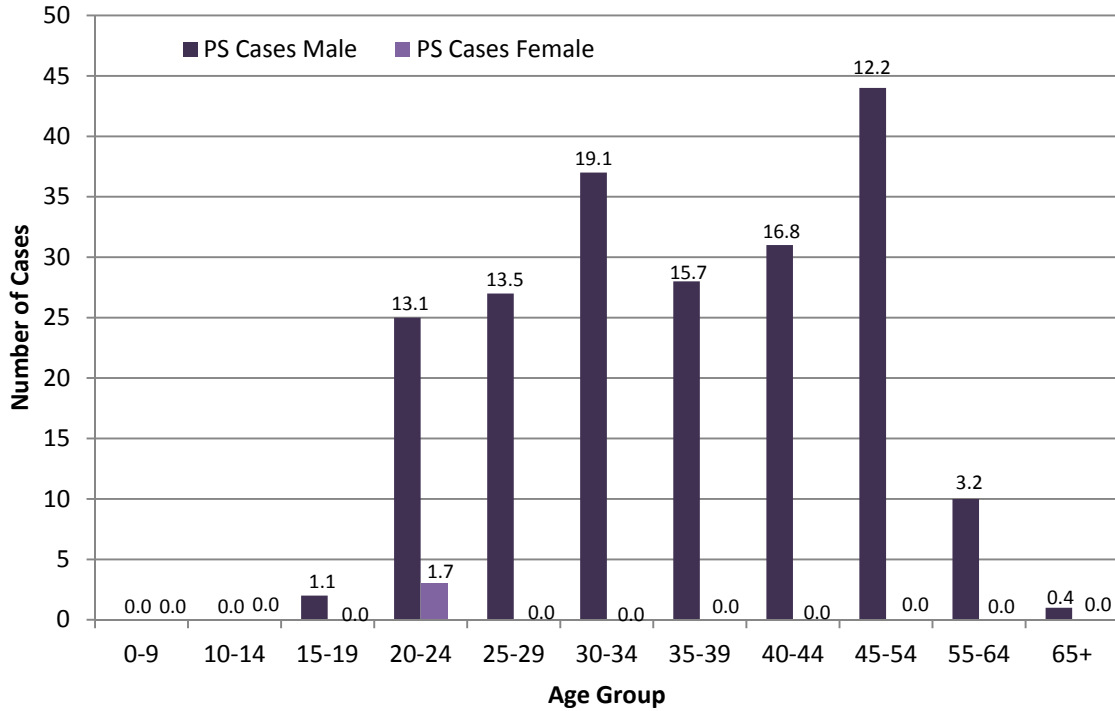


Figure 12 shows age and gender case counts for P&S syphilis diagnosed in 2012. The mean age at diagnosis is 36.7 with a range of 18 to 65 years of age. The highest rates were reported among 30-34 year old males whose infection rates of 19.1 cases per 100,000, is one and a half times the rate for 20-24 year old males, at 13.1 per 100,000. In 2012, 30.8 percent of the cases occurred among 25-34 year old males followed by 40-49 year olds accounting for 29.3 percent of cases.

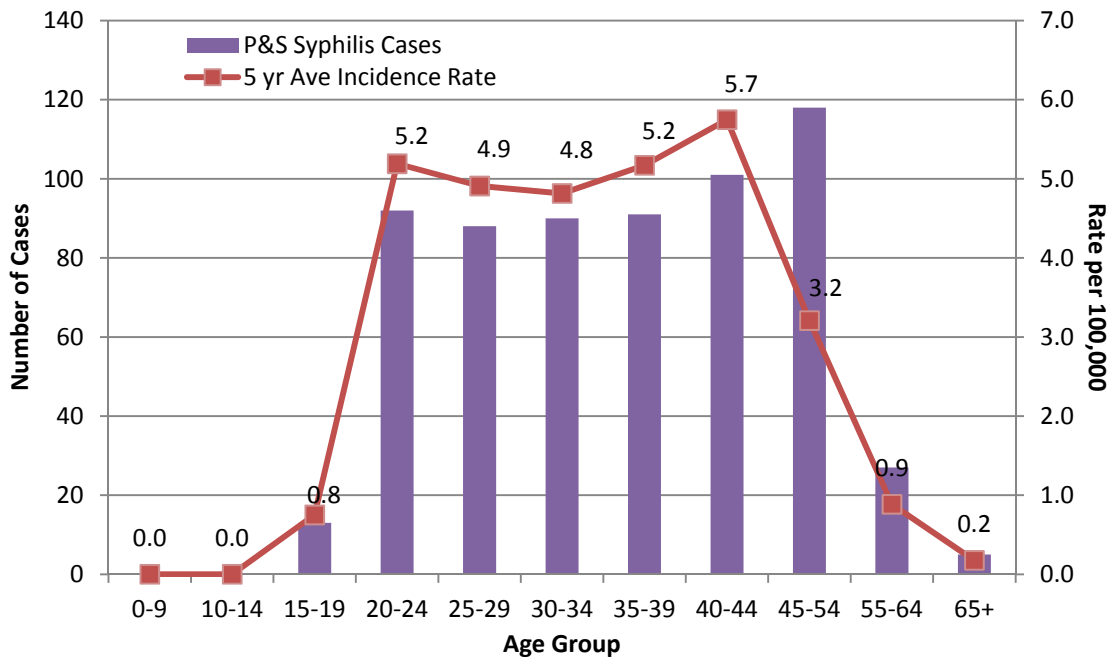
Figure 12: P&S Syphilis Cases and Rates by Gender and Age Group, Colorado, 2012



*Rates per 100,000 population on the top of the bar. Caution these rates use small numbers and thus are unstable

Figure 13 below depicts age group case counts and rates for P&S syphilis diagnosed in 2008-11. This five-year average rate helps to stabilize the rate and thus produces a more accurate representation of the disease.

Figure 13: P&S Syphilis 5-year Count and Incidence Rate by Age Group, Colorado, 2008-2012



*More stable than the 1-year incidence rate from Figure 12

Figure 14 shows that the highest rate of P&S syphilis is seen among Non-Hispanic American Indian/Alaskan Natives, 9.1 per 100,000 in 2012. However, this only includes a few cases with a small population. The next highest rate is among Non-Hispanic Blacks, 7.5 per 100,000. Although Non-Hispanic Whites account for the majority of the P&S syphilis cases, 57.7 percent, their infection rates per 100,000 are 2.3 times lower than Non-Hispanic Blacks, 3.3 per 100,000 and 7.5 per 100,000, in 2012.

Figure 14: P&S Syphilis Incidence Rates by Race/Ethnicity, Colorado, 2012

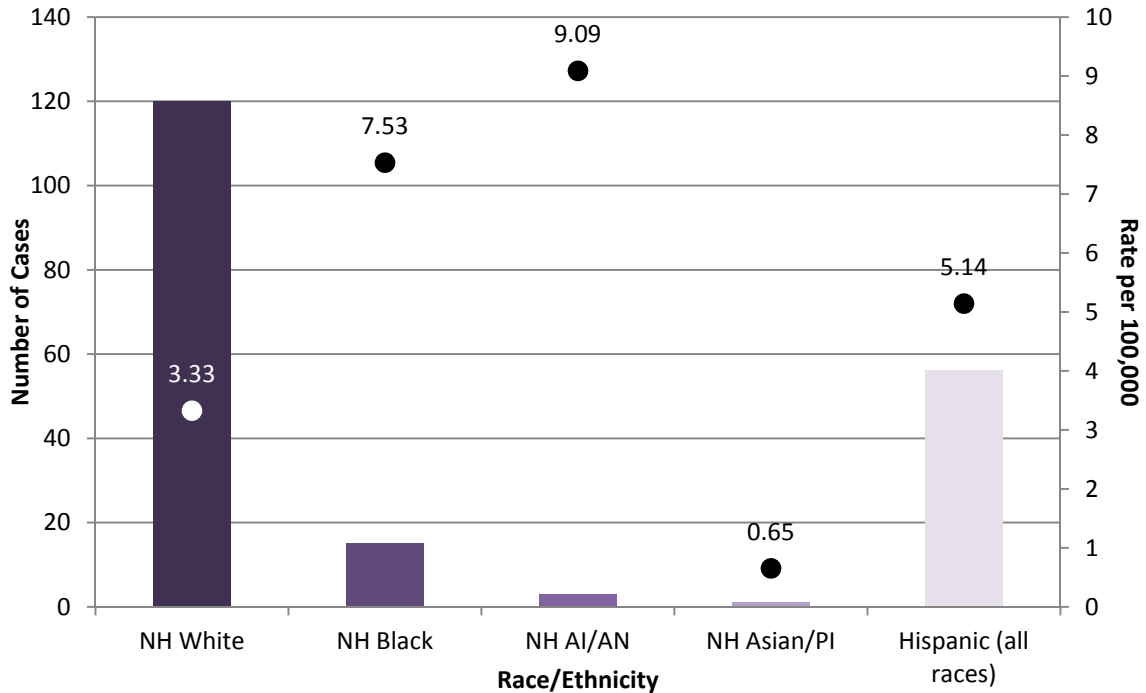


Figure 15 & 16 describes the geographical distribution of P&S syphilis incidence rates for Colorado at the county level. The map shows P&S syphilis infections have been diagnosed in 15 of 64 counties with Denver County reporting the highest proportion and rate of cases, 58.7 percent and 19.2 per 100,000 population in 2012. The next highest rate was Rio Grande County with a rate of 8.4; however this rate was produced from one case and is not reliable. The next three highest rates occurred in Alamosa, Adams and Montezuma Counties (Table1). Use caution when interpreting some of these rates as the county may have a small population and small case numbers.

Figure 15: P&S Syphilis Incidence Rates by County, Colorado, 2012

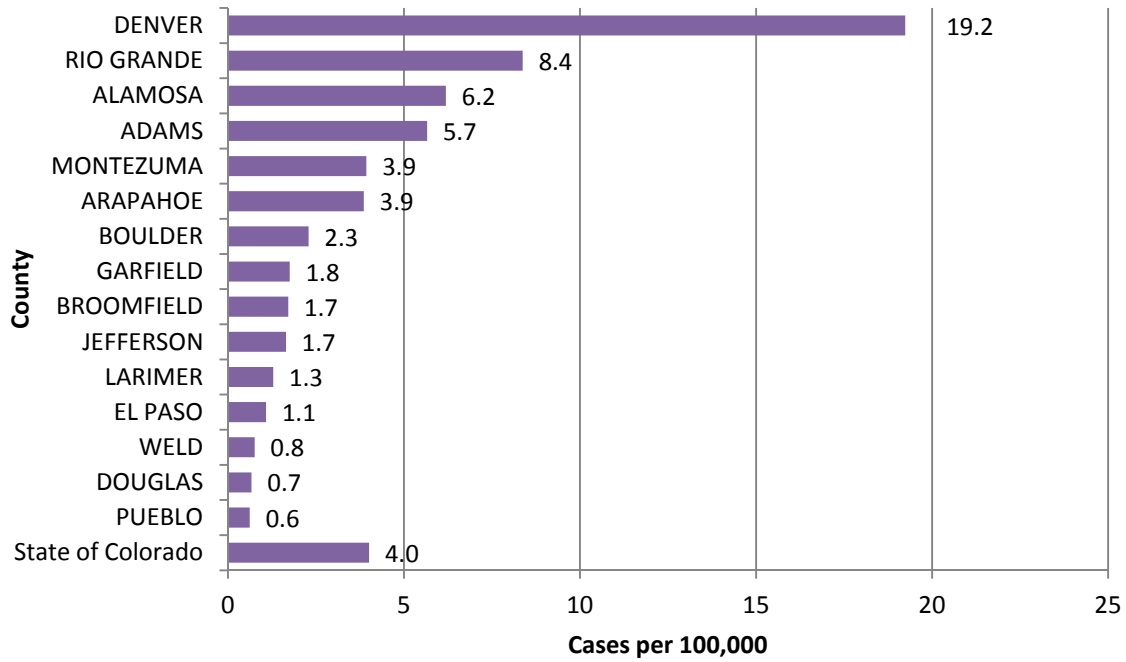


Figure 16: Primary & Secondary Syphilis Incidence Rate by County, Colorado, 2012

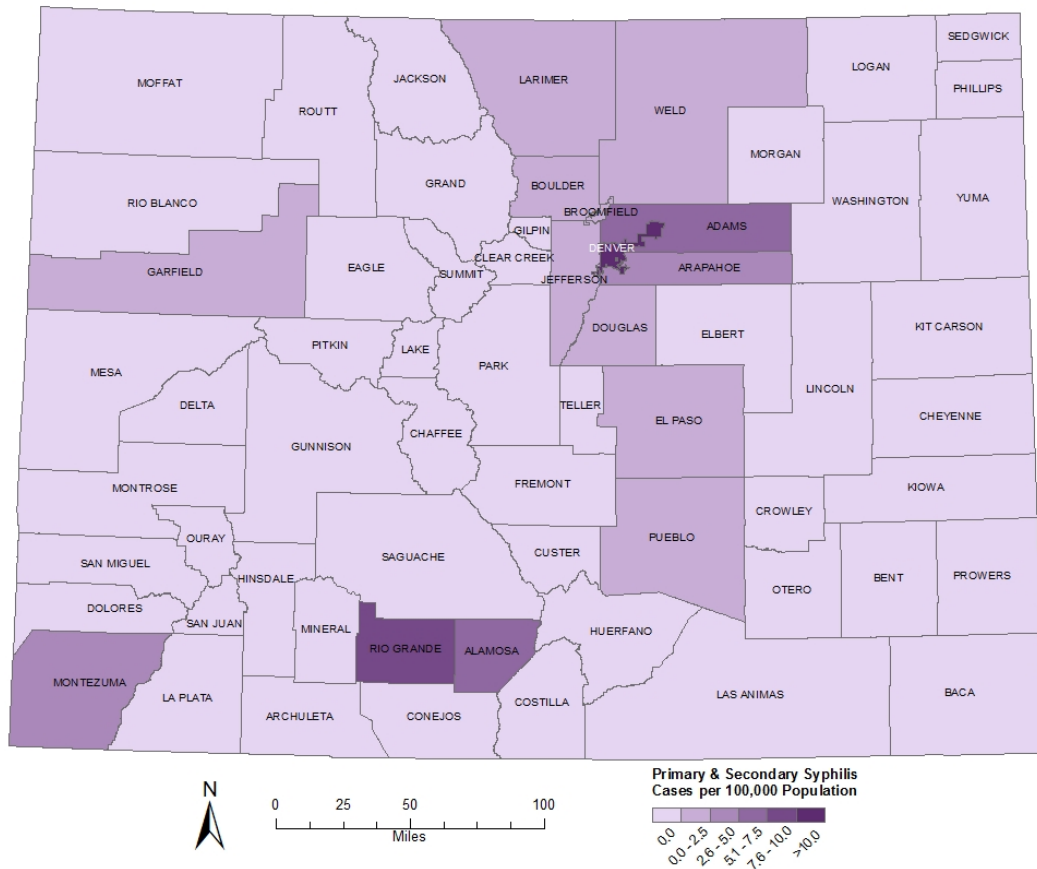
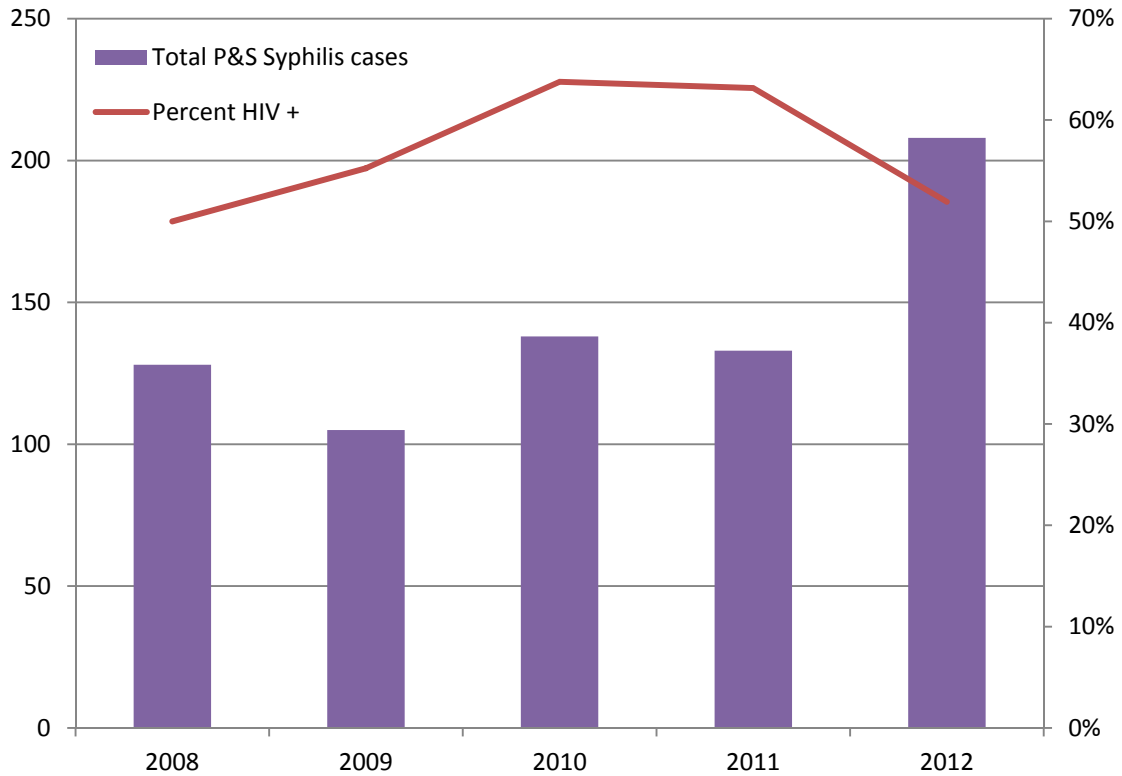


Figure 17 shows the rate of P&S syphilis and HIV co-infections for 2008-2012. The co-infection rate has ranged from 50 percent to 64 percent throughout this time period. The five-year average for P&S syphilis and HVI co-infections is 56 percent.

Figure 17: P&S Syphilis Cases and Percent HIV+ by Year of Diagnosis, Colorado, 2008-2012



Early Latent Syphilis

There were 194 cases of early latent (EL) syphilis diagnosed and reported in 2012. From 2003 to 2012, Colorado reported a 8 times increase in early latent syphilis cases, as shown in Figure 18.

The syphilis epidemic is primarily occurring in non-Hispanic White males, representing 48.5 percent of reported cases. Additionally, 87.5 percent of cases were among men who have sex with men (MSM). In 2012, 69.8 percent of early latent syphilis diagnoses who reported MSM risk, were co-infected with HIV.

Figure 18: Early Latent Syphilis Cases and Incidence Rates, Colorado, 2003-2012

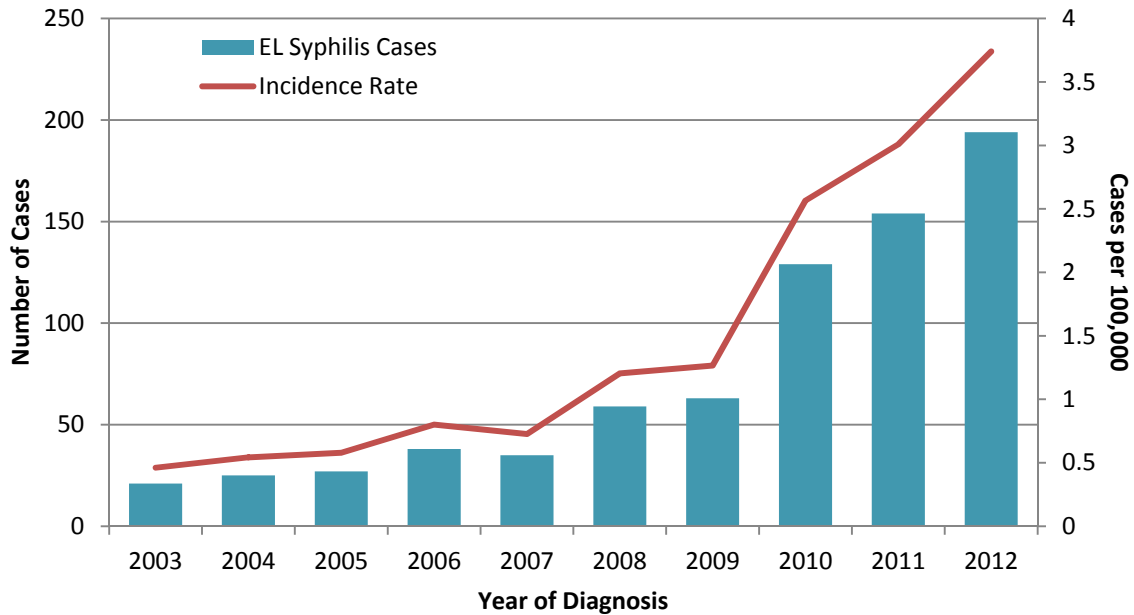
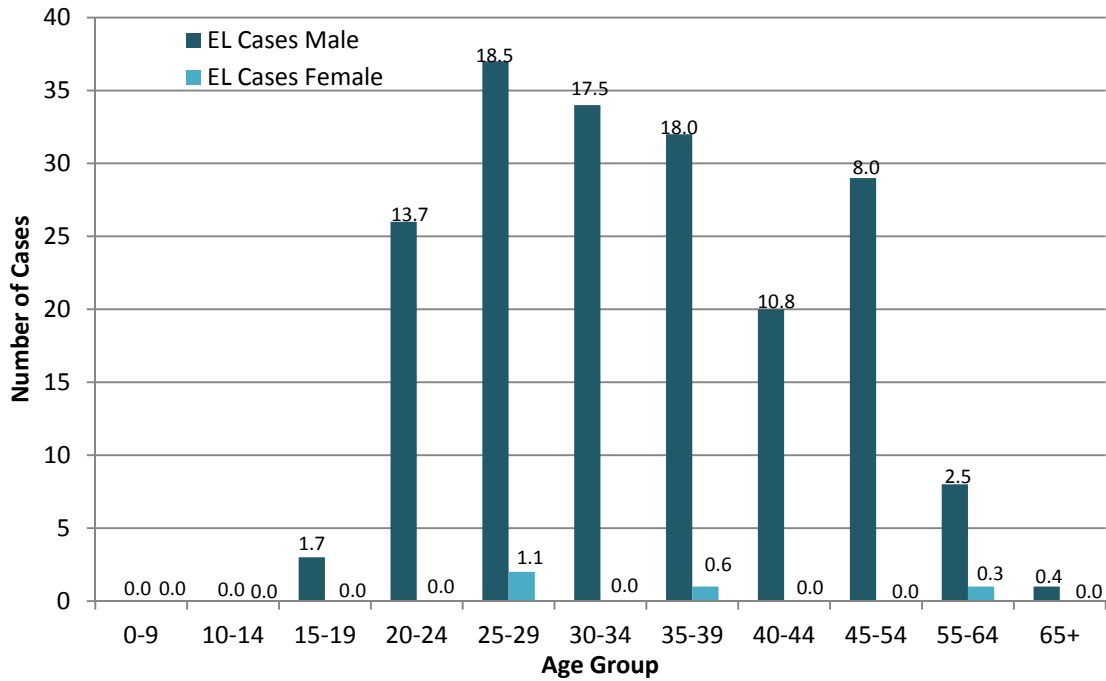


Figure 19 shows age and gender case counts for early latent syphilis diagnosed in 2012. The mean age at diagnosis is 35.2 with a range of 19 to 67 years of age. The highest rates were reported among 25-29 year old males whose infection rates of 18.5 cases per 100,000, is 1.4 times the rate for 20-24 year old males, at 13.7 per 100,000. In 2012, 36.6 percent of the cases occurred among 25-34 year old males followed by 35-44 year old males accounting for 26.8 percent of cases.

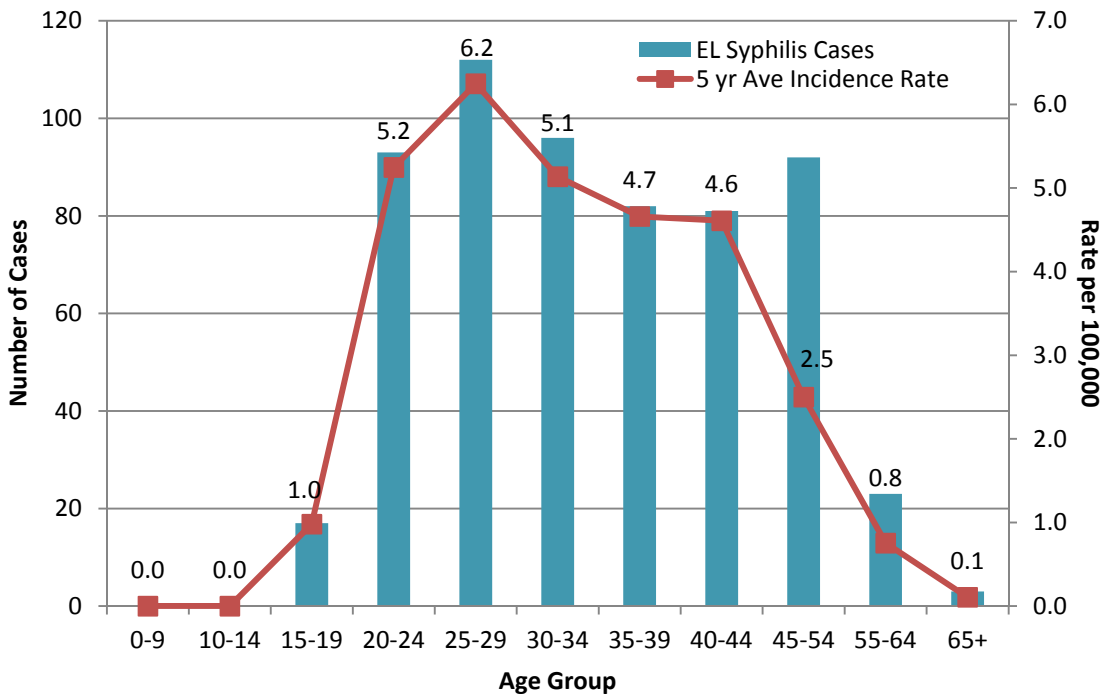
Figure 19: EL Syphilis Cases and Rates by Gender and Age Group, Colorado, 2012



*Rates per 100,000 population on the top of the bar. Caution these rates use small numbers and thus are unstable

Figure 20 below depicts age group case counts and rates for early latent syphilis diagnosed in 2008-11. This five-year average rate helps to stabilize the rate and thus produces a more accurate representation of the disease.

Figure 20: EL Syphilis 5-year Count and Incidence Rate by Age Group, Colorado, 2008-2012



*More stable than the 1-year incidence rate from figure 19

Figure 21 shows that the highest rate of early latent syphilis is seen among Non-Hispanic American Indian/Alaskan Natives, 21.2 per 100,000 in 2012. However, this only includes a few cases with a small population. The next highest rate is among Non-Hispanic Blacks, 10.0 per 100,000. Although Non-Hispanic Whites account for the majority of the early latent syphilis cases, 49.0 percent, their infection rates per 100,000 are 3.8 times lower than Non-Hispanic Blacks, 2.6 per 100,000 and 10.0 per 100,000, in 2012.

Figure 21: EL Syphilis Incidence Rates by Race/Ethnicity, Colorado, 2012

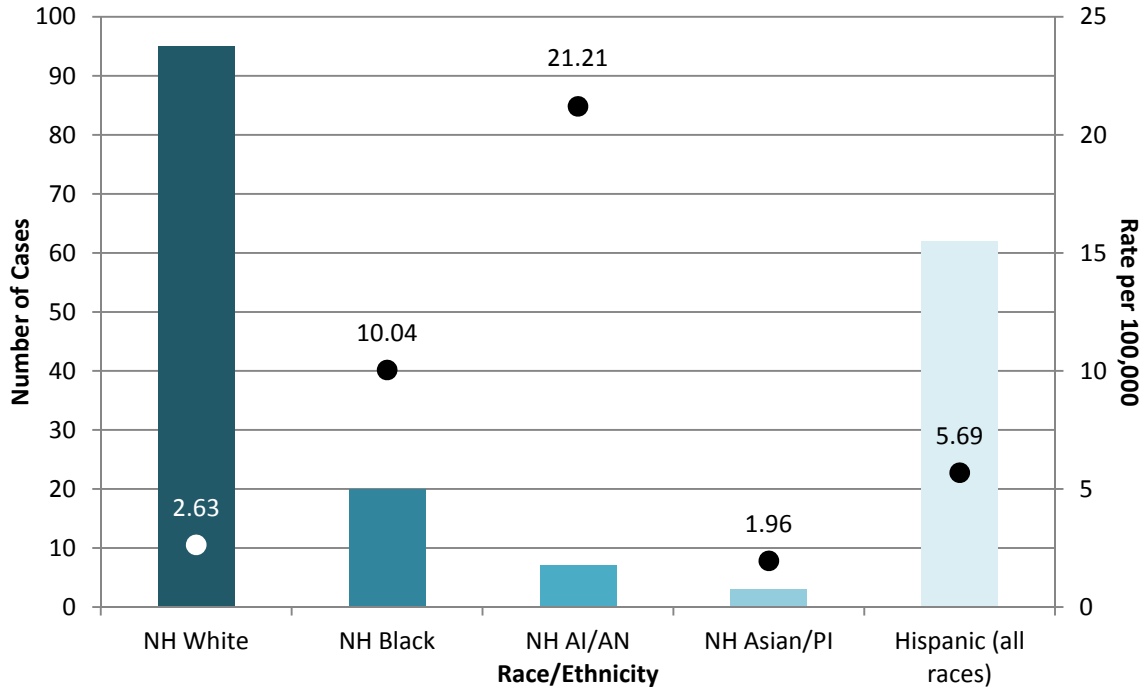


Figure 22 & 23 describes the geographical distribution of early latent syphilis incidence rates for Colorado at the county level. The map shows early latent syphilis infections have been diagnosed in 14 of 64 counties with Denver County reporting the highest proportion and rate of cases, 62.4 percent and 19.1 per 100,000 population in 2012. The next highest rate was Adams County with a rate of 4.8 followed by Montezuma, Summit and Arapahoe Counties (Table1). Use caution when interpreting some of these rates as the county may have a small population and small case numbers.

Figure 22: EL Syphilis Incidence Rates by County, Colorado, 2012

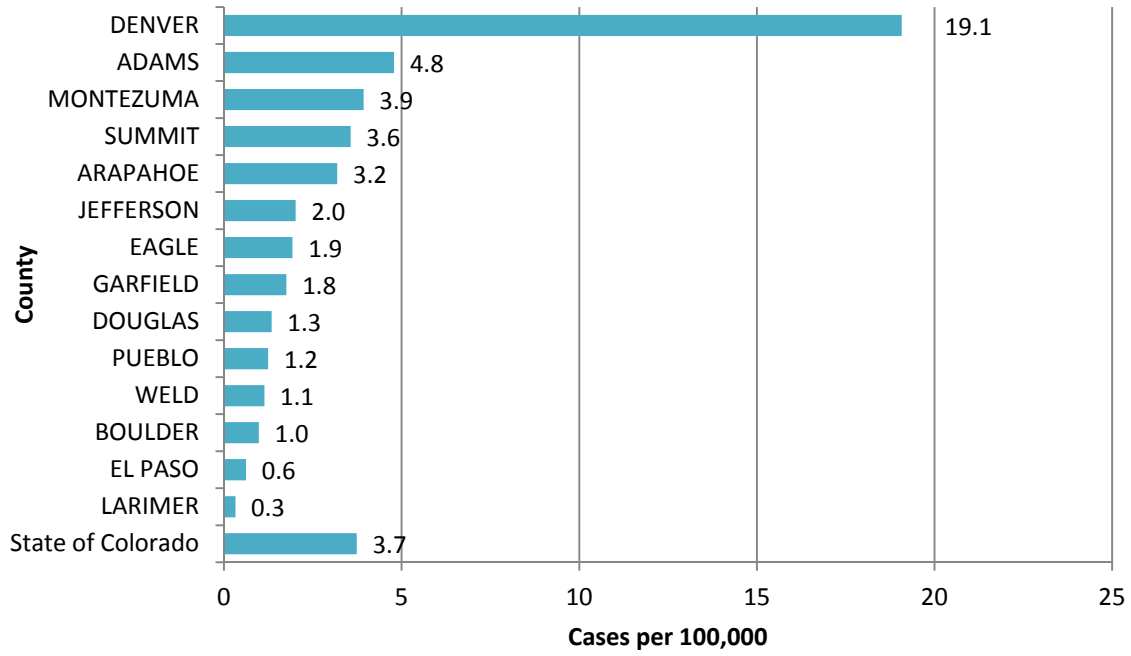


Figure 23: EL Syphilis Incidence Rate by County, Colorado, 2012

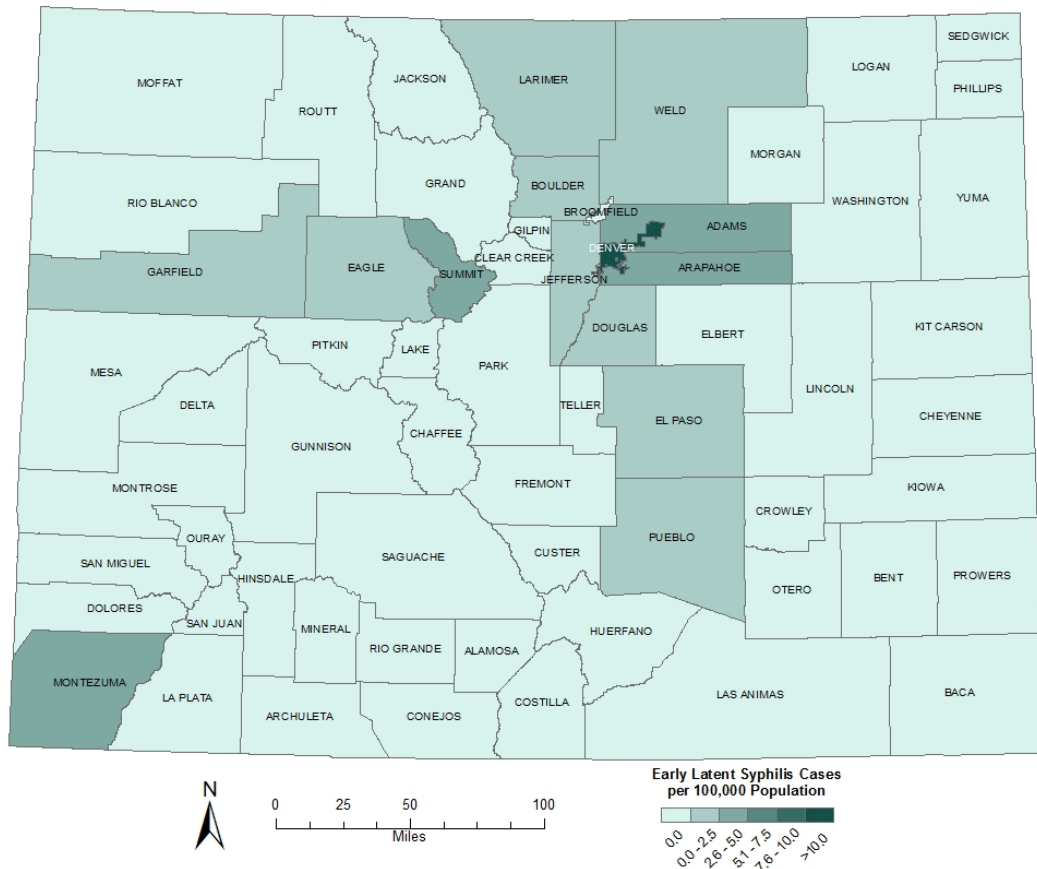


Figure 24 shows the rate of early latent syphilis and HIV co-infections for 2008-2012. The co-infection rate has ranged from 21 percent to 60 percent throughout this time period. The five-year average for early latent syphilis and HIV co-infections is 54 percent.

Figure 24: EL Syphilis Cases and Percent HIV+ by Year of Diagnosis, Colorado, 2008-2012

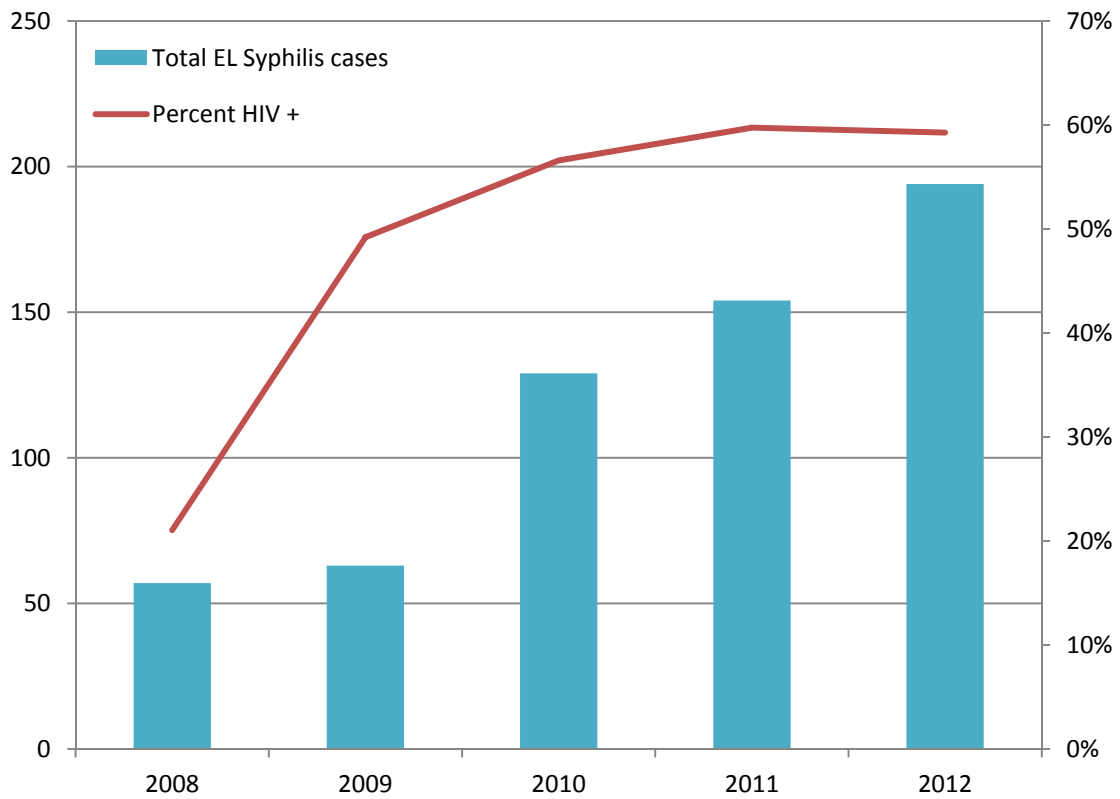


Table 1: Chlamydia, Gonorrhea and Early Syphilis Count and Incidence Rate with Ranking by County & Health Statistics Region (HSR), 2012

	2012 Population†	Chlamydia				Gonorrhea				Primary & Secondary Syphilis				Early Latent Syphilis			
		Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^
Region 1:	72,738	194	266.7	---	12	5	6.9	---	20	0	0.0	---	14	0	0.0	---	13
Logan	22,631	55	243.0	31	---	2	8.8	32	---	0	0.0	16	---	0	0.0	15	---
Morgan	28,472	104	365.3	10	---	2	7.0	37	---	0	0.0	16	---	0	0.0	15	---
Phillips	4,367	9	206.1	36	---	1	22.9	15	---	0	0.0	16	---	0	0.0	15	---
Sedgwick	2,383	1	42.0	60	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Washington	4,766	6	125.9	48	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Yuma	10,119	19	187.8	39	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Region 2:	310,487	1039	334.6	14	9	45	14.5	27	15	4	1.3	11	7	1	0.3	14	12
Larimer																	
Region 3:	298,215	509	170.7	41	19	30	10.1	31	16	2	0.7	14	11	4	1.3	9	6
Douglas																	
Region 4:	644,964	2787	432.1	7	5	434	67.3	3	3	7	1.1	12	8	4	0.6	13	11
El Paso																	
Region 5:	38,804	60	154.6	---	20	8	20.6	---	10	0	0.0	---	14	0	0.0	---	13
Cheyenne	1,874	2	106.7	54	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Elbert	23,383	27	115.5	51	---	5	21.4	16	---	0	0.0	16	---	0	0.0	15	---
Lincoln	8,094	23	284.2	18	---	2	24.7	13	---	0	0.0	16	---	0	0.0	15	---
Kit Carson	5,453	8	146.7	43	---	1	18.3	21	---	0	0.0	16	---	0	0.0	15	---
Region 6:	68,961	159	230.6	---	15	11	16.0	---	12	0	0.0	---	14	0	0.0	---	13
Baca	3,751	10	266.6	24	---	1	26.7	10	---	0	0.0	16	---	0	0.0	15	---
Bent	5,773	7	121.3	50	---	2	34.6	7	---	0	0.0	16	---	0	0.0	15	---
Crowley	5,365	6	111.8	52	---	1	18.6	20	---	0	0.0	16	---	0	0.0	15	---
Huerfano	6,596	18	272.9	22	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Kiowa	1,444	0	0.0	62	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Las Animas	14,945	33	220.8	33	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Otero	18,698	47	251.4	29	---	3	16.0	24	---	0	0.0	16	---	0	0.0	15	---
Prowers	12,389	38	306.7	16	---	4	32.3	8	---	0	0.0	16	---	0	0.0	15	---
Region 7:	160,852	883	549.0	3	3	59	36.7	6	5	1	0.6	15	12	2	1.2	10	7
Pueblo																	
Region 8:	46,973	166	353.4	---	7	10	21.3	---	9	2	4.3	---	3	0	0.0	---	13
Alamosa	16,148	75	464.5	5	---	10	61.9	4	---	1	6.2	3	---	0	0.0	15	---

	2012 Population†	Chlamydia				Gonorrhea				Primary & Secondary Syphilis				Early Latent Syphilis			
		Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^
Conejos	8,275	21	253.8	27	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Costilla	3,594	10	278.2	19	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Mineral	709	1	141.0	47	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Rio Grande	11,943	58	485.6	4	---	0	0.0	41	---	1	8.4	2	---	0	0.0	15	---
Saguache	6,304	1	15.9	61	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Region 9:	92,586	278	300.3	---	10	20	21.6	---	8	1	1.1	---	8	1	1.1	---	8
Archuleta	12,070	31	256.8	26	---	1	8.3	35	---	0	0.0	16	---	0	0.0	15	---
Dolores	1,994	1	50.2	58	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
La Plata	52,401	139	265.3	25	---	14	26.7	10	---	0	0.0	16	---	0	0.0	15	---
Montezuma	25,431	106	416.8	9	---	5	19.7	19	---	1	3.9	5	---	1	3.9	3	---
San Juan	690	1	144.9	46	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Region 10:	99,552	197	197.9	---	18	7	7.0	---	19	0	0.0	---	14	0	0.0	---	13
Delta	30,432	59	193.9	38	---	1	3.3	40	---	0	0.0	16	---	0	0.0	15	---
Gunnison	15,475	43	277.9	20	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Hinsdale	810	0	0.0	62	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Montrose	40,725	81	198.9	37	---	6	14.7	26	---	0	0.0	16	---	0	0.0	15	---
Ouray	4,530	3	66.2	57	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
San Miguel	7,580	11	145.1	45	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Region 11:	44,739	115	257.0	---	13	1	2.2	---	21	0	0.0	---	14	0	0.0	---	13
Jackson	1,348	0	0.0	62	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Moffat	13,200	46	348.5	12	---	1	7.6	36	---	0	0.0	16	---	0	0.0	15	---
Rio Blanco	6,857	10	145.8	44	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Routt	23,334	59	252.8	28	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Region 12:	168,329	426	253.1	---	14	15	8.9	---	18	1	0.6	---	12	3	1.8	---	5
Eagle	51,874	85	163.9	42	---	3	5.8	39	---	0	0.0	16	---	1	1.9	7	---
Garfield	56,953	189	331.9	15	---	5	8.8	32	---	1	1.8	8	---	1	1.8	8	---
Grand	14,195	12	84.5	55	---	1	7.0	37	---	0	0.0	16	---	0	0.0	15	---
Pitkin	17,263	42	243.3	30	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Summit	28,044	98	349.5	11	---	6	21.4	16	---	0	0.0	16	---	1	3.6	4	---
Region 13:	76,525	165	215.6	---	16	7	9.1	---	17	0	0.0	---	14	0	0.0	---	13
Chaffee	18,150	43	236.9	32	---	2	11.0	30	---	0	0.0	16	---	0	0.0	15	---
Custer	4,249	2	47.1	59	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Fremont	46,788	100	213.7	35	---	4	8.5	34	---	0	0.0	16	---	0	0.0	15	---

	2012 Population†	Chlamydia				Gonorrhea				Primary & Secondary Syphilis				Early Latent Syphilis			
		Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^	Cases	Rate	County Rank*	HSR Rank^
Lake	7,338	20	272.6	23	---	1	13.6	28	---	0	0.0	16	---	0	0.0	15	---
Region 14:																	
Adams	459,598	2116	460.4	6	4	249	54.2	5	4	26	5.7	4	2	22	4.8	2	2
Region 15:																	
Arapahoe	595,546	3273	549.6	2	2	533	89.5	2	2	23	3.9	5	4	19	3.2	5	3
Region 16:																	
Boulder	305,318	841	275.5	21	---	72	19.8	---	11	8	2.2	---	5	3	0.8	---	10
Broomfield	58,298	169	289.9	17	---	16	27.4	9	---	1	1.7	9	---	0	0.0	15	---
Region 17:																	
Clear Creek	53,935	74	137.2	---	21	8	14.8	---	14	0	0.0	---	14	0	0.0	---	13
Clear Creek	9,026	7	77.6	56	---	0	0.0	41	---	0	0.0	16	---	0	0.0	15	---
Gilpin	5,491	6	109.3	53	---	1	18.2	23	---	0	0.0	16	---	0	0.0	15	---
Park	16,029	20	124.8	49	---	2	12.5	29	---	0	0.0	16	---	0	0.0	15	---
Teller	23,389	41	175.3	40	---	5	21.4	16	---	0	0.0	16	---	0	0.0	15	---
Region 18:																	
Weld	263,691	904	342.8	13	8	66	25.0	12	6	2	0.8	13	10	3	1.1	11	8
Region 19:																	
Mesa	147,848	635	429.5	8	6	22	14.9	25	13	0	0.0	16	14	0	0.0	15	13
Region 20:																	
Denver	634,265	5467	861.9	1	1	1093	172.3	1	1	122	19.2	1	1	121	19.1	1	1
Region 21:																	
Jefferson	545,358	1169	214.4	34	17	126	23.1	14	7	9	1.7	9	6	11	2.0	6	4
Unknown	---	5	---	---	---	1	---	---	---	0	---	---	---	0	---	---	---
STATEWIDE TOTAL	5,187,582	21631	417.0	---	---	2822	54.4	---	---	208	4.0	---	---	194	3.7	---	---

*Counties ranked by STI incidence rate per 100,000 population

^Health Statistics Regions ranked by STI incidence rate per 100,000 population

†2012 population estimate from the US Census Bureau

All STI surveillance data reported to the Colorado Department of Public Health and Environment for the year of 2012.

Table 2: Chlamydia, Gonorrhea and Early Syphilis Cases Diagnosed by Demographic Characteristics, 2012

	2012 Population*	Chlamydia			Gonorrhea			Primary & Secondary Syphilis			Early Latent Syphilis		
		Cases	%	Rate†	Cases	%	Rate†	Cases	%	Rate†	Cases	%	Rate†
Total	5,187,582	21,631	100.0	417.0	2,822	100.0	54.4	208	100.0	4.0	194	100.0	3.7
Gender													
Male	2,603,705	6,155	28.5	236.4	1,460	51.7	56.1	205	98.6	7.9	190	97.9	7.3
Female	2,583,877	15,476	71.5	598.9	1,362	48.3	52.7	3	1.4	0.1	4	2.1	0.2
Race/Ethnicity													
Hispanic (all races)	1,088,744	5,653	26.1	519.2	737	26.1	67.7	56	26.9	5.1	62	32.0	5.7
NH White	3,608,087	6,850	31.7	189.9	800	28.3	22.2	120	57.7	3.3	95	49.0	2.6
NH Black	199,126	2,177	10.1	1093.3	770	27.3	386.7	15	7.2	7.5	20	10.3	10.0
NH AI/AN	33,004	187	0.9	566.6	30	1.1	90.9	3	1.4	9.1	7	3.6	21.2
NH Asian/PI	152,894	277	1.3	181.2	41	1.5	26.8	1	0.5	0.7	3	1.5	2.0
NH Other	105,727	401	1.9	379.3	53	1.9	50.1	1	0.5	0.9	0	0.0	0.0
Unknown		6,086	28.1	---	391	13.9	---	12	5.8	---	7	3.6	---
Age Group													
0 to 9	691,702	3	0.0	0.4	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
10 to 14	341,626	174	0.8	50.9	15	0.5	4.4	0	0.0	0.0	0	0.0	0.0
15 to 19	339,447	6,104	28.2	1798.2	602	21.3	177.3	2	1.0	0.6	3	1.5	0.9
20 to 24	365,253	8,413	38.9	2303.3	1,028	36.4	281.4	28	13.5	7.7	26	13.4	7.1
25 to 29	384,243	3,726	17.2	969.7	542	19.2	141.1	27	13.0	7.0	39	20.1	10.1
30 to 34	377,427	1,715	7.9	454.4	269	9.5	71.3	35	16.8	9.3	34	17.5	9.0
35 to 39	346,303	769	3.6	222.1	159	5.6	45.9	28	13.5	8.1	33	17.0	9.5
40 to 44	361,043	360	1.7	99.7	92	3.3	25.5	31	14.9	8.6	20	10.3	5.5
45 to 49	350,227	186	0.9	53.1	57	2.0	16.3	30	14.4	8.6	22	11.3	6.3
50+	1,630,311	180	0.8	11.0	58	2.1	3.6	25	12.0	1.5	17	8.8	1.0
Unknown		1	0.0	---	0	0.0	---	0	0.0	---	0	0.0	---

*2012 Census Population Estimate

†Rate per 100,000

Table 3: Chlamydia Demographic Characteristics by Gender, 2012

	Chlamydia											
	Male				Female				Total			
	2012 Population [^]	Cases	%	Rate [†]	2012 Population [^]	Cases	%	Rate [†]	2012 Population [^]	Cases	%	Rate [†]
Total	2,603,705	6,155	100.0	236.4	2,583,877	15,476	100.0	598.9	5,187,582	21,631	100.0	417.0
Race/Ethnicity												
Hispanic (all races)	555,896	1,408	22.9	253.3	532,848	4,245	27.4	796.7	1,088,744	5,653	26.1	519.2
NH White	1,802,881	2,124	34.5	117.8	1,805,206	4,726	30.5	261.8	3,608,087	6,850	31.7	189.9
NH Black	105,996	803	13.0	757.6	93,130	1,374	8.9	1475.4	199,126	2,177	10.1	1093.3
NH AI/AN	16,771	54	0.9	322.0	16,233	133	0.9	819.3	33,004	187	0.9	566.6
NH Asian/PI	69,759	57	0.9	81.7	83,135	220	1.4	264.6	152,894	277	1.3	181.2
NH Other	52,402	108	1.8	206.1	53,325	293	1.9	549.5	105,727	401	1.9	379.3
Unknown		1,601	26.0	---		4,485	29.0	---		6,086	28.1	---
Age Group												
0 to 9	354,518	1	0.0	0.3	337,184	2	0.0	0.6	691,702	3	0.0	0.4
10 to 14	174,372	17	0.3	9.7	167,254	157	1.0	93.9	341,626	174	0.8	50.9
15 to 19	175,945	1,116	18.1	634.3	163,502	4,988	32.2	3050.7	339,447	6,104	28.2	1798.2
20 to 24	190,417	2,306	37.5	1211.0	174,836	6,107	39.5	3493.0	365,253	8,413	38.9	2303.3
25 to 29	199,981	1,288	20.9	644.1	184,262	2,438	15.8	1323.1	384,243	3,726	17.2	969.7
30 to 34	193,883	702	11.4	362.1	183,544	1,013	6.5	551.9	377,427	1,715	7.9	454.4
35 to 39	178,123	328	5.3	184.1	168,180	441	2.8	262.2	346,303	769	3.6	222.1
40 to 44	184,751	174	2.8	94.2	176,292	186	1.2	105.5	361,043	360	1.7	99.7
45 to 49	175,498	97	1.6	55.3	174,729	89	0.6	50.9	350,227	186	0.9	53.1
50+	776,217	125	2.0	16.1	854,094	55	0.4	6.4	1,630,311	180	0.8	11.0
Unknown		1	0.0	---		0	0.0	---		1	0.0	---

[^]2012 Census Population Estimate

[†]Rate per 100,000

Table 4: Gonorrhea Demographic Characteristics by Gender, 2012

	Gonorrhea											
	Male				Female				Total			
	2012 Population [^]	Cases	%	Rate [†]	2012 Population [^]	Cases	%	Rate [†]	2012 Population [^]	Cases	%	Rate [†]
Total	2,603,705	1,460	100.0	56.1	2,583,877	1,362	100.0	52.7	5,187,582	2,822	100.0	54.4
Race/Ethnicity												
Hispanic (all races)	555,896	355	24.3	63.9	532,848	382	28.0	71.7	1,088,744	737	26.1	67.7
NH White	1,802,881	487	33.4	27.0	1,805,206	313	23.0	17.3	3,608,087	800	28.3	22.2
NH Black	105,996	425	29.1	401.0	93,130	345	25.3	370.4	199,126	770	27.3	386.7
NH AI/AN	16,771	14	1.0	83.5	16,233	16	1.2	98.6	33,004	30	1.1	90.9
NH Asian/PI	69,759	22	1.5	31.5	83,135	19	1.4	22.9	152,894	41	1.5	26.8
NH Other	52,402	10	0.7	19.1	53,325	43	3.2	80.6	105,727	53	1.9	50.1
Unknown		147	10.1	-		244	17.9	-		391	13.9	-
Age Group												
0 to 9	354,518	0	0.0	0.0	337,184	0	0.0	0.0	691,702	0	0.0	0.0
10 to 14	174,372	1	0.1	0.6	167,254	14	1.0	8.4	341,626	15	0.5	4.4
15 to 19	175,945	180	12.3	102.3	163,502	422	31.0	258.1	339,447	602	21.3	177.3
20 to 24	190,417	534	36.6	280.4	174,836	494	36.3	282.6	365,253	1,028	36.4	281.4
25 to 29	199,981	314	21.5	157.0	184,262	228	16.7	123.7	384,243	542	19.2	141.1
30 to 34	193,883	157	10.8	81.0	183,544	112	8.2	61.0	377,427	269	9.5	71.3
35 to 39	178,123	109	7.5	61.2	168,180	50	3.7	29.7	346,303	159	5.6	45.9
40 to 44	184,751	66	4.5	35.7	176,292	26	1.9	14.7	361,043	92	3.3	25.5
45 to 49	175,498	44	3.0	25.1	174,729	13	1.0	7.4	350,227	57	2.0	16.3
50+	776,217	55	3.8	7.1	854,094	3	0.2	0.4	1,630,311	58	2.1	3.6
Unknown		0	0.0	-		0	0.0	-		0	0.0	-

[^]2012 Census Population Estimate

[†]Rate per 100,000

Table 5: Primary and Secondary Syphilis Demographic Characteristics by Gender, 2012

	Primary and Secondary Syphilis											
	Male				Female				Total			
	2012 Population^	Cases	%	Rate†	2012 Population^	Cases	%	Rate†	2012 Population^	Cases	%	Rate†
Total	2,603,705	205	100.0	7.9	2,583,877	3	100.0	0.1	5,187,582	208	100.0	4.0
Race/Ethnicity												
Hispanic (all races)	555,896	56	27.3	10.1	532,848	0	0.0	0.0	1,088,744	56	26.9	5.1
NH White	1,802,881	119	58.0	6.6	1,805,206	1	33.3	0.1	3,608,087	120	57.7	3.3
NH Black	105,996	14	6.8	13.2	93,130	1	33.3	1.1	199,126	15	7.2	7.5
NH AI/AN	16,771	2	1.0	11.9	16,233	1	33.3	6.2	33,004	3	1.4	9.1
NH Asian/PI	69,759	1	0.5	1.4	83,135	0	0.0	0.0	152,894	1	0.5	0.7
NH Other	52,402	1	0.5	1.9	53,325	0	0.0	0.0	105,727	1	0.5	0.9
Unknown		12	5.9	-		0	0.0	-		12	5.8	-
Age Group												
0 to 9	354,518	0	0.0	0.0	337,184	0	0.0	0.0	691,702	0	0.0	0.0
10 to 14	174,372	0	0.0	0.0	167,254	0	0.0	0.0	341,626	0	0.0	0.0
15 to 19	175,945	2	1.0	1.1	163,502	0	0.0	0.0	339,447	2	1.0	0.6
20 to 24	190,417	25	12.2	13.1	174,836	3	100.0	1.7	365,253	28	13.5	7.7
25 to 29	199,981	27	13.2	13.5	184,262	0	0.0	0.0	384,243	27	13.0	7.0
30 to 34	193,883	37	18.0	19.1	183,544	0	0.0	0.0	377,427	37	17.8	9.8
35 to 39	178,123	28	13.7	15.7	168,180	0	0.0	0.0	346,303	28	13.5	8.1
40 to 44	184,751	31	15.1	16.8	176,292	0	0.0	0.0	361,043	31	14.9	8.6
45 to 49	175,498	30	14.6	17.1	174,729	0	0.0	0.0	350,227	30	14.4	8.6
50+	776,217	25	12.2	3.2	854,094	0	0.0	0.0	1,630,311	25	12.0	1.5
Unknown		0	0.0	-		0	0.0	-		0	0.0	-

^2012 Census Population Estimate

†Rate per 100,000

Table 6: Early Latent Syphilis Demographic Characteristics by Gender, 2012

	Early Latent Syphilis											
	Male				Female				Total			
	2012 Population [^]	Cases	%	Rate [†]	2012 Population [^]	Cases	%	Rate [†]	2012 Population [^]	Cases	%	Rate [†]
Total	2,603,705	190	100.0	7.3	2,583,877	4	100.0	0.2	5,187,582	194	100.0	3.7
Race/Ethnicity												
Hispanic (all races)	555,896	60	31.6	10.8	532,848	2	50.0	0.4	1,088,744	62	32.0	5.7
NH White	1,802,881	94	49.5	5.2	1,805,206	1	25.0	0.1	3,608,087	95	49.0	2.6
NH Black	105,996	20	10.5	18.9	93,130	0	0.0	0.0	199,126	20	10.3	10.0
NH AI/AN	16,771	7	3.7	41.7	16,233	0	0.0	0.0	33,004	7	3.6	21.2
NH Asian/PI	69,759	3	1.6	4.3	83,135	0	0.0	0.0	152,894	3	1.5	2.0
NH Other	52,402	0	0.0	0.0	53,325	0	0.0	0.0	105,727	0	0.0	0.0
Unknown		6	3.2	-		1	25.0	-		7	3.6	-
Age Group												
0 to 9	354,518	0	0.0	0.0	337,184	0	0.0	0.0	691,702	0	0.0	0.0
10 to 14	174,372	0	0.0	0.0	167,254	0	0.0	0.0	341,626	0	0.0	0.0
15 to 19	175,945	3	1.6	1.7	163,502	0	0.0	0.0	339,447	3	1.5	0.9
20 to 24	190,417	26	13.7	13.7	174,836	0	0.0	0.0	365,253	26	13.4	7.1
25 to 29	199,981	37	19.5	18.5	184,262	2	50.0	1.1	384,243	39	20.1	10.1
30 to 34	193,883	34	17.9	17.5	183,544	0	0.0	0.0	377,427	34	17.5	9.0
35 to 39	178,123	32	16.8	18.0	168,180	1	25.0	0.6	346,303	33	17.0	9.5
40 to 44	184,751	20	10.5	10.8	176,292	0	0.0	0.0	361,043	20	10.3	5.5
45 to 49	175,498	22	11.6	12.5	174,729	0	0.0	0.0	350,227	22	11.3	6.3
50+	776,217	16	8.4	2.1	854,094	1	25.0	0.1	1,630,311	17	8.8	1.0
Unknown		0	0.0	-		0	0.0	-		0	0.0	-

[^]2012 Census Population Estimate

[†]Rate per 100,000

References

Colorado Department of Public Health and Environment, Disease Control and Environmental Epidemiology Division, Colorado Revised Statutes § 6 CCR 1009-1, Rules and Regulations Pertaining to Epidemic and Communicable Disease Control (Promulgated by The State Board of Health). <http://www.cdphe.state.co.us/regulations/diseasecontrol/100901epidemiccommunicablediseasecontrol.pdf> . Amended November 17, 2010.

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