Sexually Transmitted Infections in Colorado

2013 Annual Report

Colorado 2013 Sexually Transmitted Infection Annual Report

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Sexually Transmitted Infections – 2013
The State of Colorado
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Executive Summary

The 2013 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 2013, 23,564 cases of chlamydia, gonorrhea or early syphilis were reported in Colorado. 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. Some of the reasons for preventing and controlling STIs include high rates of complications and adverse health outcomes. STIs also can facilitate the transmission of HIV, and are closely related to other co-morbidities such as substance abuse and mental illness. STIs can also serve as a marker to identify health-related disparities that may exist in Colorado communities.

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.[1] 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 submit STI reports to CDPHE, and all major laboratories report STIs electronically via secure data networks.

Due to a decrease in staffing in the Laboratory Surveillance Unit the percent of unknown race/ethnicity has increased in 2013. This was most evident in chlamydia where the percent of unknown race/ethnicity went from 28.1 percent in 2012 to 41.1 percent in 2013. Due to this proportion of cases having unknown race/ethnicity the rates by this variable will not be displayed. Gonorrhea also showed an increase in unknown race/ethnicity from 13.7 percent in 2012 to 20.2 percent in 2013, but the rates by race/ethnicity will be displayed. This proportion missing race/ethnicity may be improved in the future by increased staffing in the Laboratory Surveillance Unit. CDPHE staff anticipate that the implementation of the Integrated Disease Reporting Unit will also improve the demographic data in the future when chlamydia is included in the diseases for which the unit conducts preliminary missing data investigation.

Beginning in January 2009, Colorado began using a new STI reporting system (PRISM). 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

[1] 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.

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 2013 disease incidence rates for all Colorado counties are calculated by dividing the number of cases diagnosed for that county in 2013 by the estimated 2013 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 2013 reporting year.

Guidelines for Accurate Use of Data

The following guidelines are provided to ensure an accurate understanding of the use, interpretation and limitations of the data presented in this report. These guidelines can help prevent data misuse, and increase understanding of the accuracy and correct use of the STI data. These guidelines may be considered when reviewing data from any source.

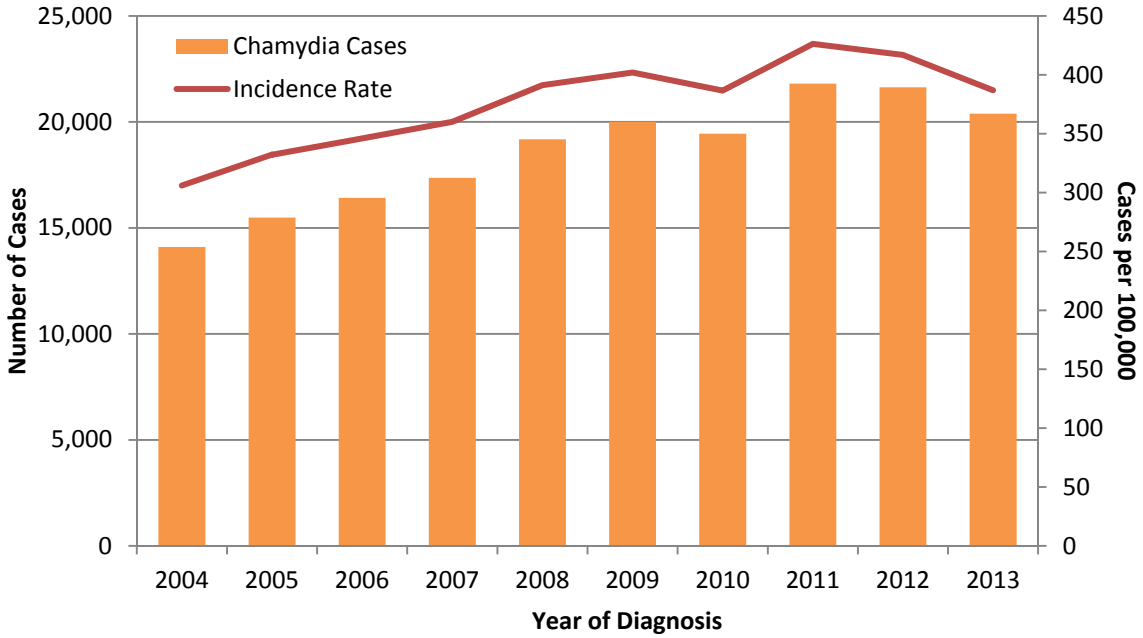
1. Data in this report are primarily reported for new cases of STIs diagnosed in 2013. They are not for unique persons diagnosed with disease, e.g. a person may have more than one infection in a single year.
2. Data in this report are based on cases reported to the STI/HIV Surveillance Program, Disease 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 2013, there were 20,386 cases diagnosed for a statewide crude incidence rate of 387.0 per 100,000 persons. Figure 1 shows annual rates of chlamydia in Colorado from 2004 to 2013. Cases and rates have increased steadily from 2003 through 2011 and appear to be on a downward trend the last two years. According to the Centers for Disease Control (CDC), the US chlamydia rate decreased for the first time from 456.7 per 100,000 reported in 2012 to 446.6 per 100,000 in 2013.[2]

Figure 1: Chlamydia Cases and Incidence Rates, Colorado, 2004-2013



Case rates per 100,000 vary significantly by gender and age. The chlamydia incidence rate is more than two times greater among females, 546.8 per 100,000, than males, 228.6 per 100,000 in 2013 (Tables 2 & 3).

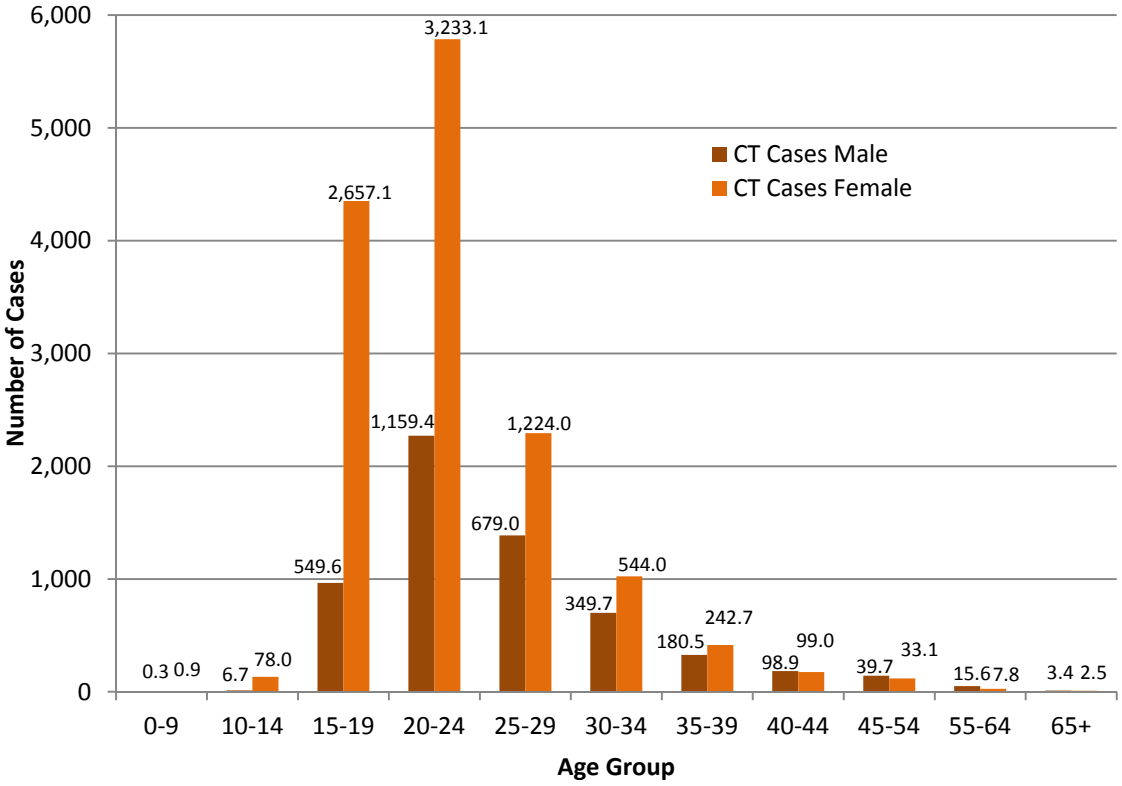
Figure 2 shows age and gender case counts and rates for chlamydia diagnosed in 2013. Females account for nearly three-quarters (70.3%) of the chlamydia cases. Among 15-19 year olds, the chlamydia rate for females, 2,657.1 per 100,000, is nearly five times greater than the rate for males, 549.6 per 100,000.

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

[2] Centers for Disease control and Prevention. *Sexually Transmitted Disease Surveillance 2013*. Atlanta: U.S. Department of Health and Human Services; 2014; 1. http://www.cdc.gov/std/stats.

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, 2013



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 9.2 percent of reported chlamydia cases in 2013.

Figure 3 shows chlamydia infection rates by county for 2013. Denver, Montezuma and Arapahoe counties had the three highest rates of reported chlamydia infections and accounted for 41.3 percent of chlamydia diagnoses in 2013. Figure 4 shows the geographical distribution of chlamydia incidence rates for Colorado at the county level. As shown in both Figures 3 & 4 chlamydia infections were largely concentrated in Denver County. In 2013, only six rural counties had no reported chlamydia infections.

Figure 3: Chlamydia Incidence Rates by County Chart, Colorado, 2013

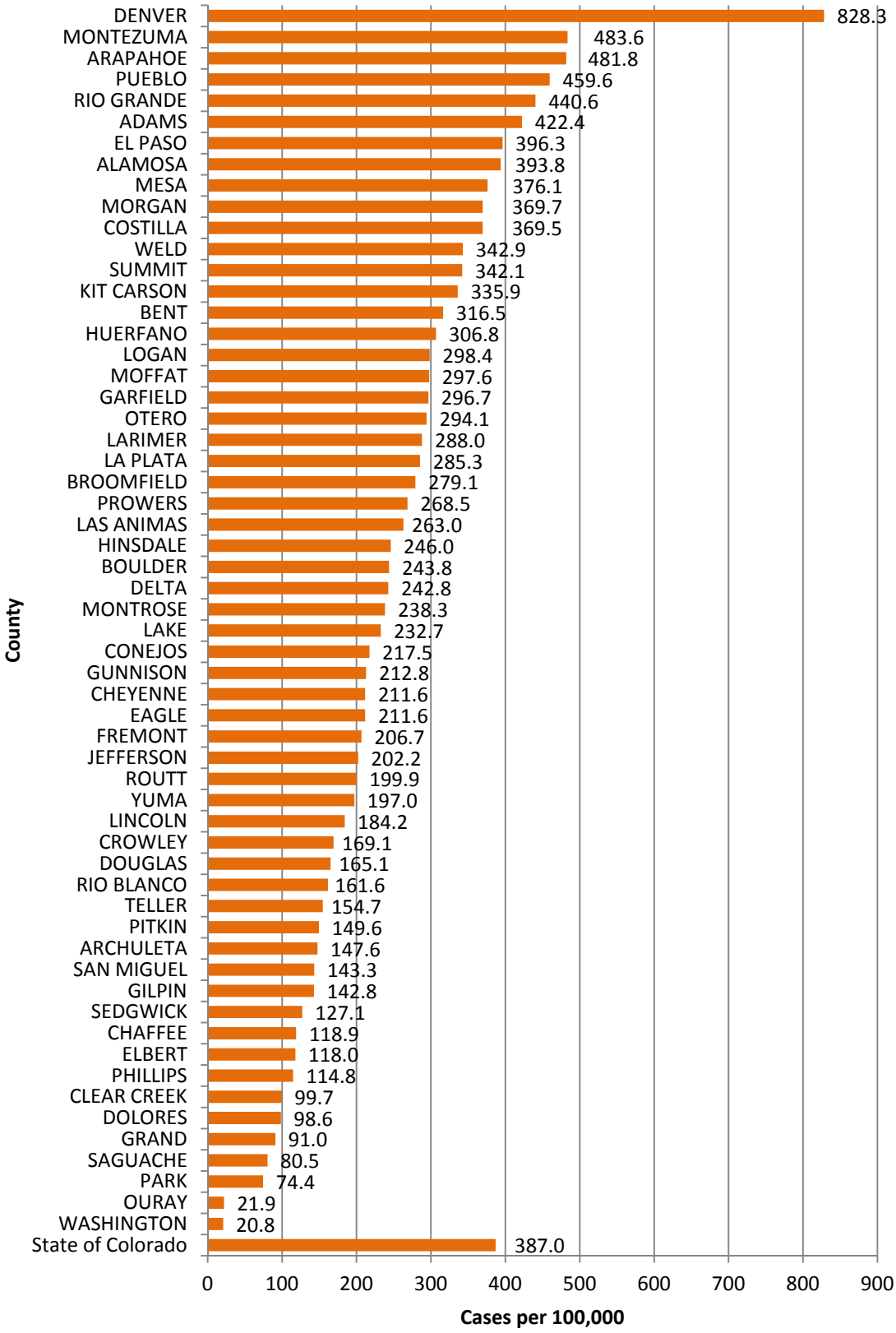
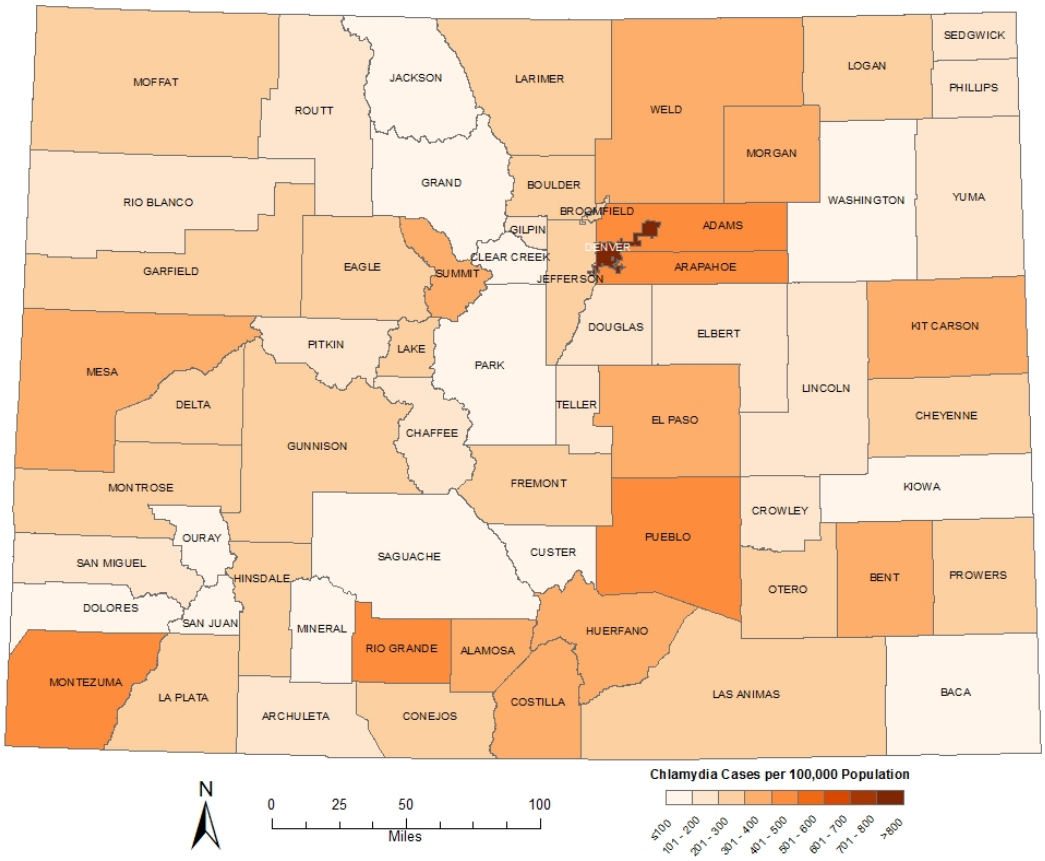


Figure 4: Chlamydia Incidence Rates by County Map, Colorado, 2013



Gonorrhea Infections

Gonorrhea remains the second most commonly reported STI in Colorado with 2,820 cases reported in 2013, yielding a rate of 53.5 per 100,000 population. According to the Centers for Disease Control (CDC), the US gonorrhea rate decreased from 106.7 per 100,000 reported in 2012 to 106.1 per 100,000 in 2013.[3]

Figure 5: Gonorrhea Cases and Incidence Rates, Colorado, 2004-2013

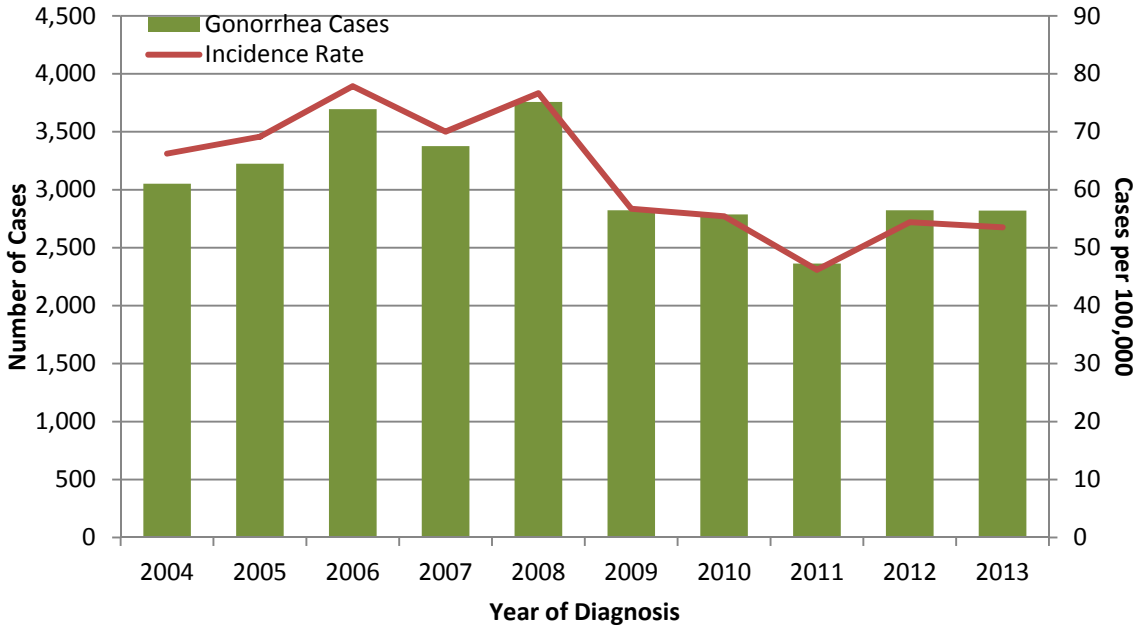
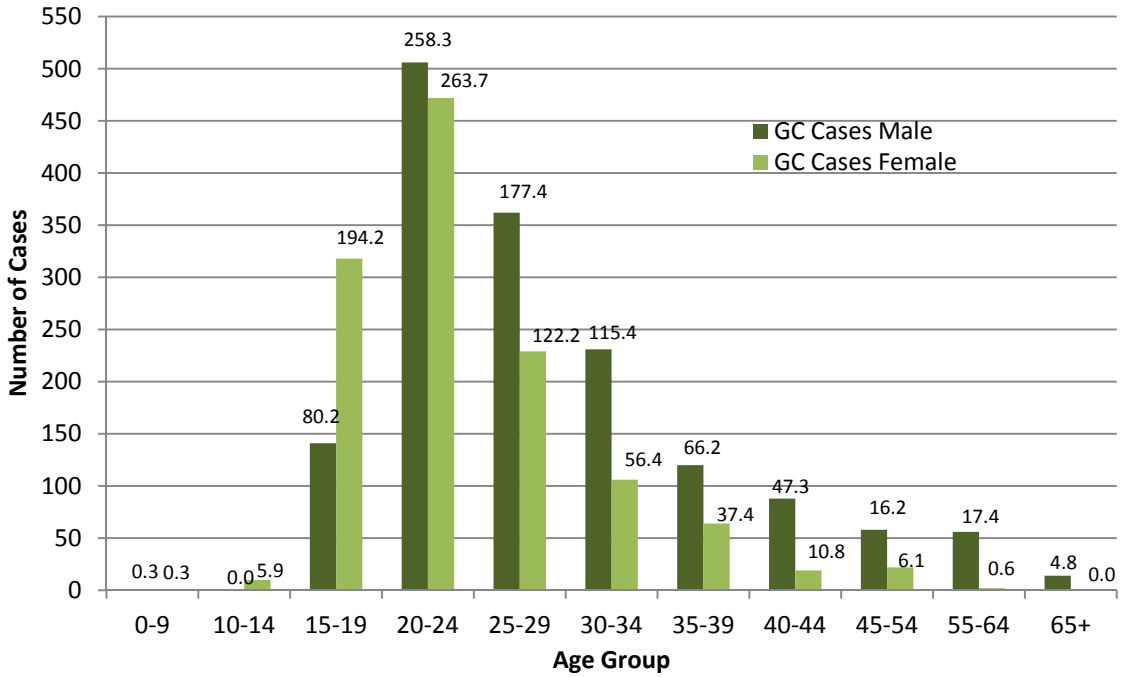


Figure 5 shows cases diagnosed each year and the incidence rate per 100,000 from 2004 to 2013. Over this ten year period, overall gonorrhea rates remained relatively consistent through 2008, with a noted decrease in 2009 followed by another period of consistency.

Figure 6 shows age and gender case counts for gonorrhea diagnosed in 2013. There is an even split of cases by gender with females accounting for 44.1 percent. Among 15-19 year olds, the gonorrhea rate for females, 194.2 per 100,000, is almost two and a half times greater than the rate for males, 80.2 per 100,000.

[3] Centers for Disease control and Prevention. *Sexually Transmitted Disease Surveillance 2013*. Atlanta: U.S. Department of Health and Human Services; 2014; 1. http://www.cdc.gov/std/stats.

Figure 6: Gonorrhea Cases and Rates by Gender and Age Group, Colorado, 2013



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

As seen with chlamydia, Non Hispanic Blacks were disproportionally affected by gonorrhea infections in 2013. They represented less than four percent of Colorado's population, but represented 17.7 percent of reported gonorrhea cases. Figure 7 shows gonorrhea case numbers by race/ethnicity for 2013. Racial disparities are seen between Non Hispanic Blacks and other races. The gonorrhea rate for Non Hispanic Blacks compared with Non Hispanic Whites was 10.3 times higher. Compared to Hispanics of all races, the rate for Non Hispanic Blacks was 3.6 times higher.

Figure 7: Gonorrhea Infections by Race/Ethnicity, Colorado 2013

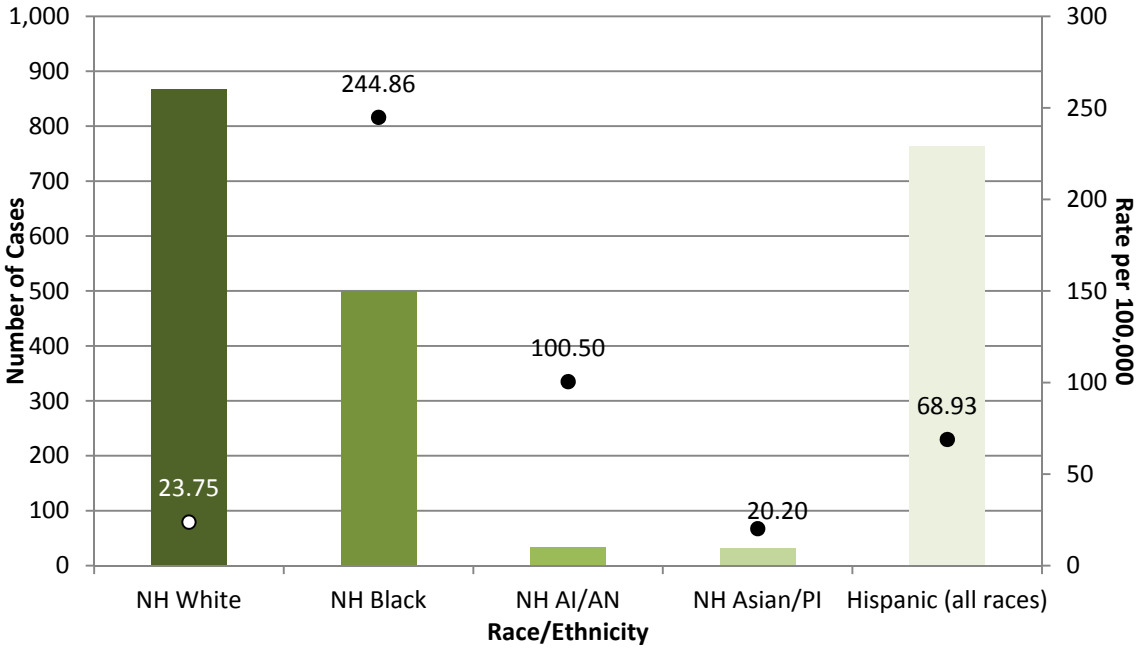
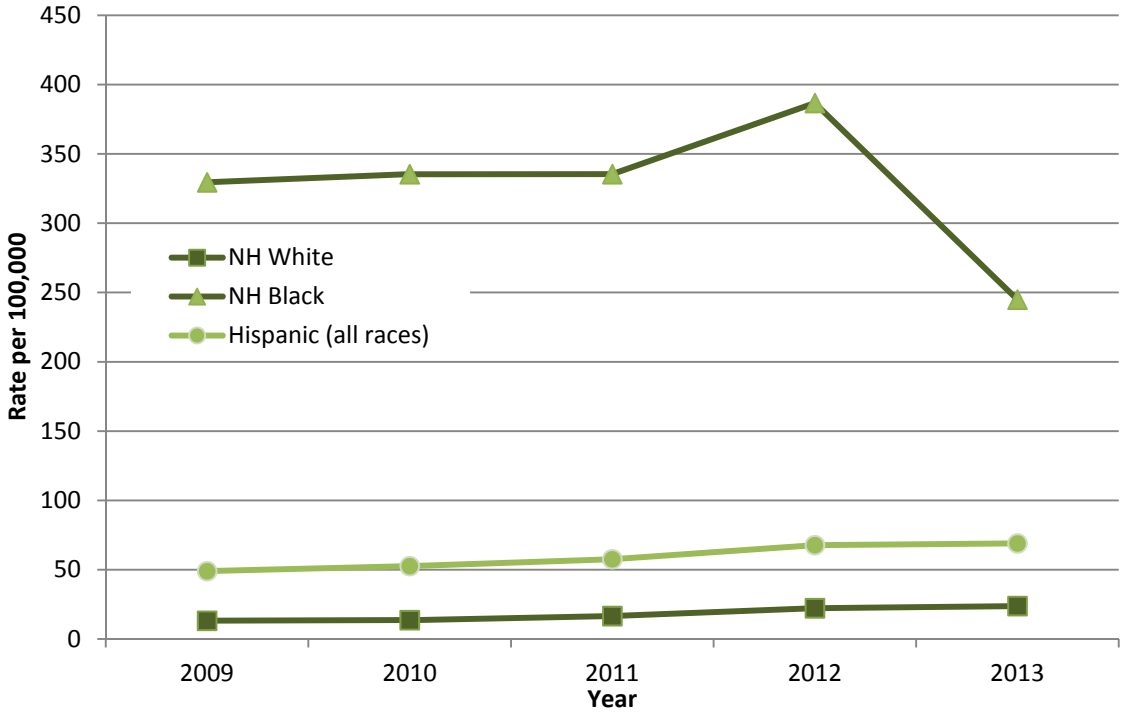


Figure 8 shows the 5-year trend in rates for Non Hispanic Whites, Non Hispanic Blacks and Hispanics. Other races were not displayed due to small numbers. The rate for Non Hispanic Blacks peaked in 2012 followed by a sharp decrease in 2013. Both Non Hispanic Whites and Hispanics have had relatively stable rates with a slight increase from 2009 to 2013.

Figure 8: Gonorrhea Infection Rates by Race/Ethnicity, Colorado, 2009-2013



Figures 9 & 10 describe 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 three rural counties did not report any gonorrhea cases in 2013, 67.4 percent of all cases were reported in just three counties: Denver, Arapahoe and El Paso, with Denver County accounting for 34.9 percent of reported cases.

Figure 9: Gonorrhea Incidence Rates by County Chart, Colorado, 2013

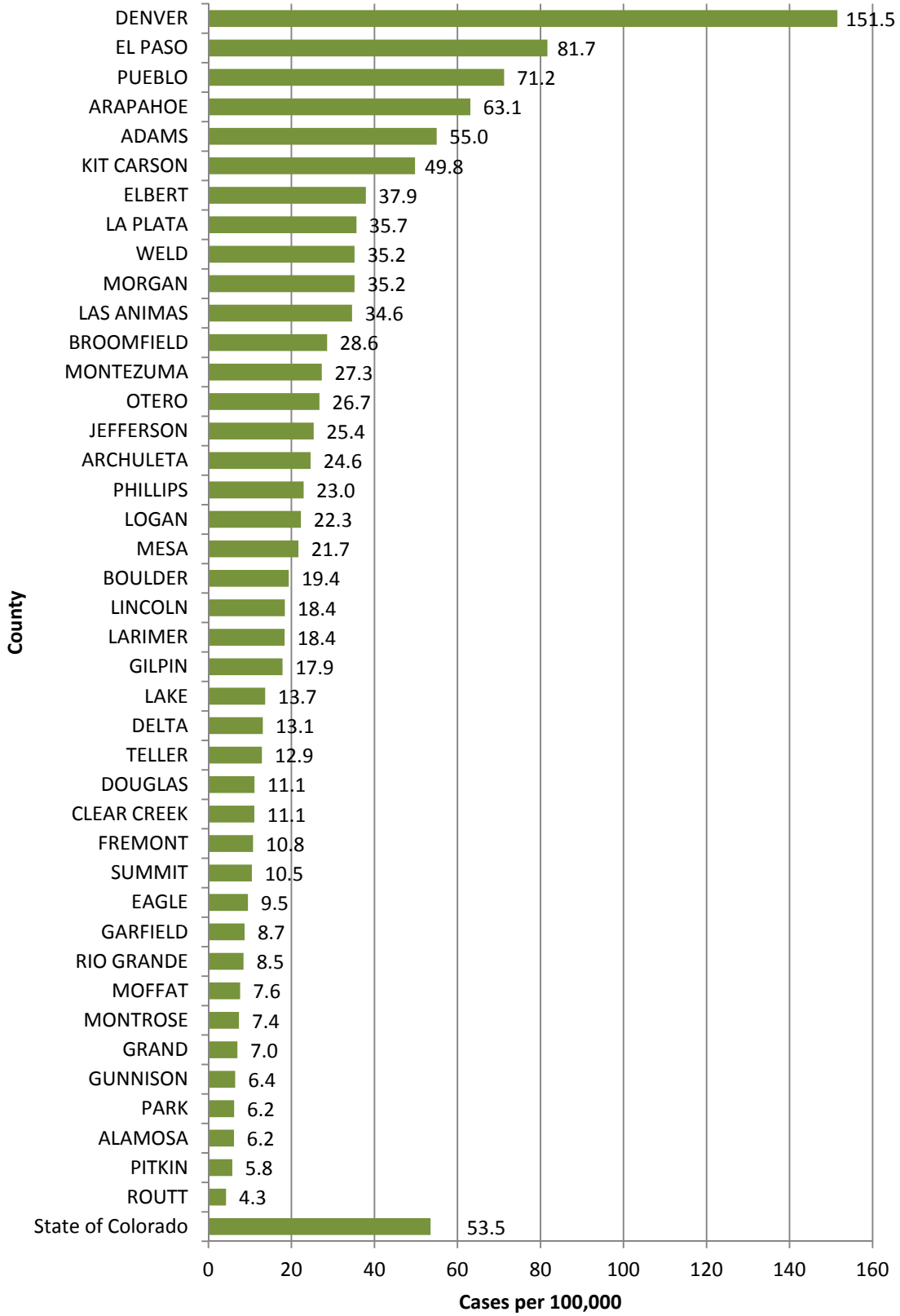
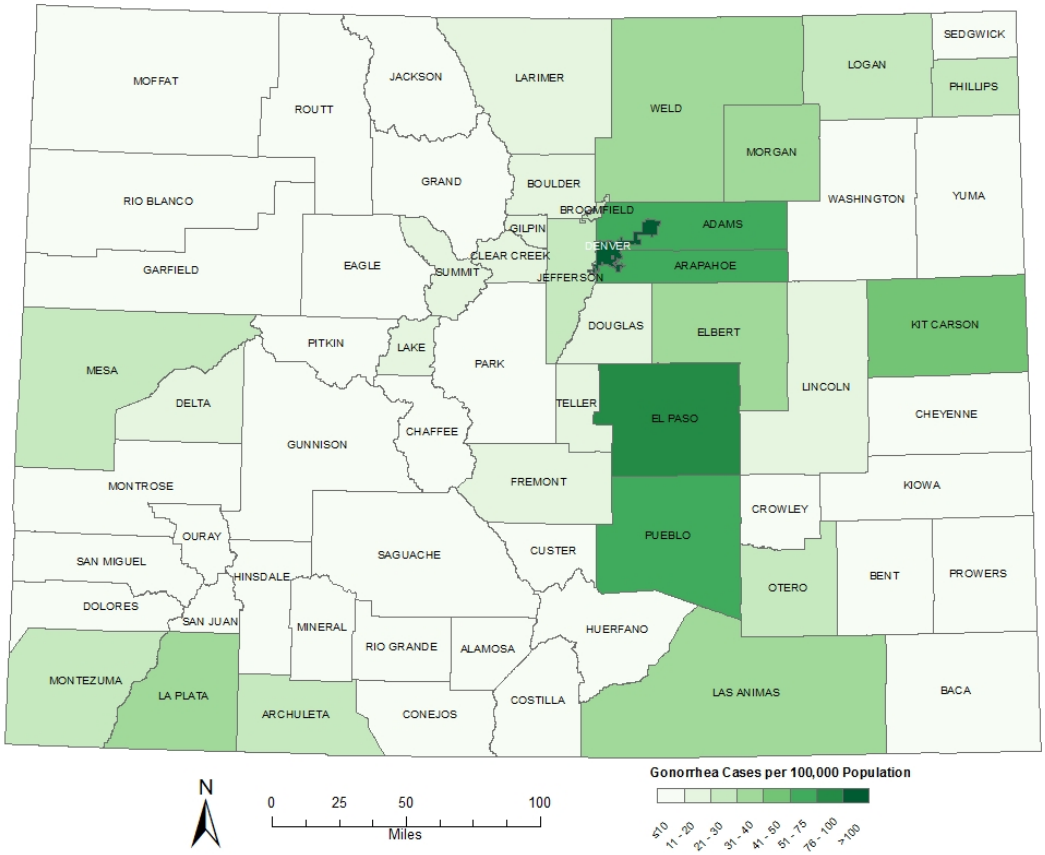


Figure 10: Gonorrhea Incidence Rates by County Map, Colorado, 2013



Primary and Secondary Syphilis Infections

There were 163 cases of primary and secondary (P&S) syphilis diagnosed and reported in 2013. From 2004 to 2013, Colorado reported more than a 150 percent increase in P&S syphilis cases, as shown in Figure 11.

The syphilis infections are primarily occurring in Non Hispanic White males, representing 57.1 percent of reported primary and secondary cases. Additionally, 81.0 percent of cases were among men who have sex with men (MSM). In 2013, 62.9 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, 2004-2013

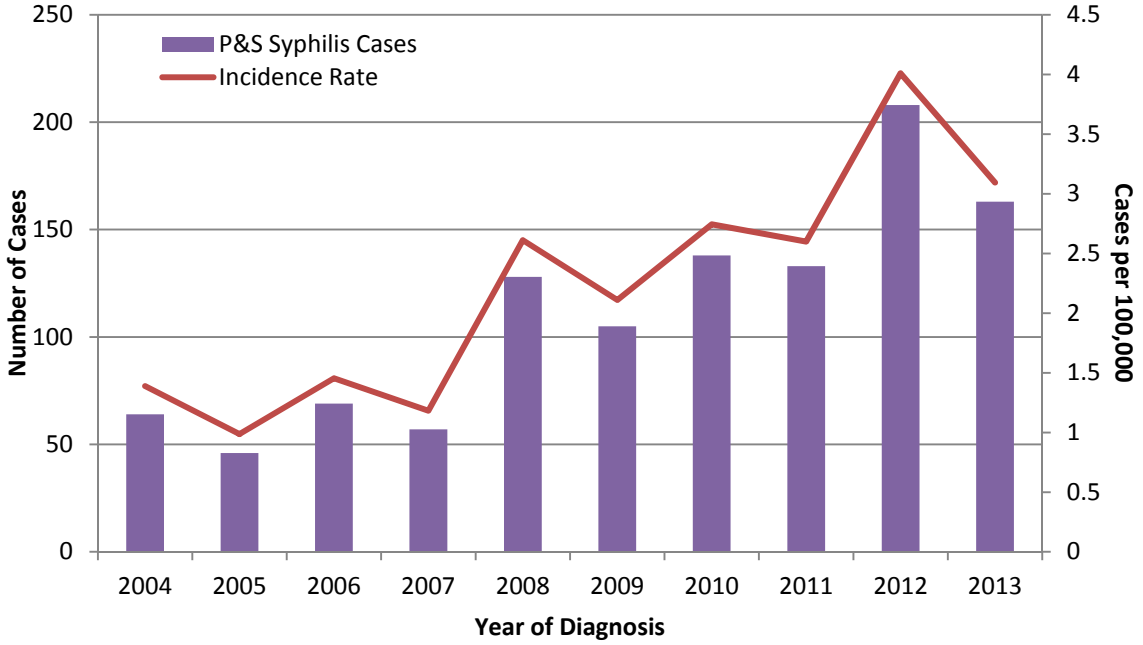
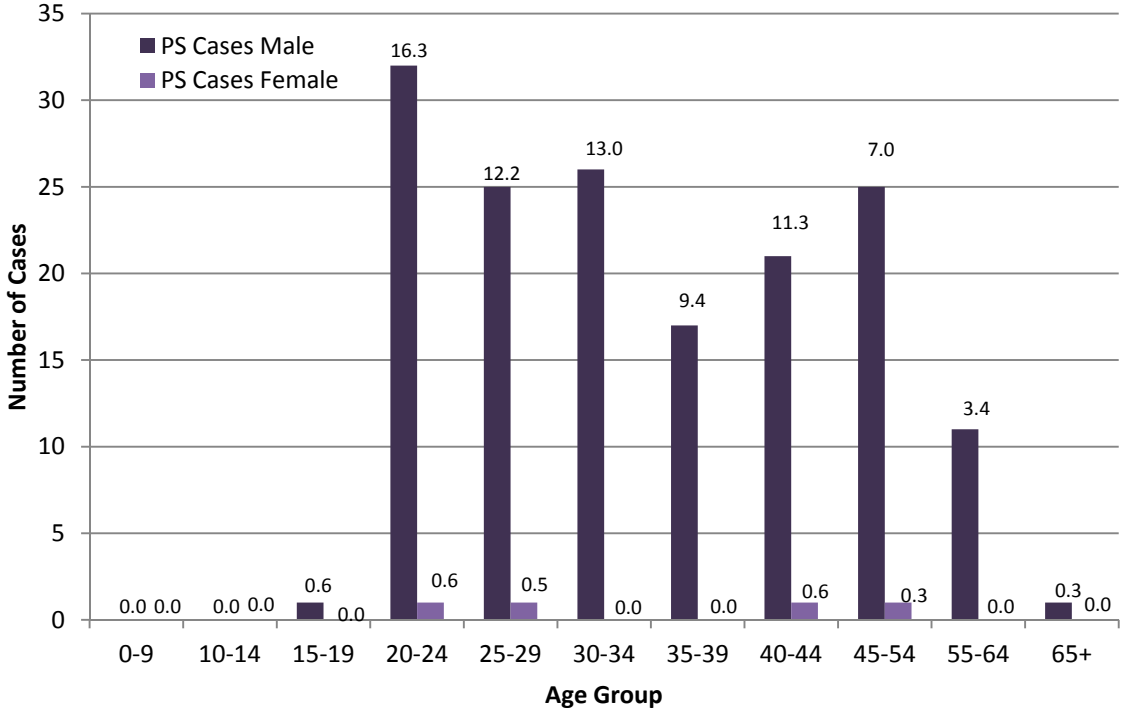


Figure 12 shows age and gender case counts for P&S syphilis diagnosed in 2013. The mean age at diagnosis is 35.5 with a range of 18 to 68 years of age. The highest rates were reported among 20-24 year old males whose infection rate was 16.3 cases per 100,000. In 2013, 35.8 percent of the cases occurred among 20-29 year old males followed by 30-39 year old males, accounting for 27.1 percent of all reported primary and secondary syphilis cases.

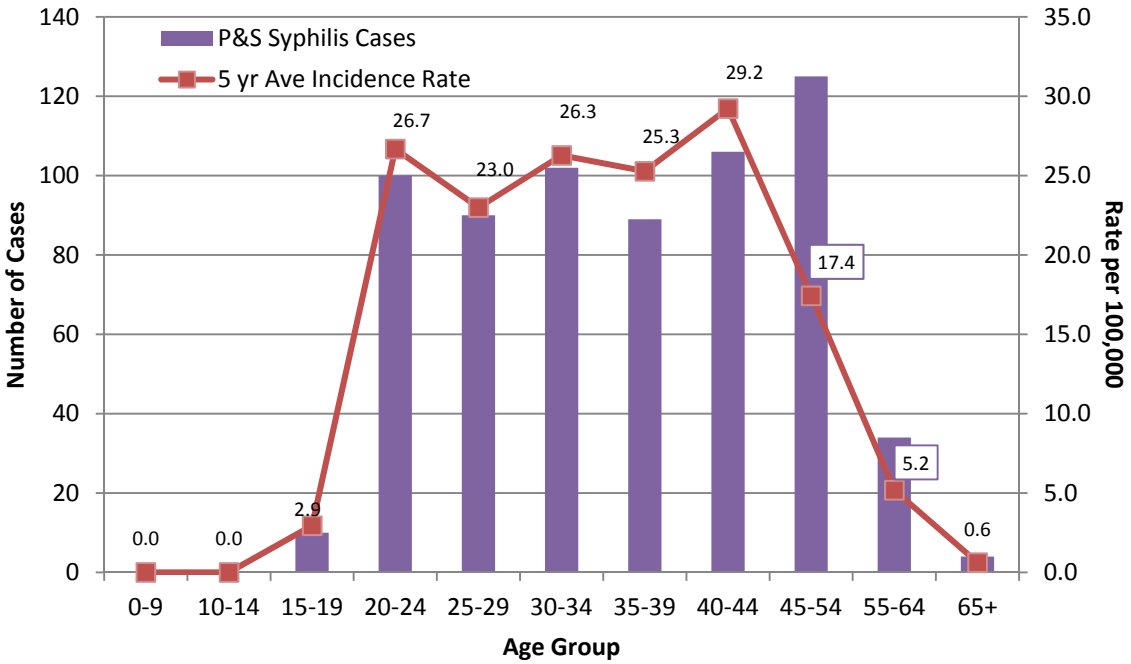
Figure 12: P&S Syphilis Cases and Rates by Gender and Age Group, Colorado, 2013



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 2009-13. 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 Cases and Rates by Age Group, Colorado, 2009-2013



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 Blacks, 4.9 per 100,000 in 2013. The next highest rate is among Hispanics of all races, 3.5 per 100,000. Although Non Hispanic Whites account for the majority of the P&S syphilis cases, 57.7 percent, their infection rate per 100,000 only higher than Non-Hispanic Asian/Pacific Islanders, 2.6 and 1.9 per 100,000, respectively, in 2013.

Figure 14: P&S Syphilis Incidence Rates by Race/Ethnicity, Colorado, 2013

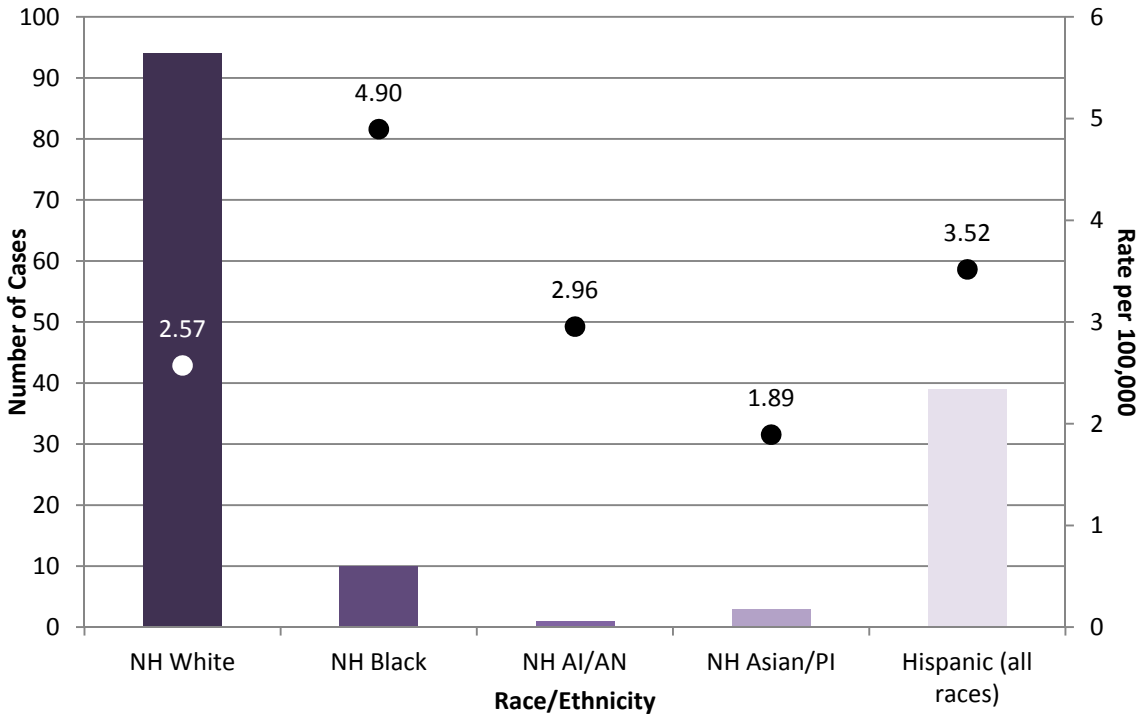
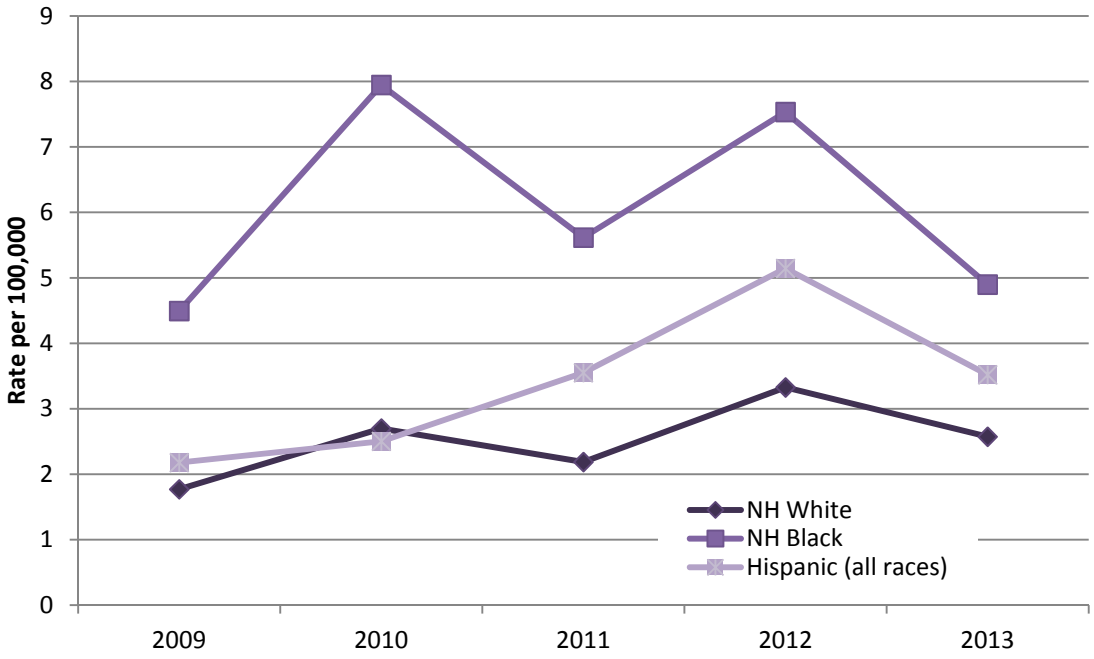


Figure 15 shows the 5 year trend in rates for Non Hispanic Whites, Non Hispanic Blacks and Hispanics. Other races were not displayed due to small numbers. The rate for Hispanics peaked in 2012 followed by a decrease in 2013. The rates for Non Hispanic Whites have been relatively stable and the rates for Non Hispanic Blacks been unstable, ranging from 4.5 per 100,000 in 2009 to 7.9 per 100,000 in 2010 with the remaining three rates in between.

Figure 15: P&S Syphilis Infection Rates by Race/Ethnicity, Colorado, 2009-2013



Figures 16 & 17 describe 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, 54.6 percent and 13.7 per 100,000 population in 2013. The next highest rate was Clear Creek County with a rate of 11.1; however this rate was produced from one case and is not reliable. The next three highest rates occurred in Archuleta, Elbert and Adams Counties (Table1). Use caution when interpreting some of these rates as the county may have a small population and small case numbers.

Figure 16: P&S Syphilis Incidence Rates by County Chart, Colorado, 2013

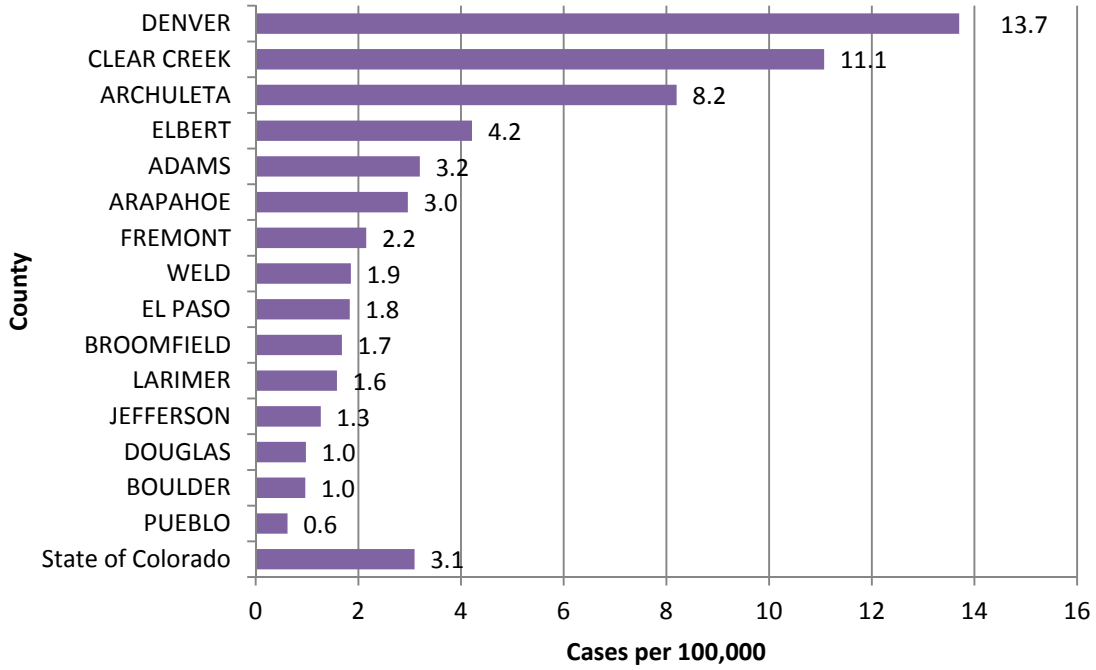


Figure 17: Primary & Secondary Syphilis Incidence Rate by County Map, Colorado, 2013

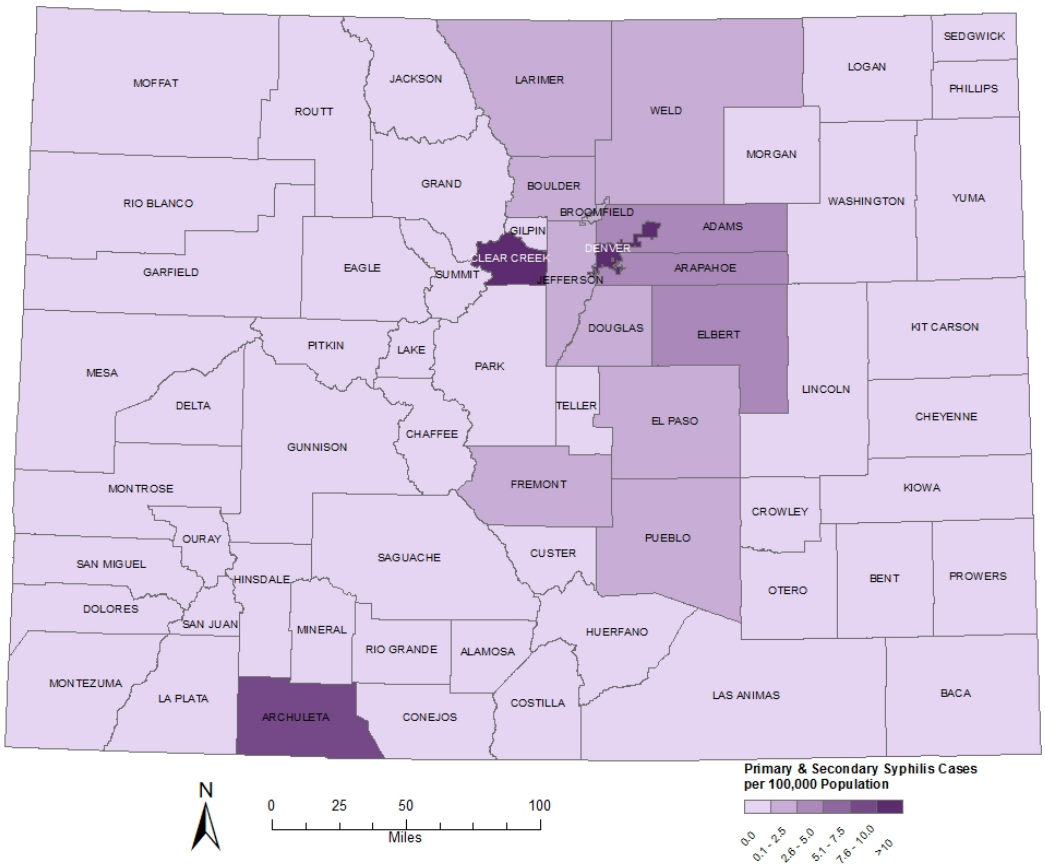
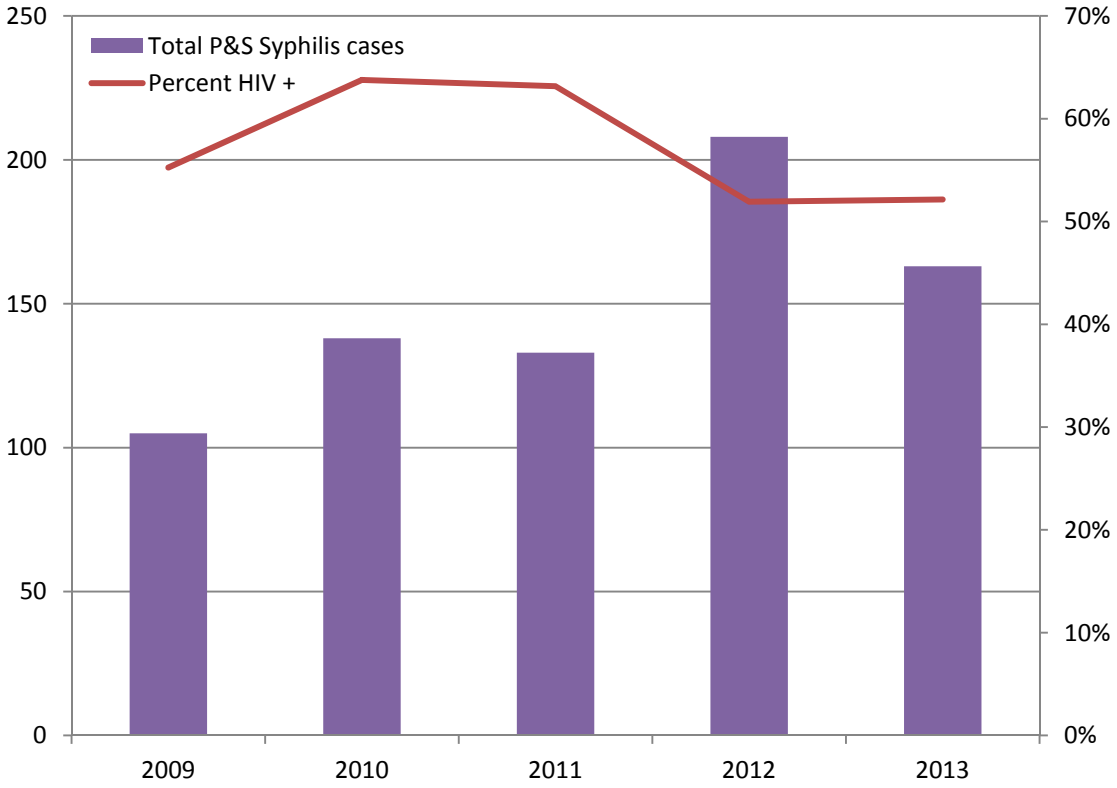


Figure 18 shows the rate of P&S syphilis and HIV co-infections for 2009-2013. The co-infection rate has ranged from 52 percent to 64 percent throughout this time period. The five-year average for P&S syphilis and HIV co-infections is 57 percent.

Figure 18: P&S Syphilis Cases and Percent HIV+ by Year of Diagnosis, Colorado, 2009-2013



Early Latent Syphilis Infections

There were 195 cases of early latent (EL) syphilis diagnosed and reported in 2013. Early latent syphilis is latent (no visible signs or symptoms) syphilis where the infection occurred within the past 12 months. From 2004 to 2013, Colorado reported a 6.8 times increase in early latent syphilis cases, as shown in Figure 19.

The syphilis epidemic is primarily occurring in Non Hispanic White males, representing 46.7 percent of reported early latent cases. Additionally, 87.7 percent of cases were among men who have sex with men (MSM). In 2013, 64.9 percent of early latent syphilis diagnoses who reported MSM risk were co-infected with HIV.

Figure 19: Early Latent Syphilis Cases and Incidence Rates, Colorado, 2004-2013

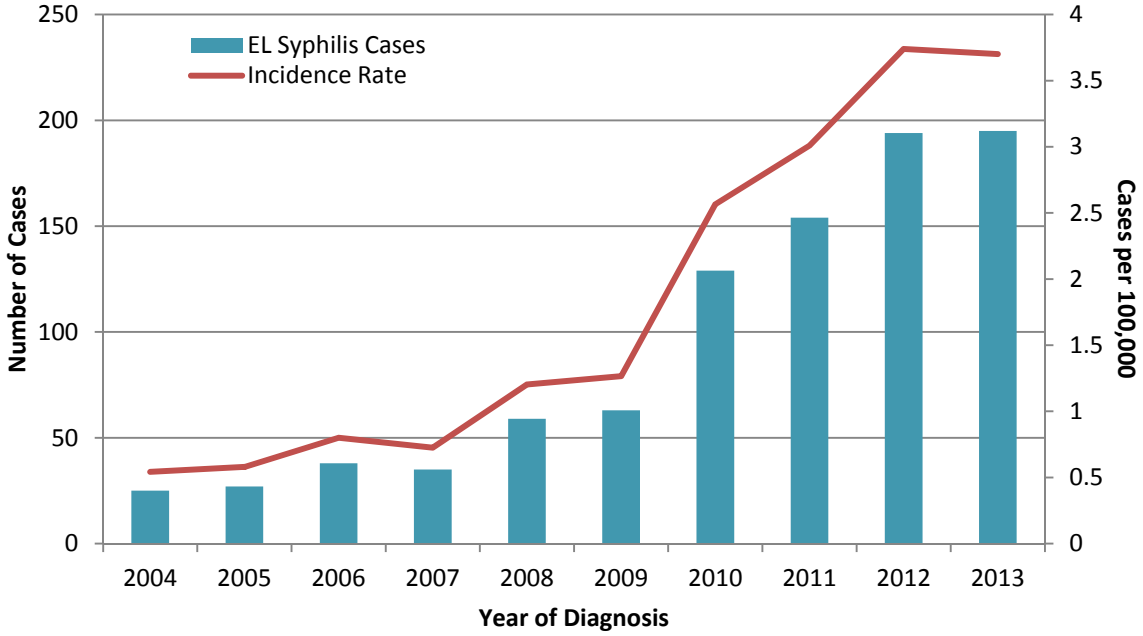
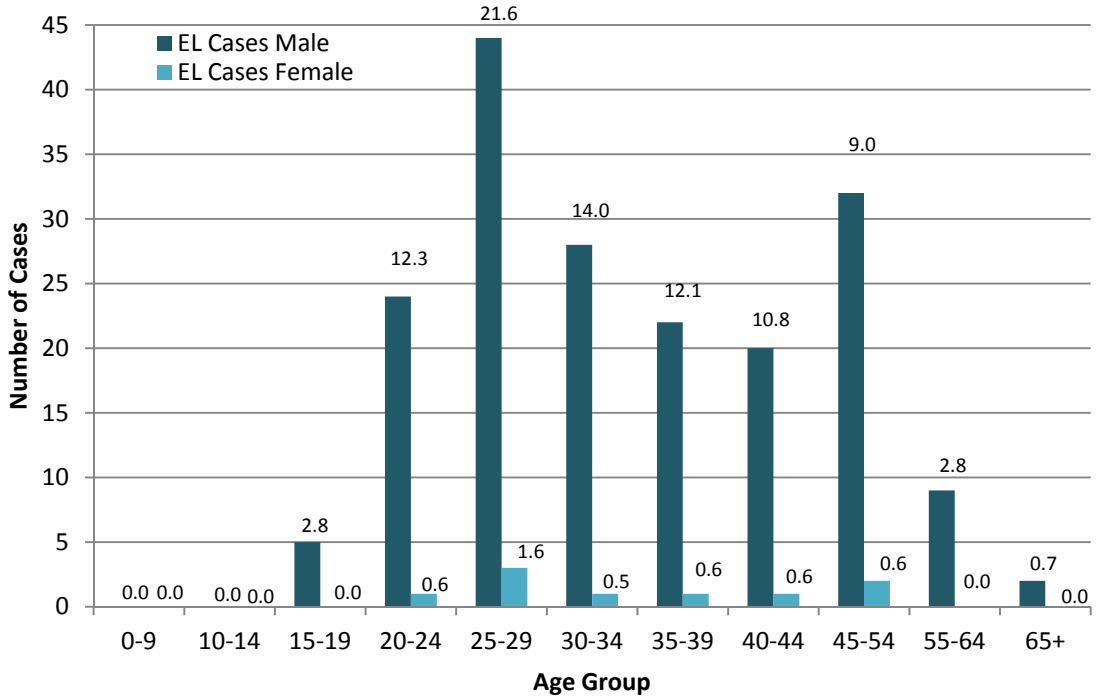


Figure 20 shows age and gender case counts for early latent syphilis diagnosed in 2013. The mean age at diagnosis is 35.6 with a range of 18 to 66 years of age. The highest rates were reported among 25-29 year old males whose infection rate was 21.6 cases per 100,000. In 2013, 36.9 percent of the cases occurred among 25-34 year old males; followed by 35-44 year old males which accounted for 21.5 percent of cases.

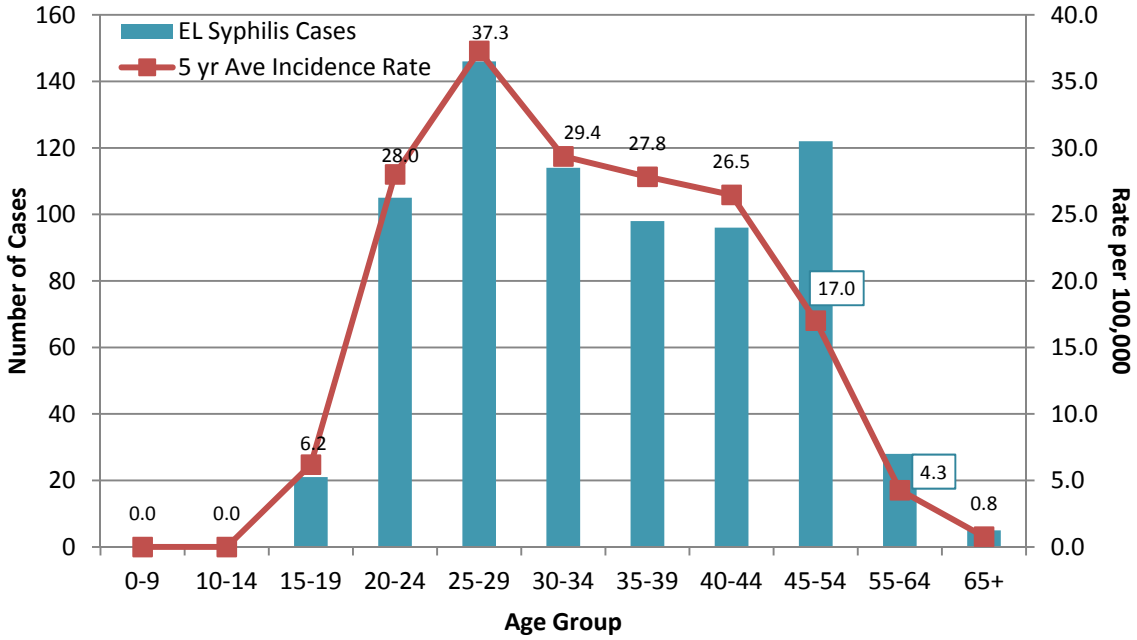
Figure 20: EL Syphilis Cases and Rates by Gender and Age Group, Colorado, 2013



Rates per 100,000 population on the top of the bar. Caution: these rates use small numbers and may be unstable.

Figure 21 below depicts age group case counts and rates for early latent syphilis diagnosed in 2009-13. This five-year average rate helps to stabilize the rate and thus produces a more accurate representation of the disease.

Figure 21: EL Syphilis 5-year Cases and Rates by Age Group, Colorado, 2009-2013



Five-year average incidence rate in Figure 21 is more stable than the 1-year incidence rate from Figure 20.

Figure 22 shows that the highest rate of early latent syphilis is seen among Non Hispanic Blacks, 14.2 per 100,000 in 2013. The next highest rate is among Non-Hispanic American Indian/Alaskan Native, 5.9 per 100,000. Although Non Hispanic Whites account for the majority of the early latent syphilis cases, 48.7 percent, their infection rate per 100,000 is just above the lowest rate belonging to Non-Hispanic Asian/Pacific Islanders, 2.6 and 2.5, respectively, in 2013.

Figure 22: EL Syphilis Incidence Rates by Race/Ethnicity, Colorado, 2013

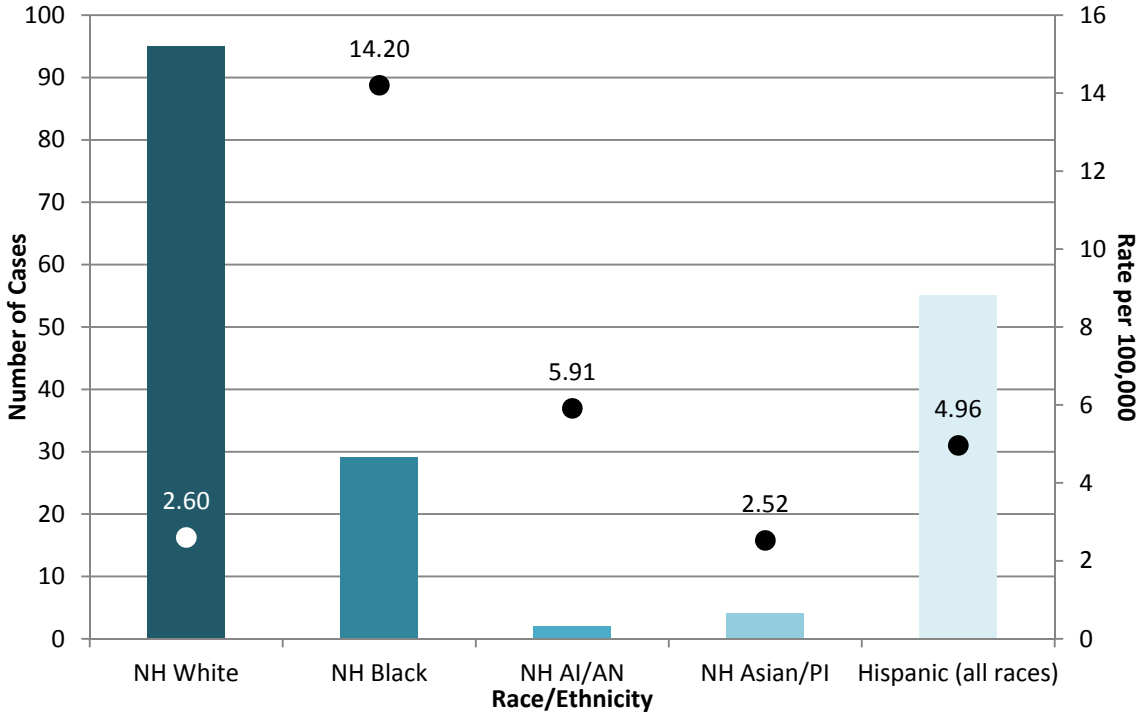
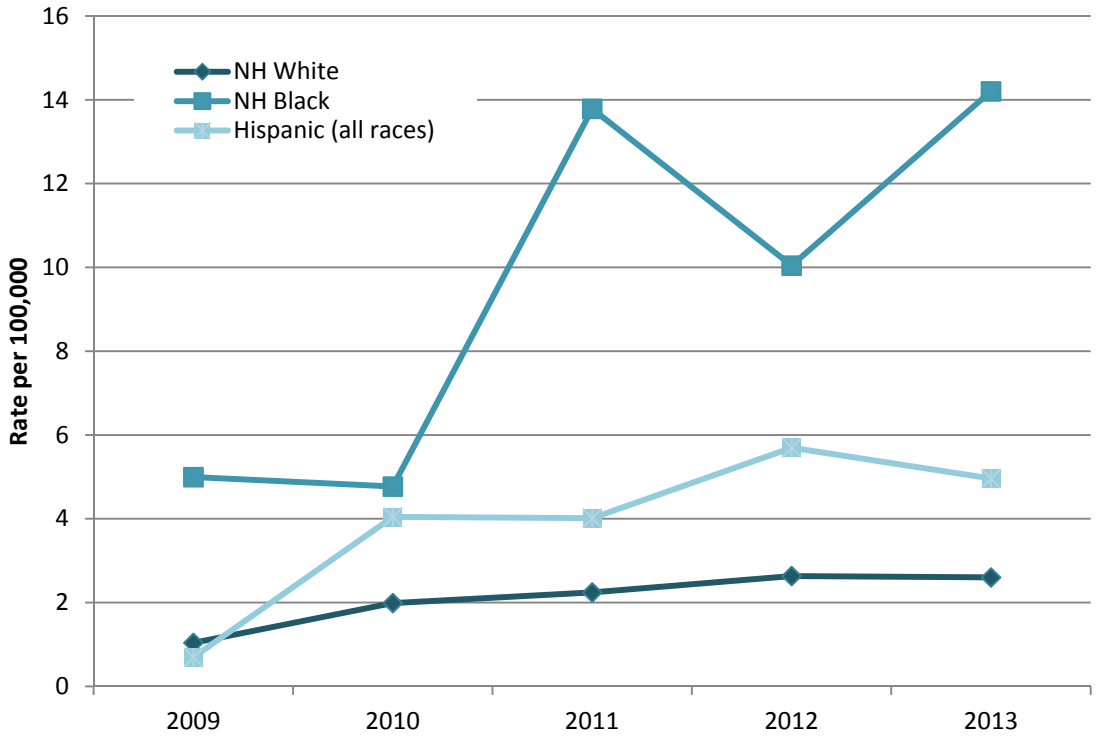


Figure 23 shows the 5 year trend in rates for Non Hispanic Whites, Non Hispanic Blacks and Hispanics. Other races were not displayed due to small numbers. The rates have been increasing for Non Hispanic Whites, Non Hispanic Blacks and Hispanics, the difference comes from how dramatic and steep that increase was. Non Hispanic Blacks have the sharpest increase and Non Hispanic Whites have the most stable rate with a slight increase over the five years.

Figure 23: EL Syphilis Infection Rates by Race/Ethnicity, Colorado, 2009-2013



Figures 24 & 25 describe 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 residents of 12 of 64 counties with Denver County reporting the highest proportion and rate of cases, 57.9 percent and 17.4 per 100,000 population in 2013. The next highest rate was Arapahoe County with a rate of 4.4 followed by Broomfield, Adams and Fremont Counties (Table 1). Use caution when interpreting some of these rates as the county may have a small population and small case numbers.

Figure 24: EL Syphilis Incidence Rates by County Chart, Colorado, 2013

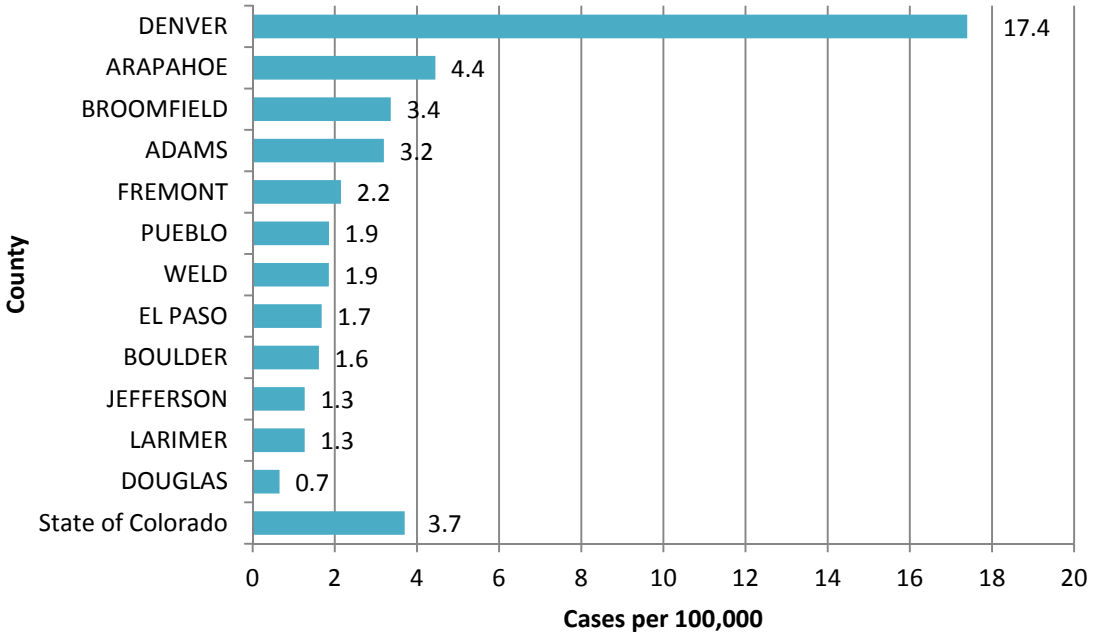


Figure 25: EL Syphilis Incidence Rate by County Map, Colorado, 2013

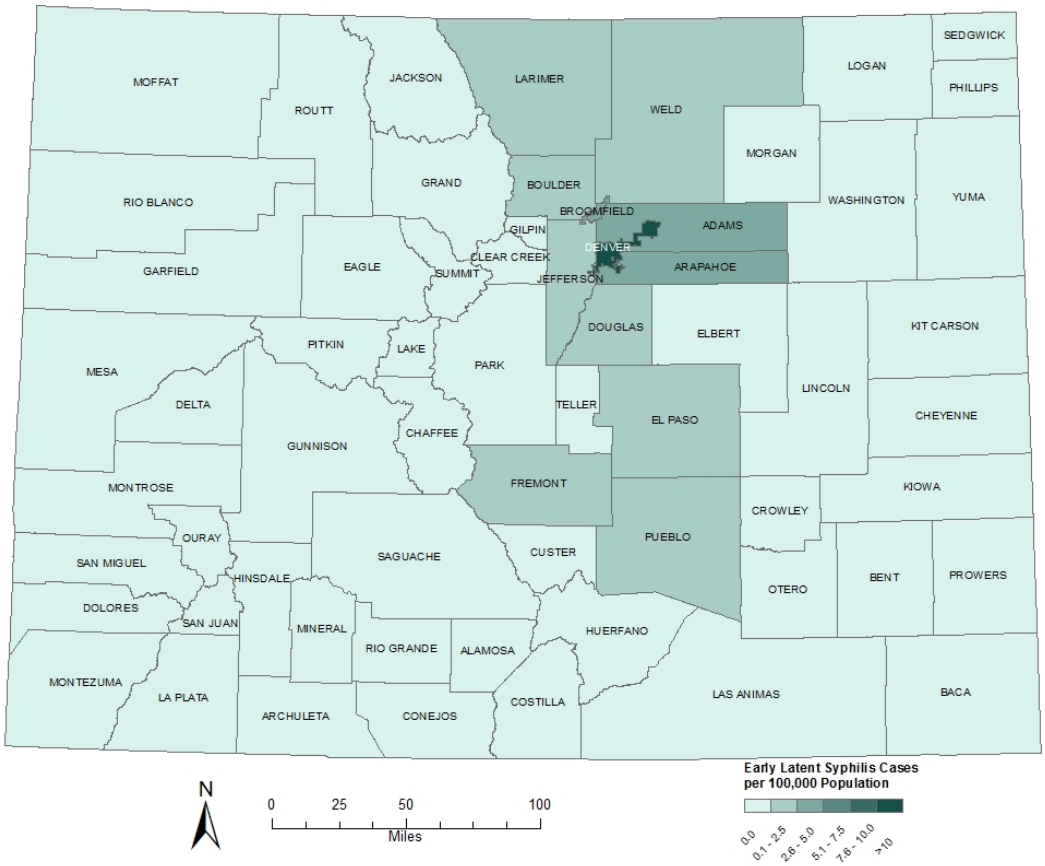
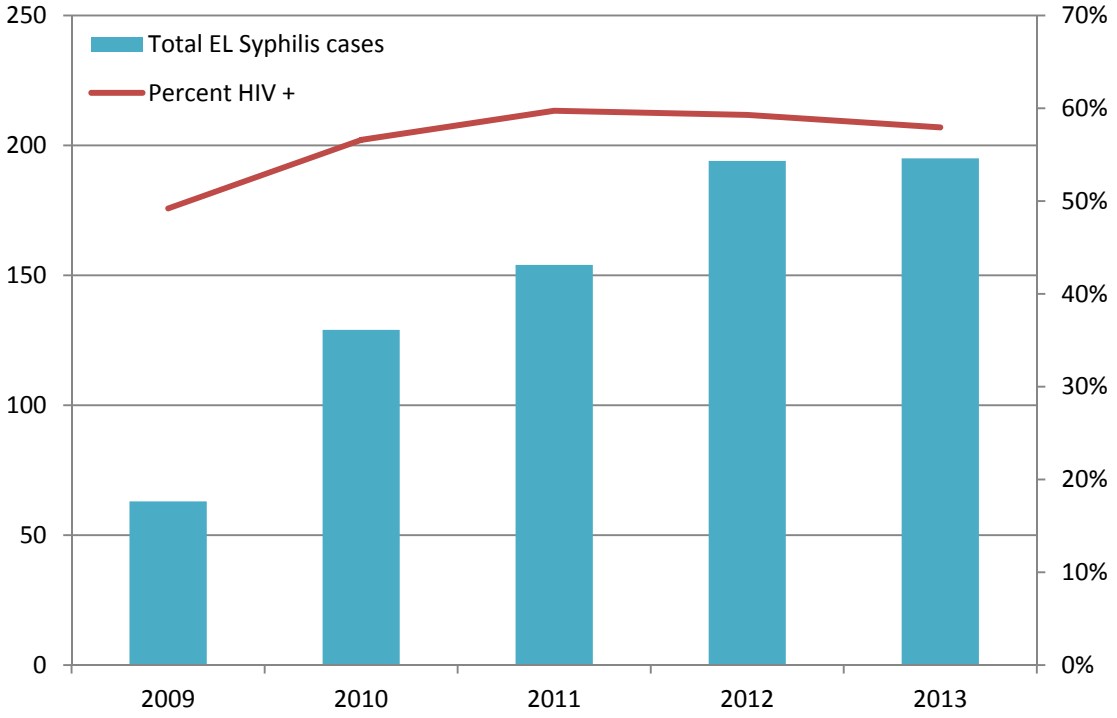


Figure 26 shows the rate of early latent syphilis and HIV co-infections for 2009-2013. The co-infection rate has ranged from 49 percent to 60 percent throughout this time period. The five-year average for early latent syphilis and HIV co-infections is 54 percent.

Figure 26: EL Syphilis Cases and Percent HIV+ by Year of Diagnosis, Colorado, 2009-2013



Data Tables

Table 1: Chlamydia, Gonorrhea and Early Syphilis Count and Incidence Rate with Ranking by County & Health Statistics Region (HSR), 2013

		Chlamydia				Gonorrhea				Primary & Secondary Syphilis				Early Latent Syphilis			
	2013 Popu-lation†	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:	**72,524**	**201**	**277.1**	---	**11**	**16**	**22.1**	---	**10**	**0**	**0.0**	---	**14**	**0**	**0.0**	**---**	**12**
Logan	22,450	67	298.4	17	---	5	22.3	18	---	0	0.0	16	---	0	0.0	13	---
Morgan	28,404	105	369.7	10	---	10	35.2	9	---	0	0.0	16	---	0	0.0	13	---
Phillips	4,356	5	114.8	51	---	1	23.0	17	---	0	0.0	16	---	0	0.0	13	---
Sedgwick	2,360	3	127.1	48	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Washington	4,803	1	20.8	58	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Yuma	10,151	20	197.0	38	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Region 2: Larimer	**315,988**	**910**	**288.0**	**21**	**10**	**58**	**18.4**	**21**	**13**	**5**	**1.6**	**11**	**7**	**4**	**1.3**	**10**	**8**
Region 3: Douglas	**305,963**	**505**	**165.1**	**41**	**20**	**34**	**11.1**	**27**	**15**	**3**	**1.0**	**14**	**11**	**2**	**0.7**	**12**	**11**
Region 4: El Paso	**655,044**	**2,596**	**396.3**	**7**	**5**	**535**	**81.7**	**2**	**2**	**12**	**1.8**	**12**	**8**	**11**	**1.7**	**8**	**7**
Region 5:	**39,090**	**69**	**176.5**	---	**18**	**14**	**35.8**	---	**6**	**1**	**2.6**	---	**14**	**0**	**0.0**	**---**	**12**
Cheyenne	1,890	4	211.6	33	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Elbert	23,733	28	118.0	50	---	9	37.9	7	---	1	4.2	16	---	0	0.0	13	---
Lincoln	8,037	27	335.9	14	---	4	49.8	6	---	0	0.0	16	---	0	0.0	13	---
Kit Carson	5,430	10	184.2	39	---	1	18.4	21	---	0	0.0	16	---	0	0.0	13	---
Region 6:	**68,074**	**173**	**254.1**	---	**12**	**10**	**14.7**	---	**14**	**0**	**0.0**	---	**14**	**0**	**0.0**	**---**	**12**
Baca	3,682	0	0.0	59	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Bent	5,688	18	316.5	15	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Crowley	5,322	9	169.1	40	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Huerfano	6,519	20	306.8	16	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Kiowa	1,423	0	0.0	59	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Las Animas	14,446	38	263.0	25	---	5	34.6	11	---	0	0.0	16	---	0	0.0	13	---
Otero	18,703	55	294.1	20	---	5	26.7	14	---	0	0.0	16	---	0	0.0	13	---
Prowers	12,291	33	268.5	24	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Region 7: Pueblo	**161,451**	**742**	**459.6**	**4**	**3**	**115**	**71.2**	**3**	**3**	**1**	**0.6**	**15**	**12**	**3**	**1.9**	**6**	**4**

		Chlamydia				Gonorrhea				Primary & Secondary Syphilis				Early Latent Syphilis			
	2013 Popu-lation†	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 8:	**46,780**	**152**	**324.9**	---	**8**	**2**	**4.3**	---	**21**	**0**	**0.0**	---	**3**	**0**	**0.0**	**---**	**12**
Alamosa	16,253	64	393.8	8	---	1	6.2	38	---	0	0.0	3	---	0	0.0	13	---
Conejos	8,277	18	217.5	31	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Costilla	3,518	13	369.5	11	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Mineral	721	0	0.0	59	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Rio Grande	11,803	52	440.6	5	---	1	8.5	33	---	0	0.0	2	---	0	0.0	13	---
Saguache	6,208	5	80.5	55	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Region 9:	**93,841**	**296**	**315.4**	---	**9**	**29**	**30.9**	---	**8**	**1**	**1.1**	---	**8**	**0**	**0.0**	**---**	**12**
Archuleta	12,194	18	147.6	45	---	3	24.6	16	---	1	8.2	16	---	0	0.0	13	---
Dolores	2,029	2	98.6	53	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
La Plata	53,284	152	285.3	22	---	19	35.7	8	---	0	0.0	16	---	0	0.0	13	---
Montezuma	25,642	124	483.6	2	---	7	27.3	13	---	0	0.0	5	---	0	0.0	13	---
San Juan	692	0	0.0	59	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Region 10:	**99,751**	**218**	**218.5**	---	**15**	**8**	**8.0**	---	**18**	**0**	**0.0**	---	**14**	**0**	**0.0**	**---**	**12**
Delta	30,483	74	242.8	28	---	4	13.1	25	---	0	0.0	16	---	0	0.0	13	---
Gunnison	15,507	33	212.8	32	---	1	6.4	37	---	0	0.0	16	---	0	0.0	13	---
Hinsdale	813	2	246.0	26	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Montrose	40,713	97	238.3	29	---	3	7.4	35	---	0	0.0	16	---	0	0.0	13	---
Ouray	4,557	1	21.9	57	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
San Miguel	7,678	11	143.3	46	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Region 11:	**44,788**	**97**	**216.6**	---	**16**	**2**	**4.5**	---	**20**	**0**	**0.0**	---	**14**	**0**	**0.0**	**---**	**12**
Jackson	1,365	0	0.0	59	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Moffat	13,103	39	297.6	18	---	1	7.6	34	---	0	0.0	16	---	0	0.0	13	---
Rio Blanco	6,807	11	161.6	42	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Routt	23,513	47	199.9	37	---	1	4.3	41	---	0	0.0	16	---	0	0.0	13	---
Region 12:	**170,079**	**418**	**245.8**	---	**14**	**15**	**8.8**	---	**17**	**0**	**0.0**	---	**12**	**0**	**0.0**	**---**	**12**
Eagle	52,460	111	211.6	33	---	5	9.5	31	---	0	0.0	16	---	0	0.0	13	---
Garfield	57,302	170	296.7	19	---	5	8.7	32	---	0	0.0	8	---	0	0.0	13	---
Grand	14,289	13	91.0	54	---	1	7.0	36	---	0	0.0	16	---	0	0.0	13	---
Pitkin	17,379	26	149.6	44	---	1	5.8	40	---	0	0.0	16	---	0	0.0	13	---
Summit	28,649	98	342.1	13	---	3	10.5	30	---	0	0.0	16	---	0	0.0	13	---
Region 13:	**76,552**	**135**	**176.4**	---	**19**	**6**	**7.8**	---	**19**	**1**	**1.3**	---	**14**	**1**	**1.3**	**---**	**8**
Chaffee	18,510	22	118.9	49	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---

		Chlamydia				Gonorrhea				Primary & Secondary Syphilis				Early Latent Syphilis			
	2013 Popu-lation†	Cases	Rate	County Rank*	HSR Rank ^	Cases	Rate	County Rank*	HSR Rank ^	Cases	Rate	County Rank*	HSR Rank ^	Cases	Rate	County Rank*	HSR Rank ^
Custer	4,285	0	0.0	59	---	0	0.0	42	---	0	0.0	16	---	0	0.0	13	---
Fremont	46,451	96	206.7	35	---	5	10.8	29	---	1	2.2	16	---	1	2.2	5	---
Lake	7,306	17	232.7	30	---	1	13.7	24	---	0	0.0	16	---	0	0.0	13	---
Region 14: Adams	**469,193**	**1,982**	**422.4**	**6**	**4**	**258**	**55.0**	**5**	**5**	**15**	**3.2**	**4**	**2**	**15**	**3.2**	**4**	**3**
Region 15: Arapahoe	**607,070**	**2,925**	**481.8**	**3**	**2**	**383**	**63.1**	**4**	**4**	**18**	**3.0**	**5**	**4**	**27**	**4.4**	**2**	**2**
Region 16:	**369,519**	**922**	**249.5**	---	**13**	**77**	**20.8**	---	**12**	**4**	**1.1**	---	**5**	**7**	**1.9**	**---**	**4**
Boulder	310,048	756	243.8	27	---	60	19.4	20	---	3	1.0	7	---	5	1.6	9	---
Broomfield	59,471	166	279.1	23	---	17	28.6	12	---	1	1.7	9	---	2	3.4	3	---
Region 17:	**54,028**	**65**	**120.3**	---	**21**	**6**	**11.1**	---	**15**	**1**	**1.9**	---	**14**	**0**	**0.0**	**---**	**12**
Clear Creek	9,031	9	99.7	52	---	1	11.1	27	---	1	11.1	16	---	0	0.0	13	---
Gilpin	5,601	8	142.8	47	---	1	17.9	23	---	0	0.0	16	---	0	0.0	13	---
Park	16,121	12	74.4	56	---	1	6.2	38	---	0	0.0	16	---	0	0.0	13	---
Teller	23,275	36	154.7	43	---	3	12.9	26	---	0	0.0	16	---	0	0.0	13	---
Region 18: Weld	**269,785**	**925**	**342.9**	**12**	**7**	**95**	**35.2**	**9**	**7**	**5**	**1.9**	**13**	**10**	**5**	**1.9**	**6**	**4**
Region 19: Mesa	**147,554**	**555**	**376.1**	**9**	**6**	**32**	**21.7**	**19**	**11**	**0**	**0.0**	**16**	**14**	**0**	**0.0**	**13**	**12**
Region 20: Denver	**649,495**	**5,380**	**828.3**	**1**	**1**	**984**	**151.5**	**1**	**1**	**89**	**13.7**	**1**	**1**	**113**	**17.4**	**1**	**1**
Region 21: Jefferson	**551,798**	**1,116**	**202.2**	**36**	**17**	**140**	**25.4**	**15**	**9**	**7**	**1.3**	**9**	**6**	**7**	**1.3**	**10**	**8**
Unknown	---	**4**	**---**	---	---	**1**	**---**	---	---	**0**	**---**	---	---	**0**	---	---	---
STATEWIDE TOTAL	**5,268,367**	**20,386**	**387.0**	---	---	**2,820**	**53.5**	---	---	**163**	**3.1**	---	---	**195**	**3.7**	---	---

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

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

†2013 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 2013.

Table 2: Chlamydia, Gonorrhea and Early Syphilis Cases Diagnosed by Demographic Characteristics, 2013

		Chlamydia			Gonorrhea			Primary & Secondary Syphilis			Early Latent Syphilis		
	2013 Population*	Cases	%	Rate†	Cases	%	Rate†	Cases	%	Rate†	Cases	%	Rate†
Total	5,268,367	20,386	100.0	387.0	2,820	100.0	53.5	163	100.0	3.1	195	100.0	3.7
Gender													
Male	2,646,446	6,050	29.7	228.6	1,577	55.9	59.6	159	97.5	6.0	186	95.4	7.0
Female	2,621,921	14,336	70.3	546.8	1,243	44.1	47.4	4	2.5	0.2	9	4.6	0.3
Race/Ethnicity													
Hispanic (all races)	1,108,428	4,389	21.5	396.0	764	27.1	68.9	39	23.9	3.5	55	28.2	5.0
NH White	3,653,972	5,086	24.9	139.2	868	30.8	23.8	94	57.7	2.6	95	48.7	2.6
NH Black	204,197	1,883	9.2	922.1	500	17.7	244.9	10	6.1	4.9	29	14.9	14.2
NH AI/AN	33,830	155	0.8	458.2	34	1.2	100.5	1	0.6	3.0	2	1.0	5.9
NH Asian/PI	158,438	211	1.0	133.2	32	1.1	20.2	3	1.8	1.9	4	2.1	2.5
NH Other	109,502	286	1.4	261.2	52	1.8	47.5	2	1.2	1.8	0	0.0	0.0
Unknown		8,376	41.1	-	570	20.2	-	14	8.6	-	10	5.1	-
Age Group													
0 to 9	690,619	4	0.0	0.6	2	0.1	0.3	0	0.0	0.0	0	0.0	0.0
10 to 14	348,251	145	0.7	41.6	10	0.4	2.9	0	0.0	0.0	0	0.0	0.0
15 to 19	339,507	5,317	26.1	1,566.1	459	16.3	135.2	1	0.6	0.3	5	2.6	1.5
20 to 24	374,846	8,057	39.5	2,149.4	978	34.7	260.9	33	20.2	8.8	25	12.8	6.7
25 to 29	391,452	3,679	18.0	939.8	591	21.0	151.0	26	16.0	6.6	47	24.1	12.0
30 to 34	388,234	1,723	8.5	443.8	337	12.0	86.8	26	16.0	6.7	29	14.9	7.5
35 to 39	352,127	742	3.6	210.7	184	6.5	52.3	17	10.4	4.8	23	11.8	6.5
40 to 44	362,664	359	1.8	99.0	107	3.8	29.5	22	13.5	6.1	21	10.8	5.8
45 to 49	343,623	173	0.8	50.3	71	2.5	20.7	19	11.7	5.5	15	7.7	4.4
50+	1,677,044	183	0.9	10.9	81	2.9	4.8	19	11.7	1.1	30	15.4	1.8
Unknown		4	0.0	-	0	0.0	-	0	0.0	-	0	0.0	-

*2013 Census Population Estimate †Rate per 100,000

Table 3: Chlamydia Demographic Characteristics by Gender, 2013

	Chlamydia											
	Male				Female				Total			
	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†
Total	2,646,446	6,050	100.0	228.6	2,621,921	14,336	100.0	546.8	5,268,367	20,386	100.0	387.0
Race/Ethnicity												
Hispanic (all races)	566,580	1,176	19.4	207.6	541,848	3,213	22.4	593.0	1,108,428	4,389	21.5	396.0
NH White	1,827,574	1,761	29.1	96.4	1,826,398	3,325	23.2	182.1	3,653,972	5,086	24.9	139.2
NH Black	108,771	701	11.6	644.5	95,426	1,182	8.2	1,238.7	204,197	1,883	9.2	922.1
NH AI/AN	17,136	44	0.7	256.8	16,694	111	0.8	664.9	33,830	155	0.8	458.2
NH Asian/PI	72,212	47	0.8	65.1	86,226	164	1.1	190.2	158,438	211	1.0	133.2
NH Other	54,173	83	1.4	153.2	55,329	203	1.4	366.9	109,502	286	1.4	261.2
Unknown		2,238	37.0	---		6,138	42.8	---		8,376	41.1	---
Age Group												
0 to 9	354,269	1	0.0	0.3	336,350	3	0.0	0.9	690,619	4	0.0	0.6
10 to 14	177,801	12	0.2	6.7	170,450	133	0.9	78.0	348,251	145	0.7	41.6
15 to 19	175,756	966	16.0	549.6	163,751	4,351	30.4	2,657.1	339,507	5,317	26.1	1,566.1
20 to 24	195,885	2,271	37.5	1,159.4	178,961	5,786	40.4	3,233.1	374,846	8,057	39.5	2,149.4
25 to 29	204,111	1,386	22.9	679.0	187,341	2,293	16.0	1,224.0	391,452	3,679	18.0	939.8
30 to 34	200,185	700	11.6	349.7	188,049	1,023	7.1	544.0	388,234	1,723	8.5	443.8
35 to 39	181,134	327	5.4	180.5	170,993	415	2.9	242.7	352,127	742	3.6	210.7
40 to 44	185,982	184	3.0	98.9	176,682	175	1.2	99.0	362,664	359	1.8	99.0
45 to 49	172,889	94	1.6	54.4	170,734	79	0.6	46.3	343,623	173	0.8	50.3
50+	798,434	108	1.8	13.5	878,610	75	0.5	8.5	1,677,044	183	0.9	10.9
Unknown		1	0.0	---		3	0.0	---	0	4	0.0	---

^2013 Census Population Estimate †Rate per 100,000

Table 4: Gonorrhea Demographic Characteristics by Gender, 2013

	Gonorrhea											
	Male				Female				Total			
	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†
Total	2,646,446	1,577	100.0	59.6	2,621,921	1,243	100.0	47.4	5,268,367	2,820	100.0	53.5
Race/Ethnicity												
Hispanic (all races)	566,580	398	25.2	70.2	541,848	366	29.4	67.5	1,108,428	764	27.1	68.9
NH White	1,827,574	546	34.6	29.9	1,826,398	322	25.9	17.6	3,653,972	868	30.8	23.8
NH Black	108,771	280	17.8	257.4	95,426	220	17.7	230.5	204,197	500	17.7	244.9
NH AI/AN	17,136	10	0.6	58.4	16,694	24	1.9	143.8	33,830	34	1.2	100.5
NH Asian/PI	72,212	21	1.3	29.1	86,226	11	0.9	12.8	158,438	32	1.1	20.2
NH Other	54,173	27	1.7	49.8	55,329	25	2.0	45.2	109,502	52	1.8	47.5
Unknown		295	18.7	-		275	22.1	-		570	20.2	-
Age Group												
0 to 9	354,269	1	0.1	0.3	336,350	1	0.1	0.3	690,619	2	0.1	0.3
10 to 14	177,801	0	0.0	0.0	170,450	10	0.8	5.9	348,251	10	0.4	2.9
15 to 19	175,756	141	8.9	80.2	163,751	318	25.6	194.2	339,507	459	16.3	135.2
20 to 24	195,885	506	32.1	258.3	178,961	472	38.0	263.7	374,846	978	34.7	260.9
25 to 29	204,111	362	23.0	177.4	187,341	229	18.4	122.2	391,452	591	21.0	151.0
30 to 34	200,185	231	14.6	115.4	188,049	106	8.5	56.4	388,234	337	12.0	86.8
35 to 39	181,134	120	7.6	66.2	170,993	64	5.1	37.4	352,127	184	6.5	52.3
40 to 44	185,982	88	5.6	47.3	176,682	19	1.5	10.8	362,664	107	3.8	29.5
45 to 49	172,889	58	3.7	33.5	170,734	13	1.0	7.6	343,623	71	2.5	20.7
50+	798,434	70	4.4	8.8	878,610	11	0.9	1.3	1,677,044	81	2.9	4.8
Unknown		0	0.0	-		0	0.0	-		0	0.0	-

^2013 Census Population Estimate †Rate per 100,000

Table 5: Primary and Secondary Syphilis Demographic Characteristics by Gender, 2013

	Primary and Secondary Syphilis											
	Male				Female				Total			
	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†
Total	2,646,446	159	100.0	6.0	2,621,921	4	100.0	0.2	5,268,367	163	100.0	3.1
Race/Ethnicity												
Hispanic (all races)	566,580	37	23.3	6.5	541,848	2	50.0	0.4	1,108,428	39	23.9	3.5
NH White	1,827,574	93	58.5	5.1	1,826,398	1	25.0	0.1	3,653,972	94	57.7	2.6
NH Black	108,771	10	6.3	9.2	95,426	0	0.0	0.0	204,197	10	6.1	4.9
NH AI/AN	17,136	1	0.6	5.8	16,694	0	0.0	0.0	33,830	1	0.6	3.0
NH Asian/PI	72,212	3	1.9	4.2	86,226	0	0.0	0.0	158,438	3	1.8	1.9
NH Other	54,173	2	1.3	3.7	55,329	0	0.0	0.0	109,502	2	1.2	1.8
Unknown		13	8.2	-		1	25.0	-		14	8.6	-
Age Group												
0 to 9	354,269	0	0.0	0.0	336,350	0	0.0	0.0	690,619	0	0.0	0.0
10 to 14	177,801	0	0.0	0.0	170,450	0	0.0	0.0	348,251	0	0.0	0.0
15 to 19	175,756	1	0.6	0.6	163,751	0	0.0	0.0	339,507	1	0.6	0.3
20 to 24	195,885	32	20.1	16.3	178,961	1	25.0	0.6	374,846	33	20.2	8.8
25 to 29	204,111	25	15.7	12.2	187,341	1	25.0	0.5	391,452	26	16.0	6.6
30 to 34	200,185	26	16.4	13.0	188,049	0	0.0	0.0	388,234	26	16.0	6.7
35 to 39	181,134	17	10.7	9.4	170,993	0	0.0	0.0	352,127	17	10.4	4.8
40 to 44	185,982	21	13.2	11.3	176,682	1	25.0	0.6	362,664	22	13.5	6.1
45 to 49	172,889	18	11.3	10.4	170,734	1	25.0	0.6	343,623	19	11.7	5.5
50+	798,434	19	11.9	2.4	878,610	0	0.0	0.0	1,677,044	19	11.7	1.1
Unknown		0	0.0	-		0	0.0	-		0	0.0	-

^2013 Census Population Estimate †Rate per 100,000

Table 6: Early Latent Syphilis Demographic Characteristics by Gender, 2013

	Early Latent Syphilis											
	Male				Female				Total			
	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†	2013 Population^	Cases	%	Rate†
Total	2,646,446	186	100.0	7.0	2,621,921	9	100.0	0.3	5,268,367	195	100.0	3.7
Race/Ethnicity												
Hispanic (all races)	566,580	51	27.4	9.0	541,848	4	44.4	0.7	1,108,428	55	28.2	5.0
NH White	1,827,574	91	48.9	5.0	1,826,398	4	44.4	0.2	3,653,972	95	48.7	2.6
NH Black	108,771	29	15.6	26.7	95,426	0	0.0	0.0	204,197	29	14.9	14.2
NH AI/AN	17,136	2	1.1	11.7	16,694	0	0.0	0.0	33,830	2	1.0	5.9
NH Asian/PI	72,212	4	2.2	5.5	86,226	0	0.0	0.0	158,438	4	2.1	2.5
NH Other	54,173	0	0.0	0.0	55,329	0	0.0	0.0	109,502	0	0.0	0.0
Unknown		9	4.8	-		1	11.1	-		10	5.1	-
Age Group												
0 to 9	354,269	0	0.0	0.0	336,350	0	0.0	0.0	690,619	0	0.0	0.0
10 to 14	177,801	0	0.0	0.0	170,450	0	0.0	0.0	348,251	0	0.0	0.0
15 to 19	175,756	5	2.7	2.8	163,751	0	0.0	0.0	339,507	5	2.6	1.5
20 to 24	195,885	24	12.9	12.3	178,961	1	11.1	0.6	374,846	25	12.8	6.7
25 to 29	204,111	44	23.7	21.6	187,341	3	33.3	1.6	391,452	47	24.1	12.0
30 to 34	200,185	28	15.1	14.0	188,049	1	11.1	0.5	388,234	29	14.9	7.5
35 to 39	181,134	22	11.8	12.1	170,993	1	11.1	0.6	352,127	23	11.8	6.5
40 to 44	185,982	20	10.8	10.8	176,682	1	11.1	0.6	362,664	21	10.8	5.8
45 to 49	172,889	14	7.5	8.1	170,734	1	11.1	0.6	343,623	15	7.7	4.4
50+	798,434	29	15.6	3.6	878,610	1	11.1	0.1	1,677,044	30	15.4	1.8
Unknown		0	0.0	-		0	0.0	-		0	0.0	-

^2013 Census Population Estimate †Rate per 100,000