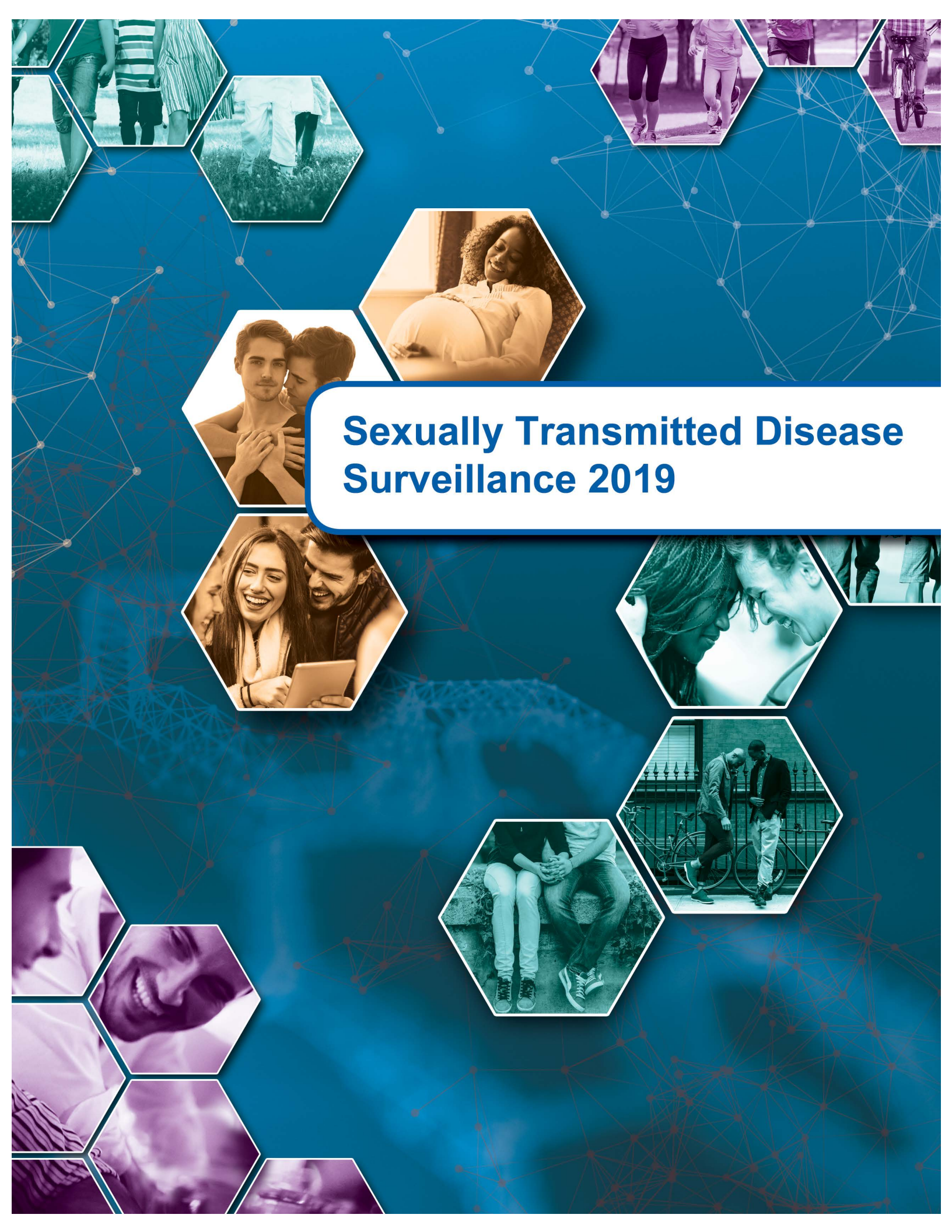




Sexually Transmitted Disease Surveillance 2019

Sexually Transmitted Disease Surveillance 2019

**Division of STD Prevention
April 2021**

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for HIV, Viral Hepatitis, STD, and TB Prevention
Division of STD Prevention
Atlanta, Georgia, 30329-4027

Announcement

Dear Partners in Prevention,

Today, during the second annual STD Awareness Week, CDC released Sexually Transmitted Disease (STD) Surveillance, 2019. Reported cases of chlamydia, gonorrhea, and syphilis have increased for the sixth consecutive year – reaching a new, all-time high. These infections remain common, costly, and challenge the health and wellness of millions of people across the United States.

In 2019, U.S. health departments reported:

- 1.8 million cases of chlamydia, an increase of nearly 20 percent since 2015;
- 616,392 cases of gonorrhea, an increase of more than 50 percent since 2015; and
- 129,813 cases of syphilis (all stages), an increase of more than 70 percent since 2015.

Congenital syphilis, an incredibly [harmful infection](#) has increased a staggering 279 percent since 2015. In 2019 alone, there were nearly 2,000 cases of congenital syphilis reported, including 128 deaths. In addition to infant morbidity and mortality, STIs can also lead to long-term health consequences, like infertility, and they can facilitate HIV transmission.

STIs are common, but not everyone is equally affected

Social inequity often leads to health inequity and, ultimately, manifests as health disparities. Even when STI rates reached historic lows, disparities have persisted because of the social, cultural, and economic conditions that make it more difficult for sexually active people to stay healthy. And while reported STDs have once again become increasingly common, racial and ethnic minority populations, adolescent and young adults, and gay and bisexual men still bear the brunt of these deeply entrenched social determinants of health.

Less than 20 years ago, gonorrhea rates in the U.S. were at historic lows, syphilis was close to elimination, and advances in chlamydia diagnostics made it easier to detect infections. That progress has been lost, due in part to challenges to our public health system.

COVID-19 highlights both needs and opportunities in the STI field

The 2019 numbers and trends presented here do not yet reflect the impact of the COVID-19 pandemic; however, we know from recent [STI field surveys](#) that COVID-19 is having a profound impact on state and local health STI programs. The recently published National Academies of Sciences, Engineering, and Medicine (NASEM) consensus study report, [Sexually Transmitted Infections: Adopting a Sexual Health Paradigm](#), highlights that the “COVID-19 pandemic has exposed weaknesses in public health preparedness due to weak infrastructure, an under-capacitated and under-resourced workforce, and limited surge capacity.” These are challenges STD prevention efforts have faced for many years. Preliminary 2020 data suggest we likely will see continued concerning trends which demand immediate attention, even in the current environment. We must continue to meet the challenges by finding new solutions; adapting quickly to meet the ever-changing landscape of the healthcare system; and collaborating to share information, strategies, and science.

Fortunately, this is also a time of momentum in our field. HHS’ [Sexually Transmitted Infections National Strategic Plan for the United States](#) – the nation’s first-ever plan of its kind for STIs – has provided a roadmap for public health, government, community-based organizations and other stakeholders to develop, enhance and expand STI prevention and care programs at the local, state, tribal and national levels. In addition, STI prevention partners across the nation are leveraging innovative approaches, like telehealth/telemedicine; partnerships with pharmacies and retail health clinics; and STI express clinics, to meet patients where they are with the testing and prevention services they urgently need.

During these unprecedented times, we recognize what we collectively face looks different than ever before, and that you are working through exceptional fatigue and exhaustion. We are lifted by your dedication and compassion, and though we can never thank you enough, we truly appreciate all you do every day.

It is our sincere hope these new data should create a sense of urgency and mobilize the resources needed, so that future reports can tell a different story.

Best regards,

Raul Romaguera, DMD, MPH

Acting Director, Division of STD Prevention

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

US Centers for Disease Control and Prevention

Foreword – Sexually Transmitted Disease Surveillance, 2019

Reported cases of chlamydia, gonorrhea, and syphilis have increased for the sixth consecutive year – reaching a new, all-time high. These infections remain common, costly, and challenge the health and wellness of millions of people across the United States.

In 2019, U.S. health departments reported:

- 1.8 million cases of chlamydia, an increase of nearly 20 percent since 2015;
- 616,392 cases of gonorrhea, an increase of more than 50 percent since 2015; and
- 129,813 cases of syphilis (all stages), an increase of more than 70 percent since 2015.

Congenital syphilis has increased a staggering 279 percent since 2015. In 2019 alone, there were nearly 2,000 cases of congenital syphilis reported, including 128 deaths. Syphilis among newborns can result in lifelong physical and neurologic problems; meaning bone deformity, severe anemia, and brain and nerve problems, including blindness, can become reality for affected infants.

In addition to infant morbidity and mortality, STIs can also lead to long-term health consequences, like infertility, and they can facilitate HIV transmission.

Social inequity often leads to health inequity and, ultimately, manifests as health disparities. Historically, health disparities have persisted because access to, and routine use of, quality health care, including STI prevention and treatment, have not been equitably distributed. Currently, many Americans, particularly racial and ethnic minority populations, and adolescent and young adults, have limited access to these services. In 2019, racial and ethnic minorities had STI rates several times higher than Whites, and youth aged 15-24 comprised significant proportions of reported cases across all groups. Gay, bisexual, and other men who have sex with men continue to experience higher rates of syphilis and gonorrhea than heterosexual men.

Less than 20 years ago, gonorrhea rates in the U.S. were at historic lows, syphilis was close to elimination, and advances in chlamydia diagnostics made it easier to detect infections. That progress has been lost, due in part to challenges to our public health system.

The 2019 numbers and trends presented here do not yet reflect the impact of the COVID-19 pandemic on STDs in the United States. Many STD prevention staff have been called to the front lines of the nation's public health response to COVID-19, and health departments have had to adjust resources accordingly. Fewer STI tests are being performed in health care clinics as people heed safe-at-home guidance and clinics have reduced hours, or even temporarily closed, as a result. The recently published National Academies of Sciences, Engineering, and Medicine (NASEM) consensus study report, [*Sexually Transmitted Infections: Adopting a Sexual Health Paradigm*](#), highlights that the "COVID-19 pandemic has exposed weaknesses in public health preparedness due to weak infrastructure, an under-capacitated and under-resourced workforce, and limited surge capacity." These are challenges STD prevention efforts have faced for many years. Preliminary 2020 data suggest we likely will see continued concerning trends which demand immediate attention, even in the current environment. We must continue to meet the challenges by finding new solutions; adapting quickly to meet the ever-changing landscape of the healthcare system; and collaborating to share information, strategies, and science.

Fortunately, this is also a time of momentum in our field. HHS' [*Sexually Transmitted Infections National Strategic Plan for the United States*](#) – the nation's first-ever plan of its kind for STIs – has provided a roadmap for public health, government, community-based organizations, and other stakeholders to develop, enhance, and expand STI prevention and care programs at the local, state, tribal, and national levels. In addition, STI prevention partners across the nation are leveraging innovative approaches, like telehealth/telemedicine; partnerships with pharmacies and retail health clinics; and STI express clinics, to meet patients where they are with the testing and prevention services they urgently need.

While these times may be unprecedented, with the help of our partners and the STI field, we will continue to rise to the challenge – and protect the nation's health. It is our sincere hope that the latest national data on reported STDs will create a sense of urgency around this escalating problem and mobilize resources so that future reports can highlight renewed progress.

Raul Romaguera, DMD, MPH

Acting Director, Division of STD Prevention

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

US Centers for Disease Control and Prevention

National Overview – Sexually Transmitted Disease Surveillance, 2019

As noted in the 2021 National Academies of Sciences Engineering and Medicine report, [Sexually Transmitted Infections: Adopting a Sexual Health Paradigm](#), surveillance is key to understanding the magnitude of sexually transmitted infections in the United States and in subpopulations that are most affected.¹ The 2019 STD Surveillance Report provides trends in STDs to describe current epidemiology of nationally notifiable STDs and inform prevention and control strategies. This overview summarizes national surveillance data for 2019 on the three notifiable diseases for which there are federally funded control programs: chlamydia, gonorrhea, and syphilis.

CHLAMYDIA

In 2019, a total of 1,808,703 cases of *Chlamydia trachomatis* infection were reported to the CDC, making it the most common notifiable condition in the United States for that year. This case count corresponds to a rate of 552.8 cases per 100,000 population, an increase of 2.8% compared with the rate in 2018. During 2018–2019, rates of reported chlamydia increased among both males and females, in all regions of the United States, and among all racial/Hispanic ethnicity groups.

Although rates of reported cases among men are generally lower than rates among women, reflecting the larger number of women screened for this infection, rates among men increased 32.1% during 2015–2019. Increases in rates among men may reflect an increased number of men, including gay, bisexual, and other men who have sex with men (MSM), being tested and diagnosed with a chlamydial infection due to increased availability of urine testing and extragenital screening, increased transmission among men, or both.

Rates of reported chlamydia are highest among adolescents and young adults. In 2019, almost two-thirds (61.0%) of all reported chlamydia cases were among persons aged 15–24 years. Among females aged 15–24 years, the population targeted for chlamydia screening, the overall rate of reported cases of chlamydia was 3,728.1 cases per 100,000 females, an increase of 10.0% from 2015.

GONORRHEA

In 2019, a total of 616,392 cases of gonorrhea were reported to the CDC, making it the second most common notifiable condition in the United States for that year. Rates of reported gonorrhea have increased 92.0% since the historic low in 2009. During 2018–2019, the overall rate of reported gonorrhea increased 5.7%. Rates increased among both males and females, in all regions of the United States, and among all racial/Hispanic ethnicity groups.

Since 2013, the rate of reported gonorrhea has been higher among men compared to women. Among men, the rate of reported gonorrhea increased 5.9% during 2018–2019 and 60.6% during 2015–2019. Rates among women increased 5.1% during 2018–2019 and 43.6% during 2015–2019. The higher case rate among men and the magnitude of recent increases suggests either increased transmission, increased case ascertainment (e.g., through increased extra-genital screening among MSM), or both. The concurrent increase in cases reported among women suggests parallel increases in heterosexual transmission, increased screening among women, or both. Enhanced data on a representative sample of gonorrhea cases from selected jurisdictions participating in a sentinel surveillance system, the STD Surveillance Network (SSuN), suggest that estimated rates of reported gonorrhea among MSM are 42 times the estimated rate among men who have sex with women only (MSW); however, increases in rates of reported gonorrhea among MSM appear to have slowed in the past several years.

ANTIBIOTIC RESISTANT GONORRHEA

Gonorrhea can quickly develop resistance to antibiotics used to treat infection, and in 2019, more than half of all infections were estimated to be resistant to at least one antibiotic. Since 2010, almost all circulating strains in the United States, based on gonococcal isolates collected through sentinel surveillance in the Gonococcal Isolate Surveillance Project (GISP), remain susceptible to ceftriaxone, the primary treatment for gonorrhea; only 0.1% of isolates displayed elevated ceftriaxone minimum

inhibitory concentrations (MICs) in 2019. In 2019, 5.1% of isolates had elevated azithromycin MICs; the proportion was higher among MSM compared to MSW (8.8% vs 3.3%). In 2019, the prevalence of ciprofloxacin resistance also continued to increase to 35.4%, the highest recorded in GISP. Continued monitoring of susceptibility patterns to antibiotics is critical to inform gonorrhea treatment guidelines.

In selected jurisdictions participating in a sentinel surveillance system, the STD Surveillance Network, most reported gonorrhea cases received the recommended treatment in 2019. In December of 2020, CDC released updated gonorrhea treatment guidelines, recommending a single 500 mg intramuscular dose of ceftriaxone for uncomplicated gonorrhea.² Continued surveillance of treatment practices is a critical public health priority to help assure that patients receive the highest quality of care, and to address the emerging threat of antimicrobial-resistant gonorrhea.

SYPHILIS

In 2019, 129,813 cases of all stages of syphilis, were reported, including 38,992 cases of primary and secondary (P&S) syphilis, the most infectious stages of the disease. Since reaching a historic low in 2000 and 2001, the rate of P&S syphilis has increased almost every year, increasing 11.2% during 2018–2019. Rates increased among both males and females, in all regions of the United States, and among all racial/Hispanic ethnicity groups.

Since 2000, rates of P&S syphilis have increased among men, likely attributable to increases in cases among MSM; however, increases among MSM may be slowing. In jurisdictions with consistent collection of sex of sex partners, case counts among MSM were stable during 2018–2019. Still, MSM are disproportionately impacted, accounting for a majority (56.7%) of all male P&S syphilis cases in 2019. Although rates of P&S syphilis are lower among women, rates have increased substantially in recent years, increasing 30.0% during 2018–2019 and 178.6% during 2015–2019, suggesting the heterosexual syphilis epidemic continues to rapidly increase.

CONGENITAL SYPHILIS

The 2013 rate of congenital syphilis (9.2 cases per 100,000 live births) marked the first increase in congenital syphilis since 2008. Since 2013, the rate of congenital syphilis has increased each year. In 2019, 1,870 cases of congenital syphilis were reported. Although the majority of cases were reported from a few states, 44 jurisdictions (43 states and the District of Columbia) reported at least one case of congenital syphilis in 2019. The national rate of 48.5 cases per 100,000 live births in 2019 represents a 41.4% increase relative to 2018 and 291.1% increase relative to 2015.

During 2018–2019 the number of syphilitic stillbirths increased (from 79 to 94 stillbirths), as did the number of congenital syphilis related infant deaths (from 15 to 34 deaths). In 2019, the most common missed congenital syphilis prevention opportunity was a lack of adequate maternal syphilis treatment despite receipt of a timely syphilis diagnosis (40.2%). The second most common missed congenital syphilis prevention opportunity in 2019 was a lack of timely prenatal care and subsequent lack of timely syphilis testing (36.3%).

DISPARITIES IN STDs

As in past years, there were significant disparities in rates of reported STDs. In 2019, over half (55.4%) of reported cases of STDs were among adolescents and young adults aged 15–24 years. Disparities continue to persist in rates of reported STDs among some racial minority or Hispanic groups when compared with rates among non-Hispanic Whites. In 2019, 30.6% of all cases of chlamydia, gonorrhea, and P&S syphilis were among non-Hispanic Blacks, even though they made up only approximately 12.5% of the US population. MSM are disproportionately impacted by STDs, including P&S syphilis and gonorrhea.

It is important to note that these disparities are unlikely explained by differences in sexual behavior and rather reflect differential access to quality sexual health care, as well as differences in sexual network characteristics. For example, in communities with higher prevalence of STDs, with each sexual encounter, people face a greater chance of encountering an infected partner than those in lower prevalence settings do, regardless of similar sexual behavior patterns. Acknowledging inequities in STD rates is a critical first step toward empowering affected groups and the public health community to collaborate in addressing systemic

inequities in the burden of disease — with the ultimate goal of minimizing the health impacts of STDs on individuals and populations.

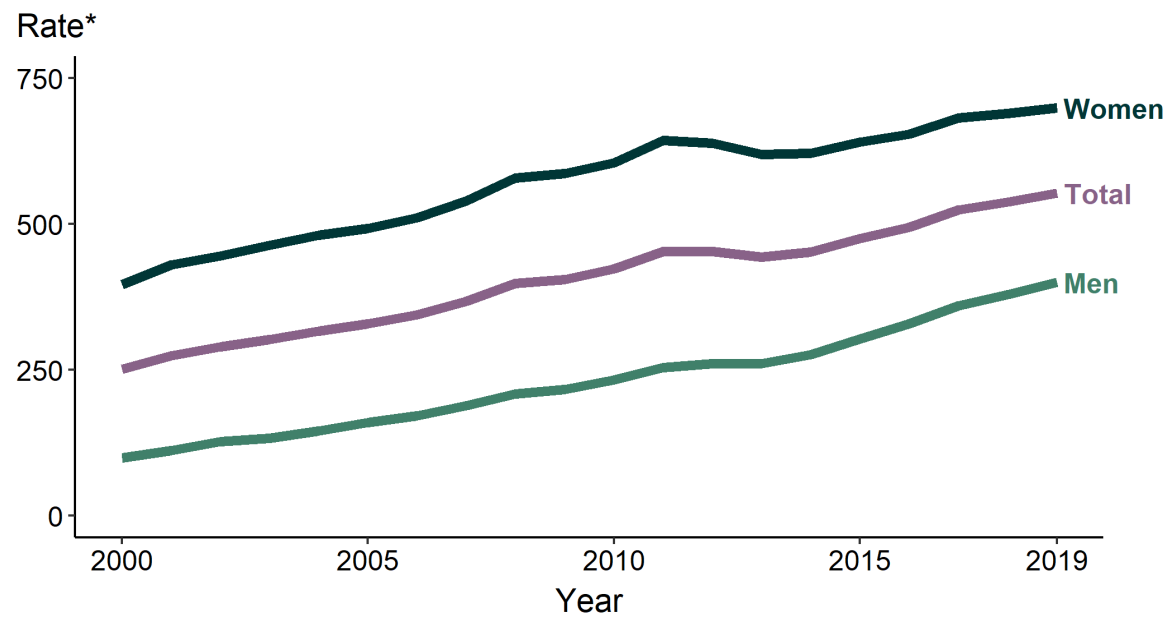
REFERENCES

1. National Academies of Sciences, Engineering, and Medicine 2021. Sexually Transmitted Infections: Adopting a Sexual Health Paradigm. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25955>
2. St. Cyr S, Barbee L, Workowski KA, et al. Update to CDC's Treatment Guidelines for Gonococcal Infection, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1911–1916. DOI: <https://dx.doi.org/10.15585/mmwr.mm6950a6>

Figures

These figures display trends for STDs in the United States through 2019. Data presented include case reports provided to CDC through the National Notifiable Diseases Surveillance System (NNDSS) and data collected through projects and programs that monitor STDs in various settings, including the National Job Training Program (NJTP), the STD Surveillance Network (SSuN), and the Gonococcal Isolate Surveillance Project (GISP).

Chlamydia — Rates of Reported Cases by Sex, United States, 2000–2019

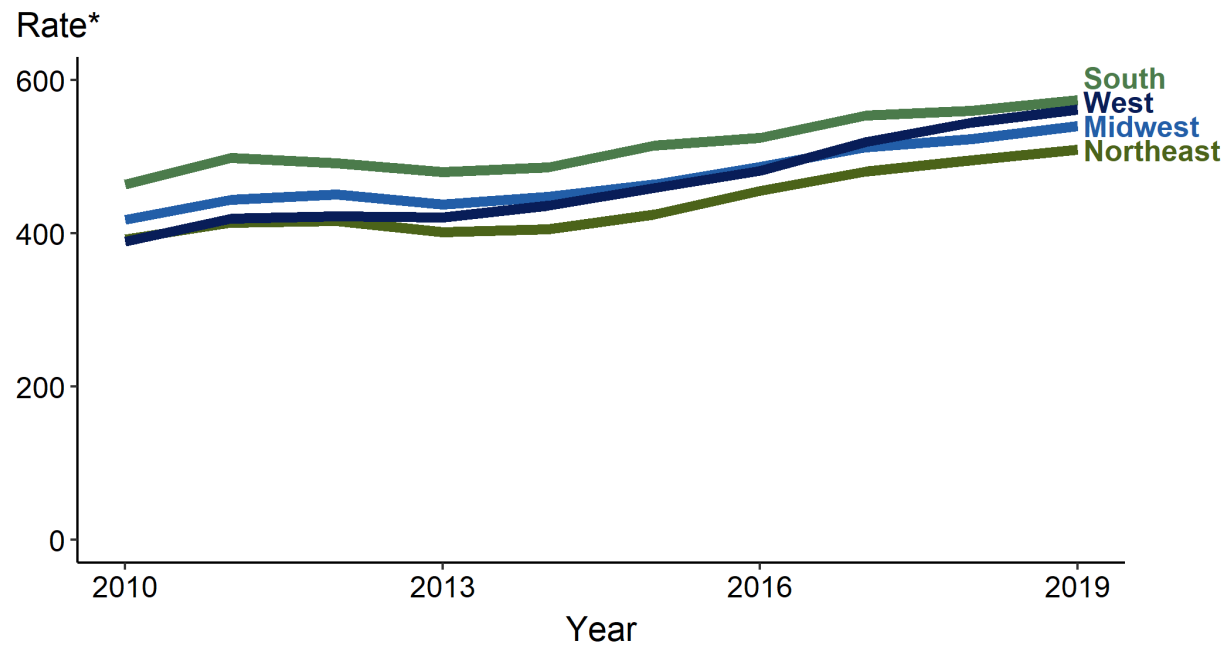


* Per 100,000



In 2019, 1,808,703 chlamydial infections were reported to CDC in 50 states and the District of Columbia. This case count corresponds to a rate of 552.8 cases per 100,000 population, an increase of 2.8% from 2018. During 2018–2019, the rate of reported chlamydia among males increased 5.5% (from 378.9 to 399.9 cases per 100,000 males) and the rate among females increased 1.3% (from 689.6 to 698.9 cases per 100,000 females).

Chlamydia — Rates of Reported Cases by Region, United States, 2010–2019

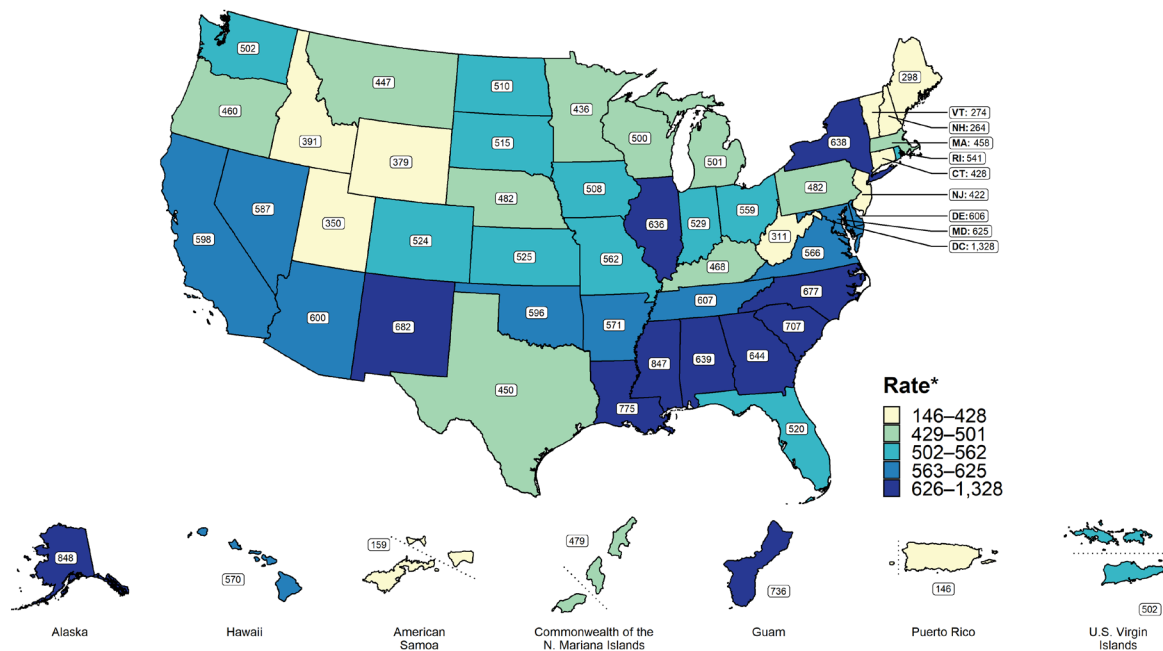


* Per 100,000



In 2019, rates of reported cases of chlamydia were highest in the South (573.9 cases per 100,000; 2.4% increase from 2018), followed by the West (561.6 per 100,000; 3.2% increase from 2018), Midwest (540.1 per 100,000; 3.3% increase from 2018), and Northeast (509.4 per 100,000; 2.8% increase from 2018).

Chlamydia — Rates of Reported Cases by State, United States and Territories, 2019

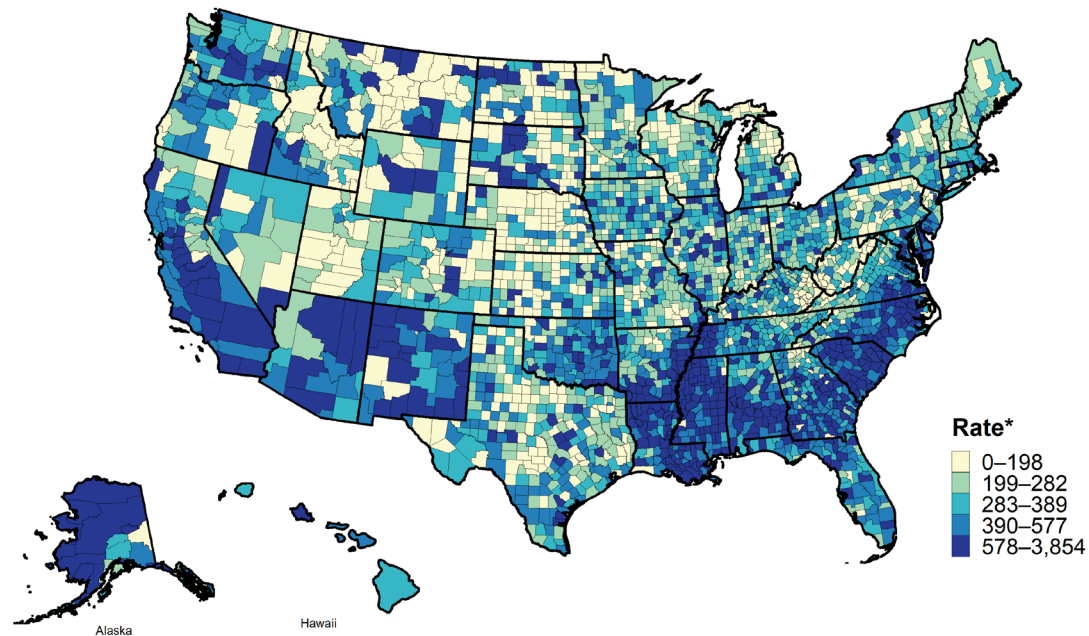


* Per 100,000



In 2019, rates of reported cases of chlamydia by state ranged from 263.7 cases per 100,000 population in New Hampshire to 848.1 cases per 100,000 population in Alaska; the rate for the District of Columbia was 1,327.8 cases per 100,000 population.

Chlamydia — Rates of Reported Cases by County, United States, 2019

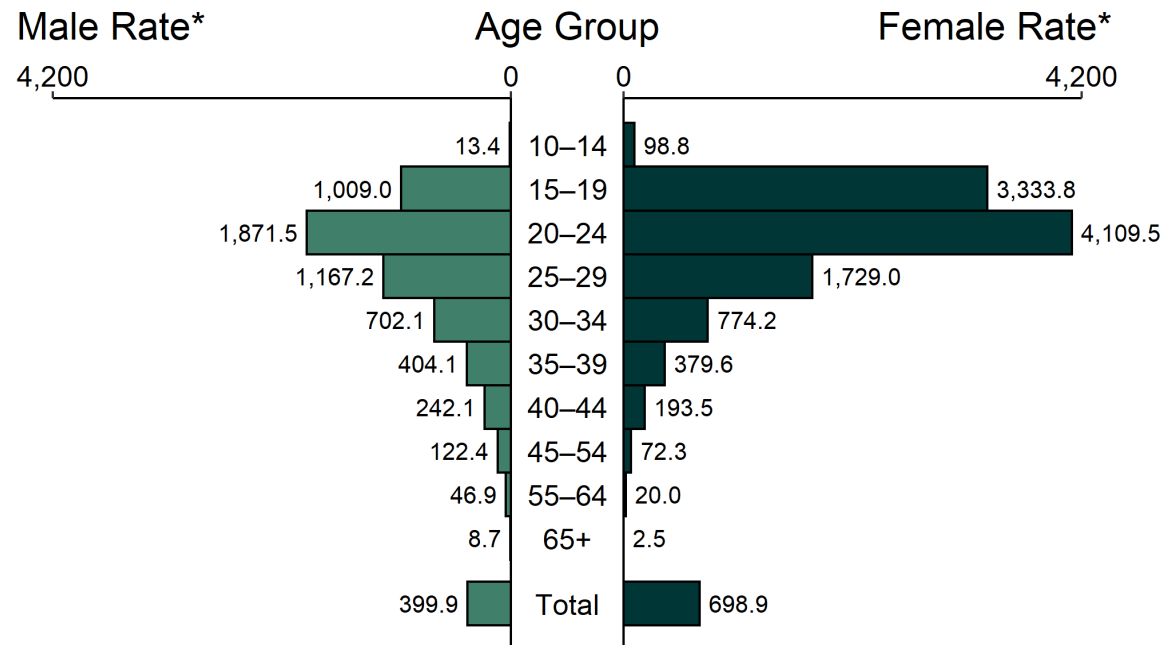


* Per 100,000



In 2019, 98.8% of all counties in the United States reported at least one case of chlamydia. Out of 3,142 counties and independent cities, 96 made up approximately 50% of all reported cases of chlamydia.

Chlamydia — Rates of Reported Cases by Age Group and Sex, United States, 2019



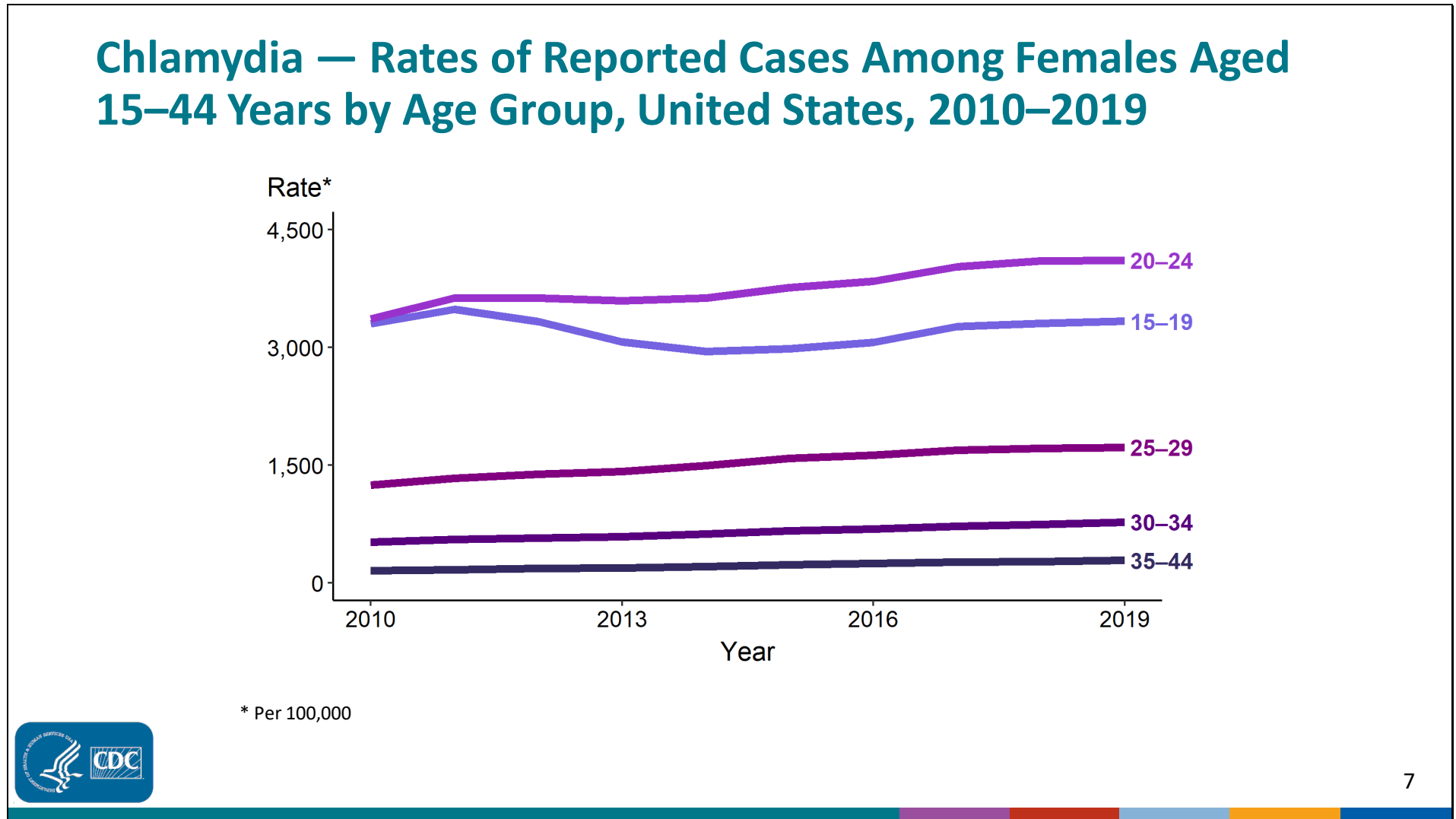
* Per 100,000

NOTE: Total includes all ages.



The highest age-specific rates of reported cases of chlamydia in 2019 were among females aged 15–19 years (3,333.8 cases per 100,000 females) and 20–24 years (4,109.5 cases per 100,000 females). The age-specific rates of reported cases of chlamydia among males, although substantially lower than rates among females, were highest in those aged 20–24 years (1,871.5 cases per 100,000 males).

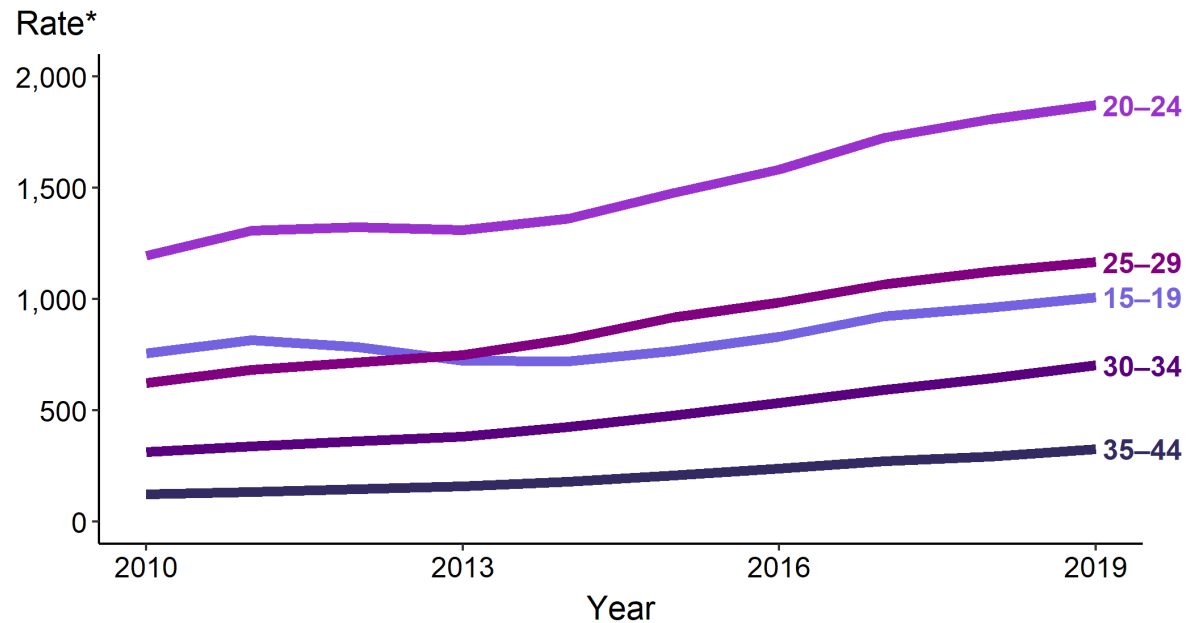
Chlamydia — Rates of Reported Cases Among Females Aged 15–44 Years by Age Group, United States, 2010–2019



The rate of reported chlamydia among 15–19-year-old females increased 0.7% during 2018–2019, with a total increase of 11.6% during 2015–2019 (2,986.5 to 3,333.8 cases per 100,000 females). The rate among 20–24-year-old females increased 0.2% during 2018–2019, with a total increase of 9.2% during 2015–2019 (3,764.4 to 4,109.5 cases per 100,000 females).

Chlamydia — Rates of Reported Cases Among Males Aged 15–44 Years by Age Group, United States, 2010–2019

Chlamydia — Rates of Reported Cases Among Males Aged 15–44 Years by Age Group, United States, 2010–2019



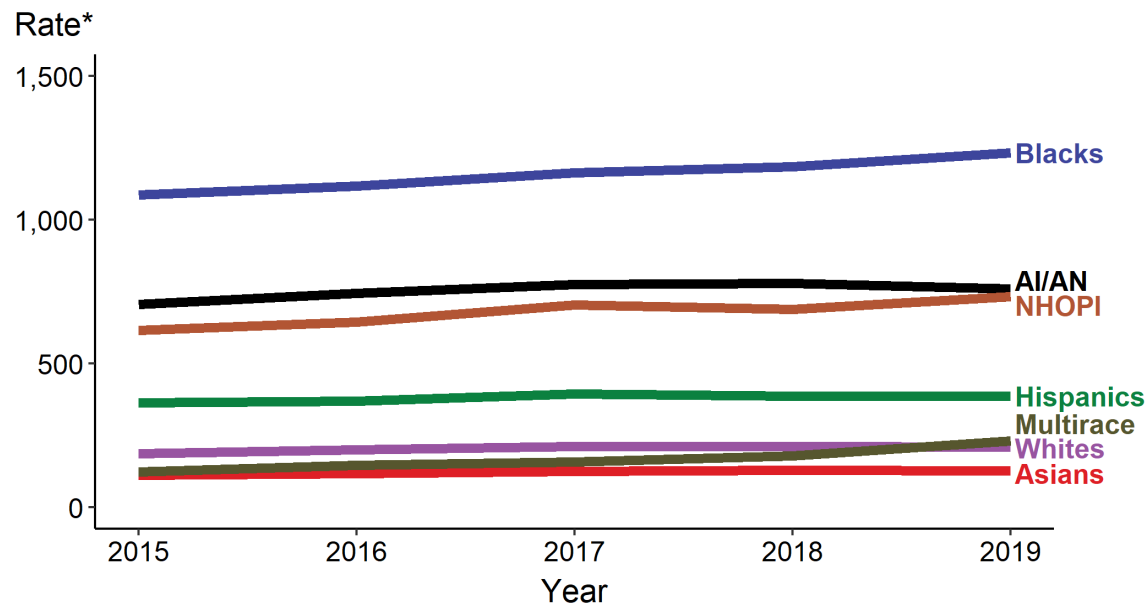
* Per 100,000



The rate of reported chlamydia among 15–19-year-old males increased 5.0% during 2018–2019, with a total increase of 31.6% during 2015–2019 (from 766.6 to 1,009.0 cases per 100,000 males). The rate among 20–24-year-old males increased 3.5% during 2018–2019, with a total increase of 26.7% during 2015–2019 (1,476.8 to 1,871.5 cases per 100,000 males).

Chlamydia — Rates of Reported Cases by Race/Hispanic Ethnicity, United States, 2015–2019

Chlamydia — Rates of Reported Cases by Race/Hispanic Ethnicity, United States, 2015–2019



* Per 100,000

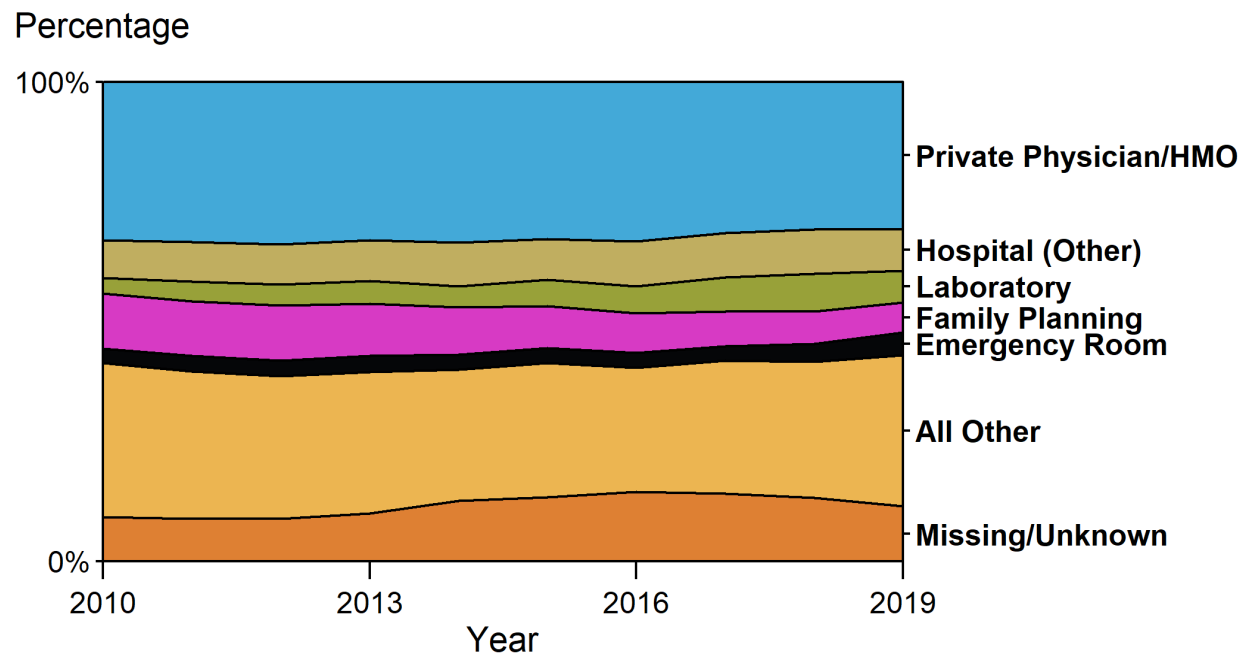
ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPi = Native Hawaiians/Other Pacific Islanders



In 2019, rates of reported cases of chlamydia were highest among Blacks (1,233.2 per 100,000), followed by American Indians/Alaska Natives (760.0 per 100,000) and Native Hawaiians/Other Pacific Islanders (733.4 per 100,000). During 2015–2019, rates of reported chlamydia cases increased among all racial/Hispanic ethnicity groups, with American Indians/Alaska Natives increasing 7.5%, Hispanics 6.3%, Blacks 13.5%, Whites 11.8%, Native Hawaiians/Other Pacific Islanders 18.9%, Asians 15.4%, and Multirace 87.2%.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPi, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Chlamydia — Percentage of Reported Cases Among Females by Reporting Source, United States, 2010–2019

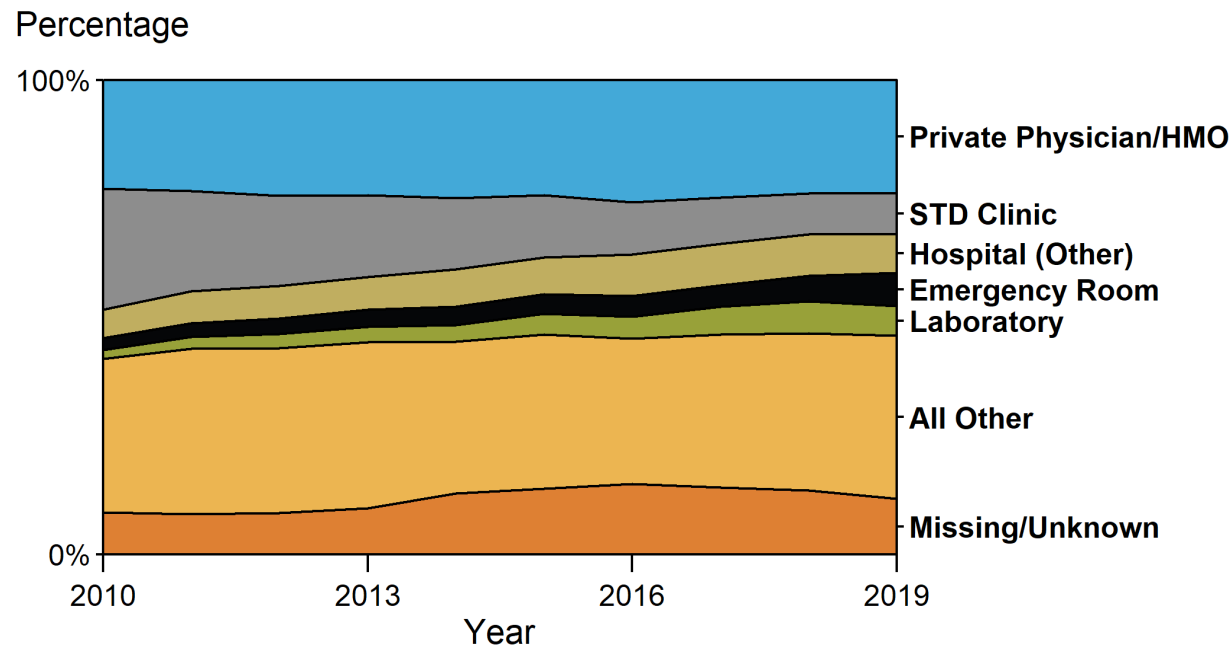


ACRONYMS: HMO = health maintenance organization



In 2019, 30.7% of chlamydia cases among females were reported from a private physician/health maintenance organization. Only 6.3% of cases were reported from Family Planning clinics and only 3.9% from STD clinics.

Chlamydia — Percentage of Reported Cases Among Males by Reporting Source, United States, 2010–2019



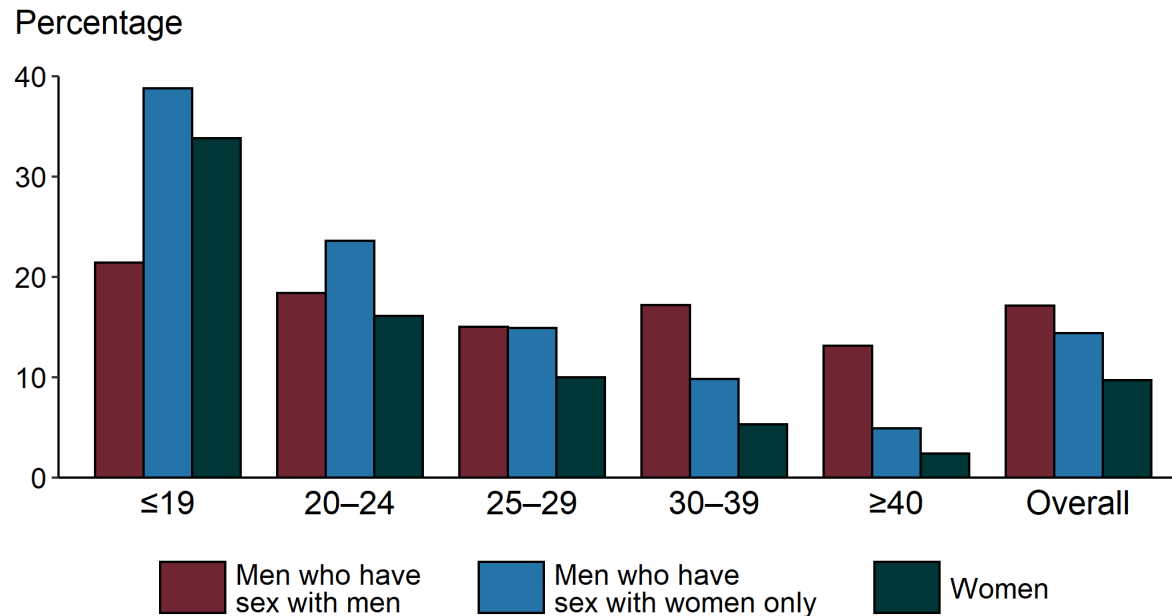
ACRONYMS: HMO = health maintenance organization



In 2019, 23.8% of male chlamydia cases were reported from a private physician/health maintenance organization. The proportion of male cases reported from STD clinic sites has decreased substantially over time, from 25.5% in 2010 to 8.6% in 2019.

Chlamydia — Proportion of STD Clinic Patients Testing Positive by Age Group, Sex, and Sex of Sex Partners, STD Surveillance Network (SSuN), 2019

Chlamydia — Proportion of STD Clinic Patients Testing Positive by Age Group, Sex, and Sex of Sex Partners, STD Surveillance Network (SSuN), 2019

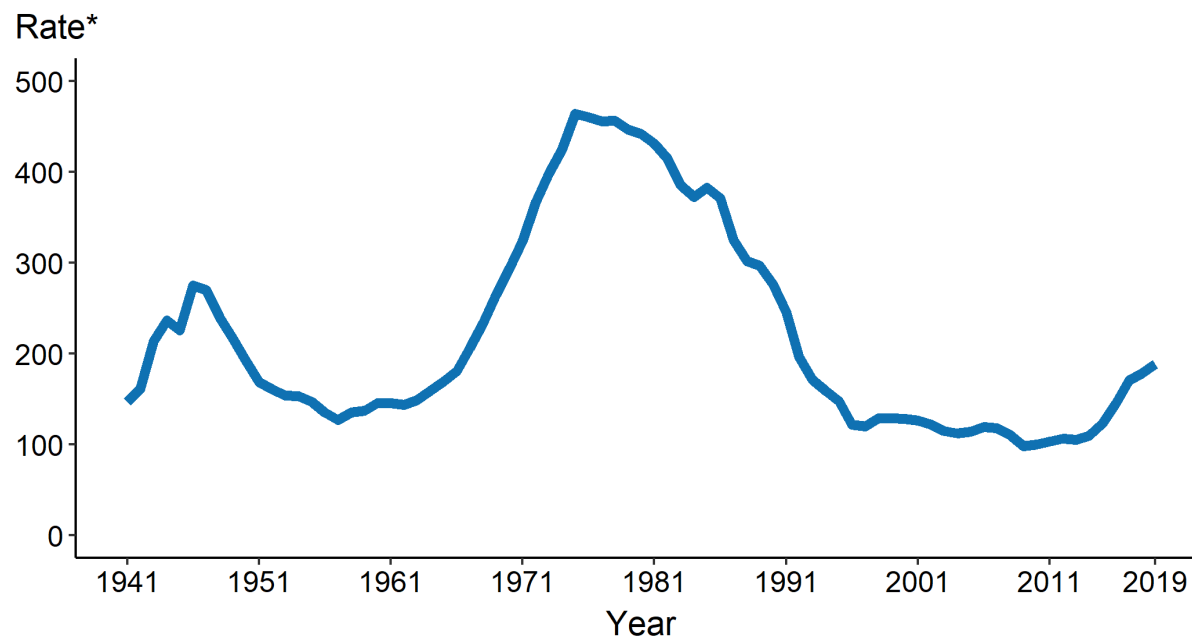


NOTE: Results are based on unique patients with known sex of sex partners (n=89,448) attending SSuN STD clinics who were tested ≥1 time for chlamydia in 2019.



Among patients accessing care in STD clinics in jurisdictions participating in the STD Surveillance Network (SSuN) who were tested for chlamydia in 2019, 17.1% of men who have sex with men, 14.4% of men who have sex with women only, and 9.7% of women were found to be positive. The proportion testing positive for chlamydia varied by sex and sex of sex partners, as well as age. Women and men who have sex with women only aged 19 years or younger had the highest positivity at 33.8% and 38.8%, respectively.

Gonorrhea — Rates of Reported Cases by Year, United States, 1941–2019

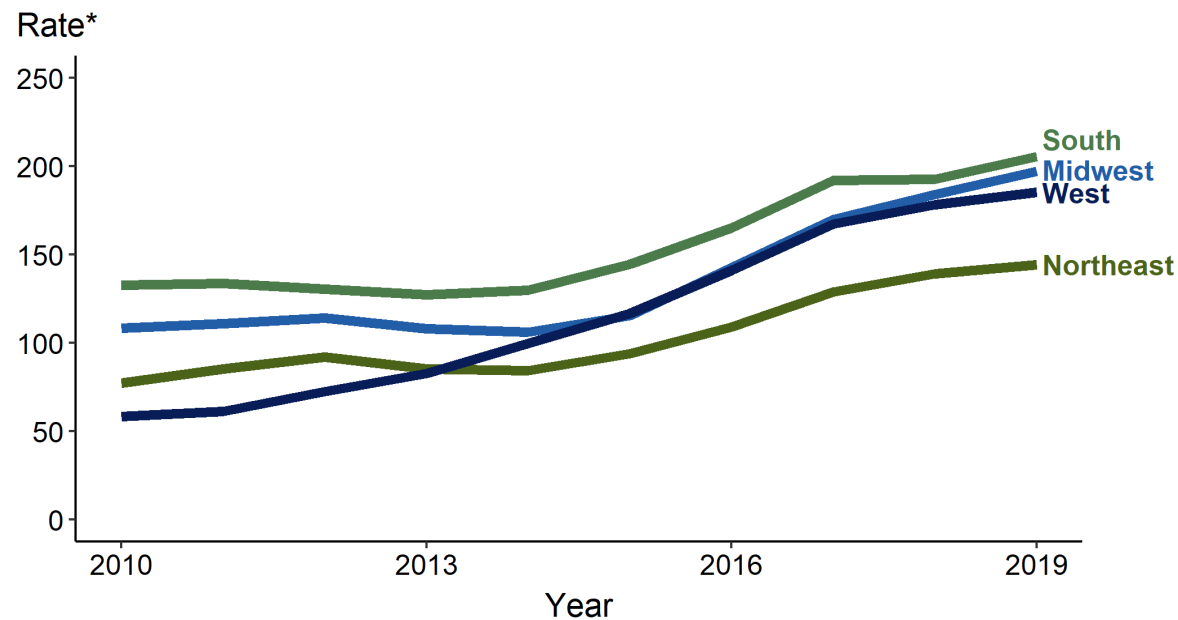


* Per 100,000



In 2019, 616,392 cases of gonorrhea were reported to CDC in 50 states and the District of Columbia, yielding a rate of 188.4 cases per 100,000 population. The rate of reported gonorrhea cases increased 5.7% from 2018 and increased 53.2% since 2015.

Gonorrhea — Rates of Reported Cases by Region, United States, 2010–2019

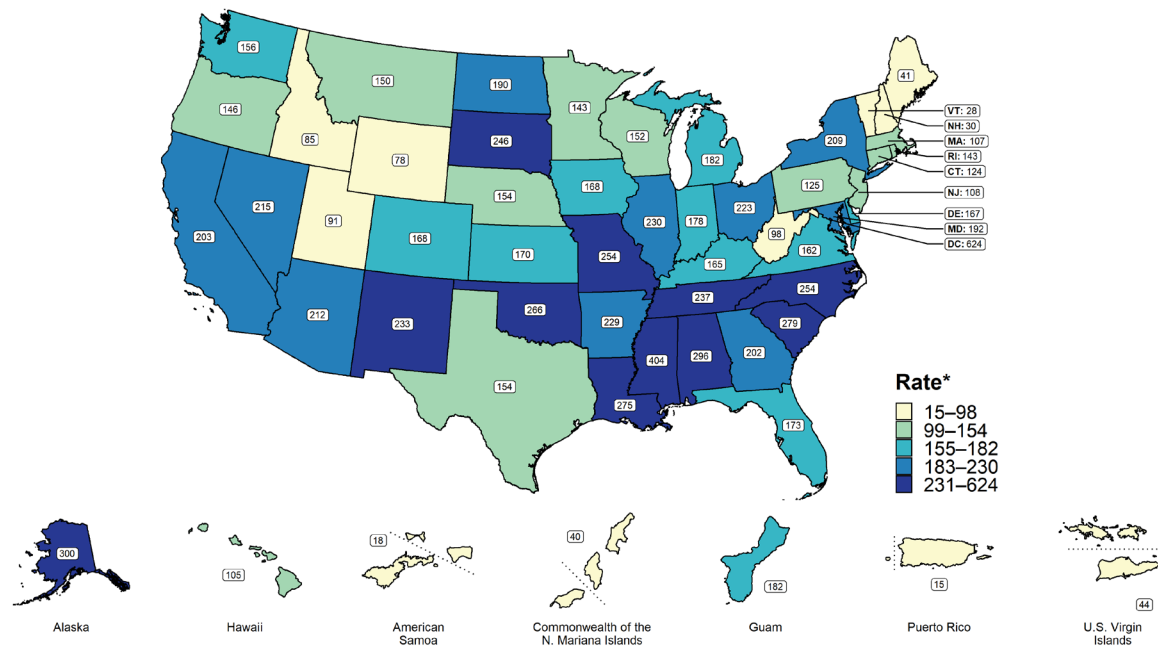


* Per 100,000



In 2019, the South had the highest rate of reported gonorrhea cases (205.4 cases per 100,000; 6.6% increase from 2018) followed by the Midwest (197.2 per 100,000; 7.1% increase from 2018), the West (185.2 per 100,000; 3.9% increase from 2018), and the Northeast (144.4 per 100,000; 3.7% increase from 2018). During 2015–2019, the largest increase occurred in the Midwest (from 115.4 to 197.2 cases per 100,000; 70.9% increase).

Gonorrhea — Rates of Reported Cases by State, United States and Territories, 2019

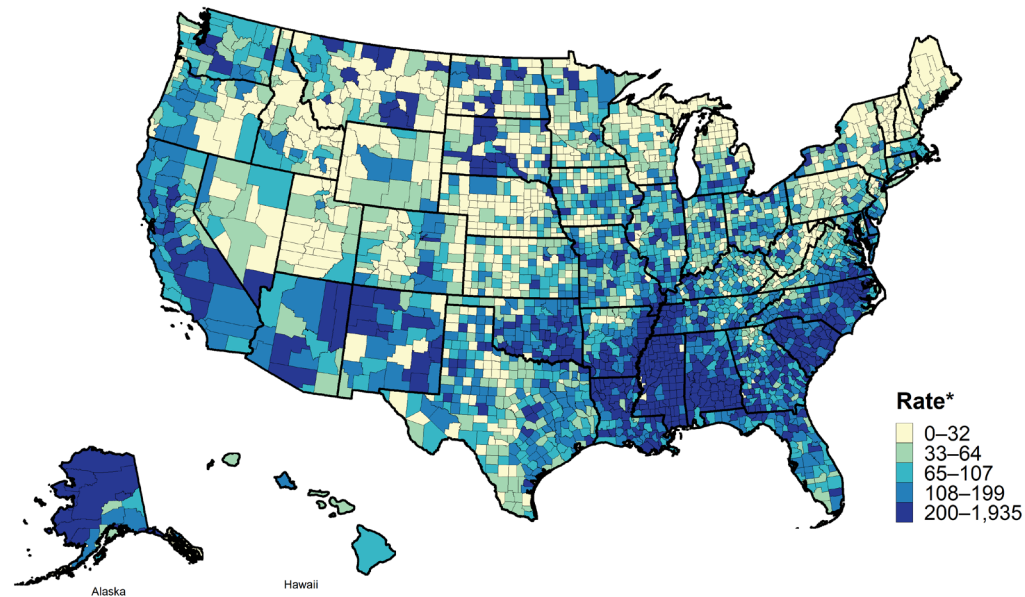


* Per 100,000



In 2019, rates of reported gonorrhea cases per 100,000 population ranged by state from 27.9 in Vermont to 404.1 in Mississippi; the gonorrhea rate in the District of Columbia was 623.8 cases per 100,000 population.

Gonorrhea — Rates of Reported Cases by County, United States, 2019

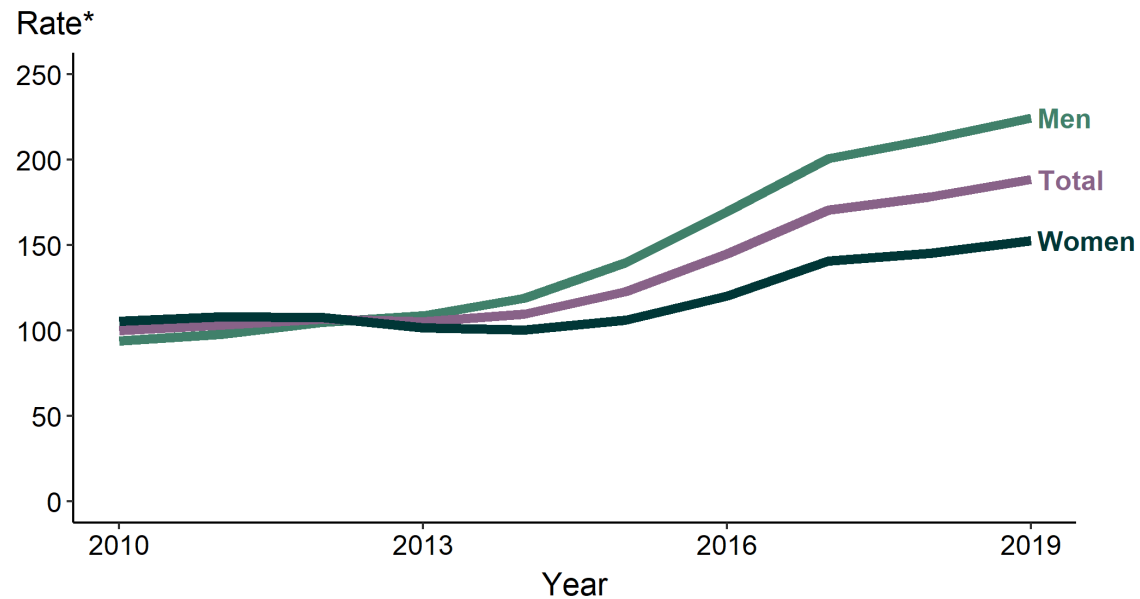


* Per 100,000



In 2019, 94.3% of all counties in the United States reported at least one case of gonorrhea. Out of 3,142 counties and independent cities, 73 made up approximately 50% of all reported cases of gonorrhea.

Gonorrhea — Rates of Reported Cases by Sex, United States, 2010–2019

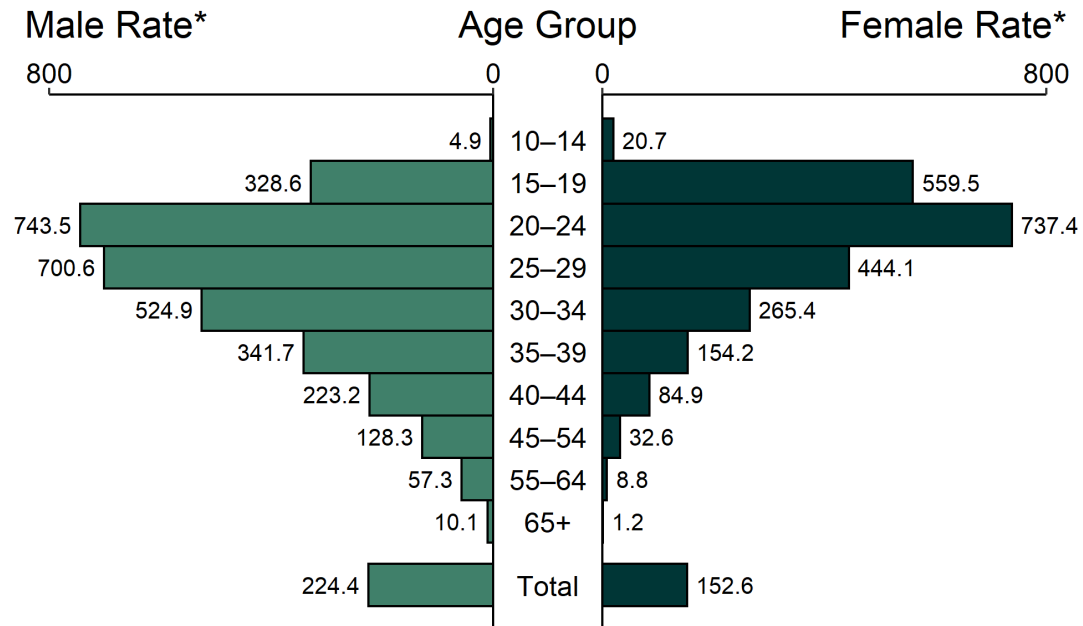


* Per 100,000



During 2018–2019, the gonorrhea rate among males increased 5.9% (from 211.9 to 224.4 cases per 100,000 males) and the rate among females increased 5.1% (from 145.2 to 152.6 cases per 100,000 females). During 2015–2019, the rate among males increased 60.6% (from 139.7 to 224.4 cases per 100,000 males) and the rate among females increased 43.6% (from 106.3 to 152.6 cases per 100,000 females).

Gonorrhea — Rates of Reported Cases by Age Group and Sex, United States, 2019



* Per 100,000

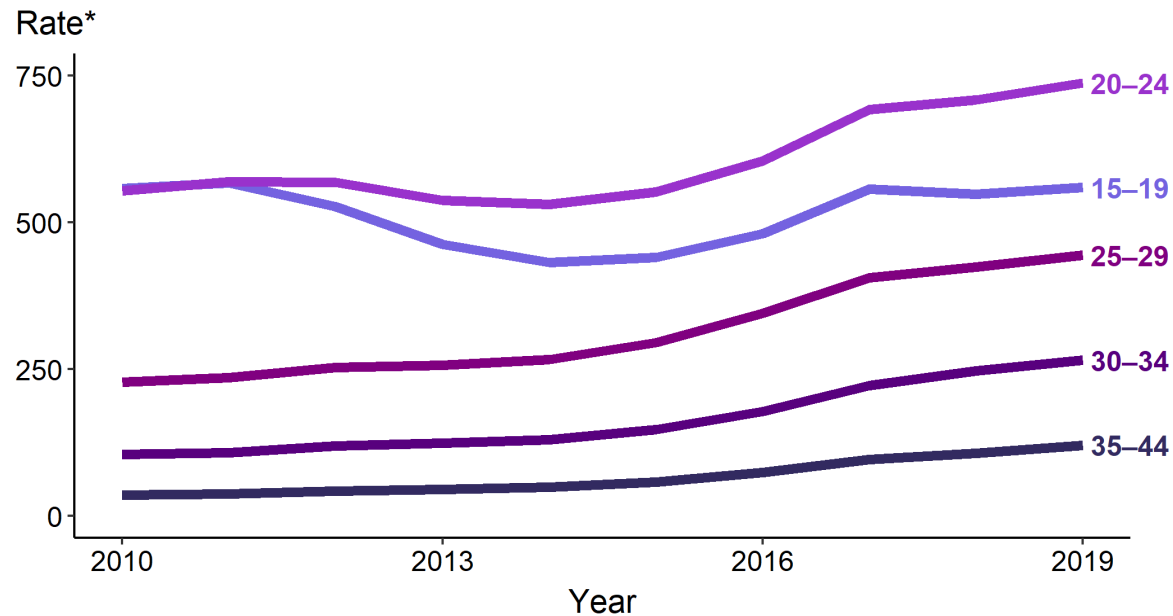
NOTE: Total includes all ages.



In 2019, rates of reported gonorrhea cases were the highest among adolescents and young adults. In 2019, the highest rates among females were observed among those aged 20–24 years (737.4 cases per 100,000 females) and 15–19 years (559.5 cases per 100,000 females). Among males, the rate was highest among those aged 20–24 years (743.5 cases per 100,000 males) and 25–29 years (700.6 cases per 100,000 males).

Gonorrhea — Rates of Reported Cases Among Females Aged 15–44 Years by Age Group, United States, 2010–2019

Gonorrhea — Rates of Reported Cases Among Females Aged 15–44 Years by Age Group, United States, 2010–2019



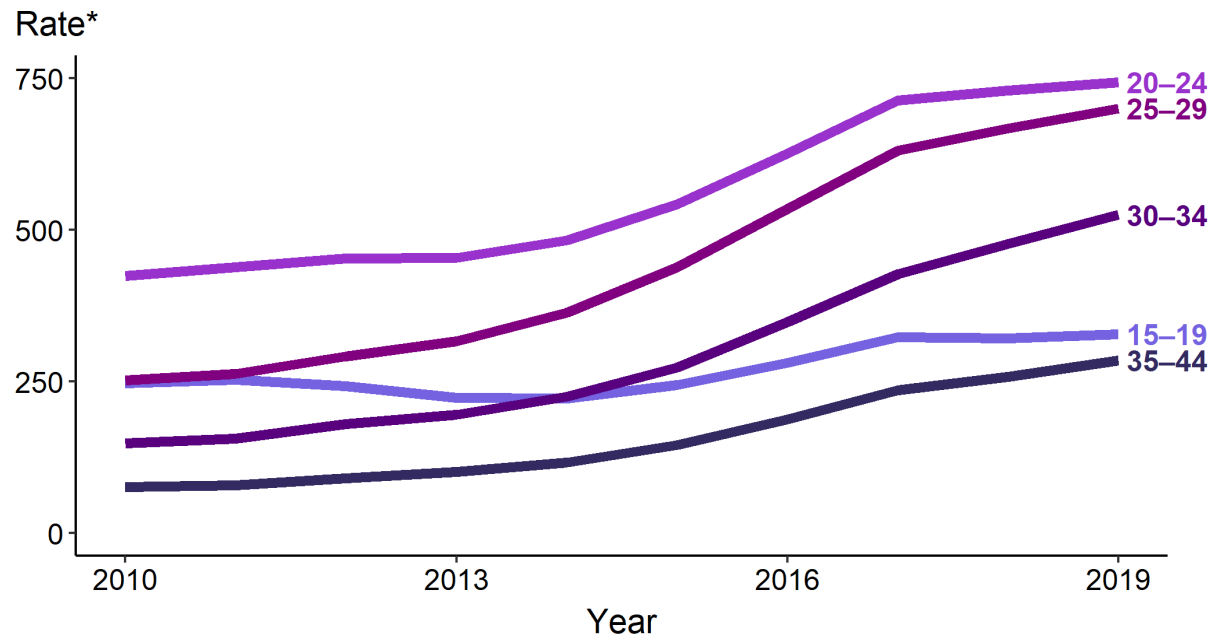
* Per 100,000



The rate of reported gonorrhea among 15–19-year-old females increased 2.0% during 2018–2019, with a total increase of 26.8% during 2015–2019 (441.1 to 559.5 cases per 100,000 females). The rate among 20–24-year-old females increased 4.0% during 2018–2019, with a total increase of 33.6% during 2015–2019 (551.9 to 737.4 cases per 100,000 females).

Gonorrhea — Rates of Reported Cases Among Males Aged 15–44 Years by Age Group, United States, 2010–2019

Gonorrhea — Rates of Reported Cases Among Males Aged 15–44 Years by Age Group, United States, 2010–2019

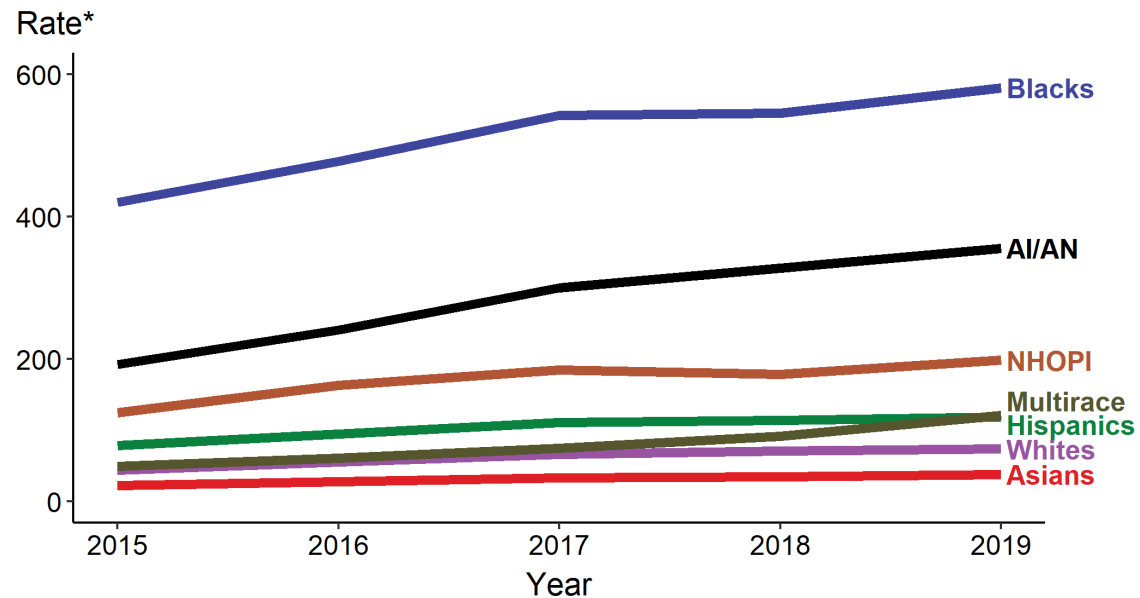


* Per 100,000



The rate of reported gonorrhea among 20–24-year-old males increased 1.8% during 2018–2019, with a total increase of 37.1% during 2015–2019 (542.4 to 743.5 cases per 100,000 males). The rate among 25–29-year-old males increased 5.0% during 2018–2019, with a total increase of 59.6% during 2015–2019 (439.0 to 700.6 cases per 100,000 males).

Gonorrhea — Rates of Reported Cases by Race/Hispanic Ethnicity, United States, 2015–2019



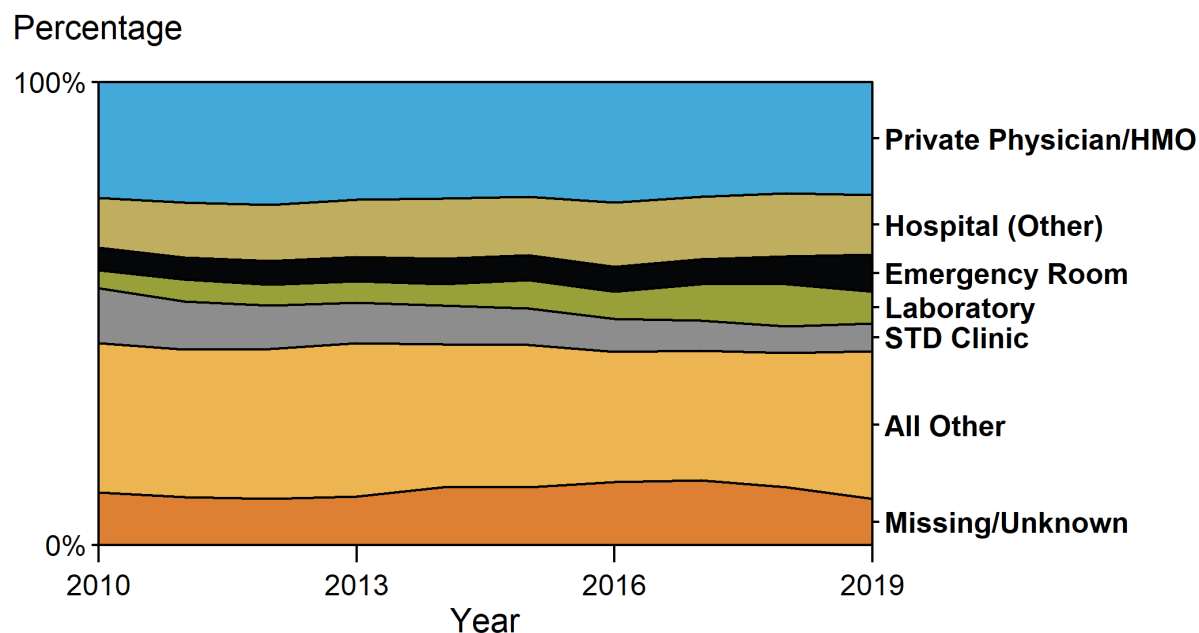
* Per 100,000

ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders

In 2019, the rate of reported gonorrhea cases was highest among Blacks (581.0 cases per 100,000 population), followed by American Indians/Alaska Natives (355.8 per 100,000). During 2015–2019, the rate of reported gonorrhea increased among all race/Hispanic ethnicity groups: 143.7% among Multirace persons, 70.5% among Asians, 59.0% among Native Hawaiians/Other Pacific Islanders, 66.1% among Whites, 85.1% among American Indians/Alaska Natives, 50.3% among Hispanics, and 38.3% among Blacks.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPI, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Gonorrhea — Percentage of Reported Cases Among Females by Reporting Source, United States, 2010–2019

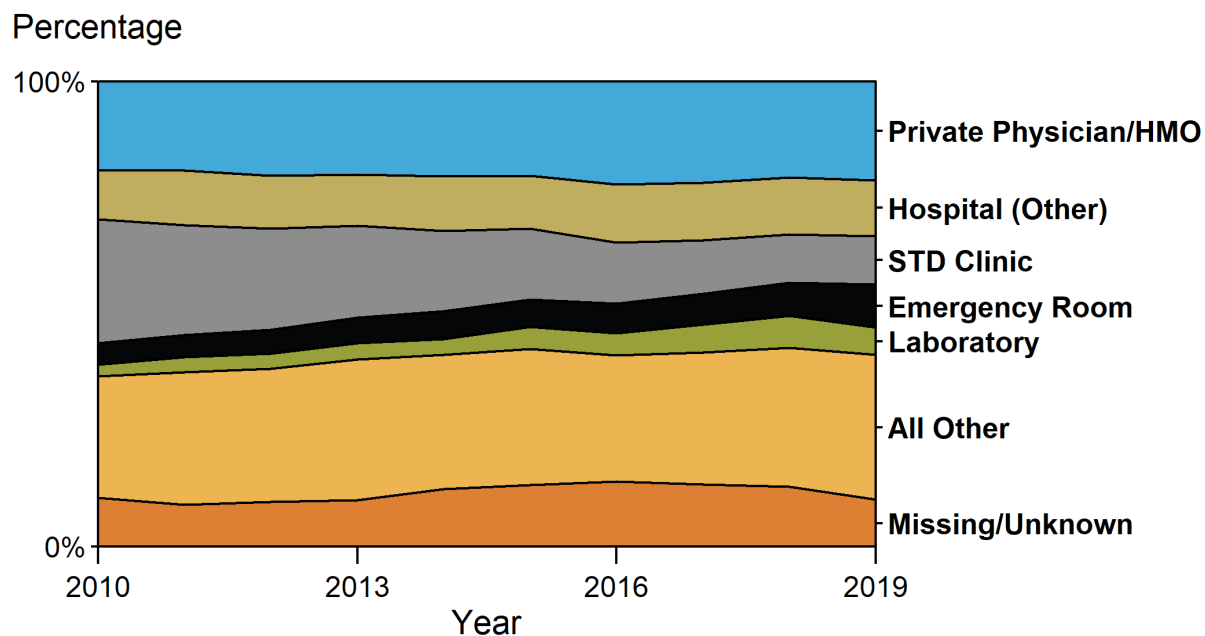


ACRONYMS: HMO = health maintenance organization



In 2019, among females, only 6.0% of gonorrhea cases were reported from an STD clinic, with a large proportion of cases (24.4%) being reported from a private physician/health maintenance organization.

Gonorrhea — Percentage of Reported Cases Among Males by Reporting Source, United States, 2010–2019



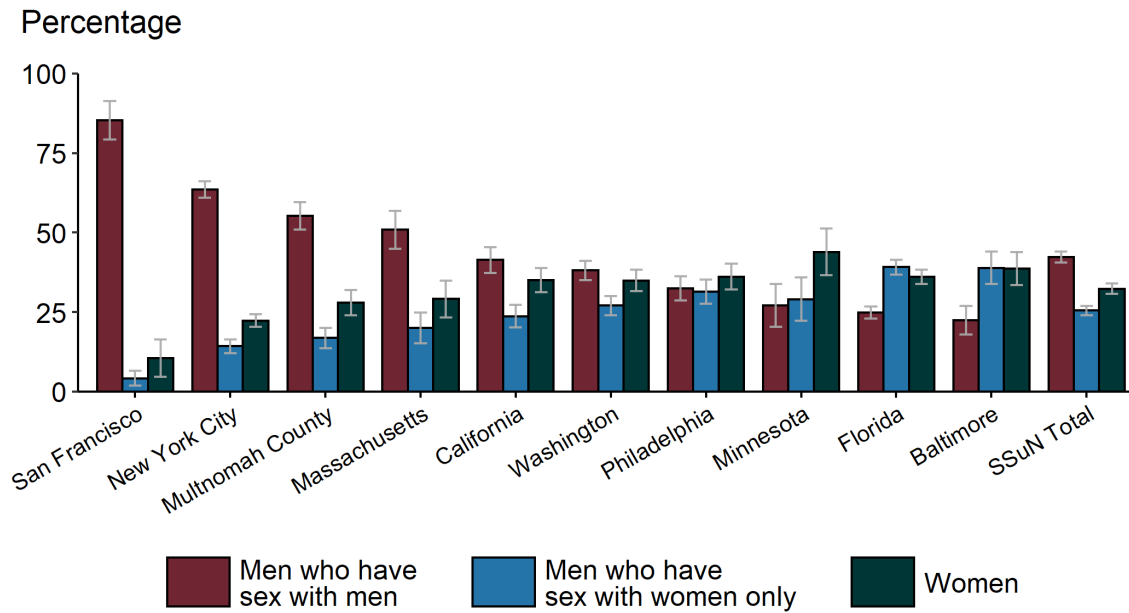
ACRONYMS: HMO = health maintenance organization



In 2019, among males, only 10.5% of gonorrhea cases were reported through an STD clinic, with a large proportion of cases (21.3%) being reported from a private physician/health maintenance organization.

Gonorrhea – Estimated Proportion of Cases Treated with Recommended Regimen by Jurisdiction, STD Surveillance Network (SSuN), 2019

Gonorrhea – Estimated Proportion of Cases Treated with Recommended Regimen by Jurisdiction, STD Surveillance Network (SSuN), 2019



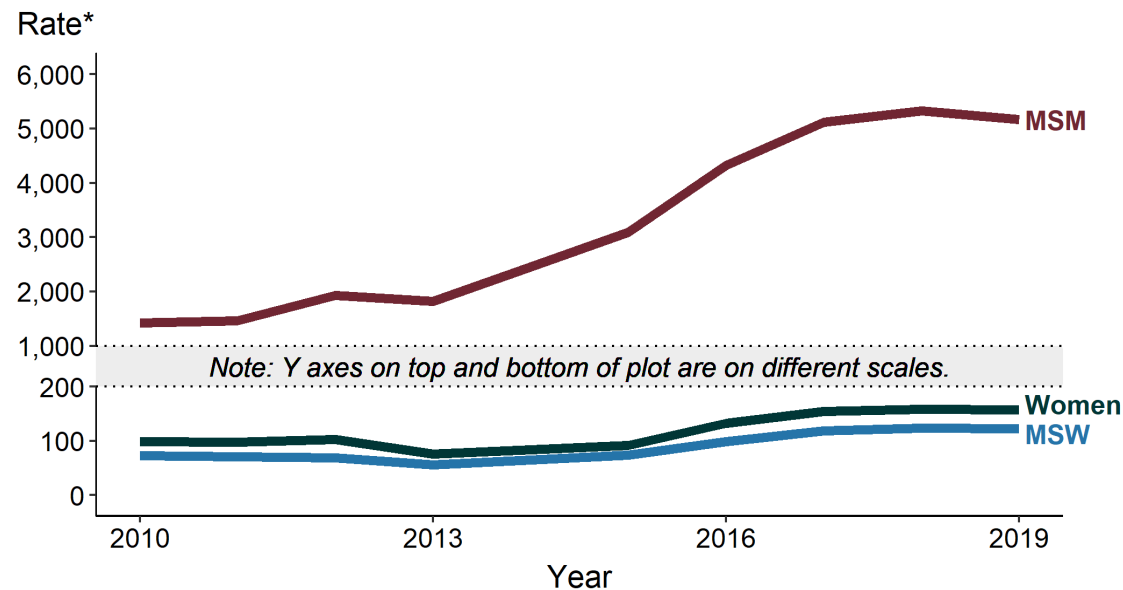
NOTE: Estimate based on weighted analysis of data obtained from interviews (n= 7,044) conducted among a random sample of reported gonorrhea cases. California data exclude San Francisco (shown separately).

ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men; MSW = Men who have sex with women only

Based on enhanced data collected on a random sample of gonorrhea cases reported in jurisdictions participating in the STD Surveillance Network (SSuN), the estimated burden of disease (and 95% confidence intervals) represented by men who have sex with men, men who have sex with women only, and women varied substantially across collaborating sites based on weighted analysis. San Francisco had the highest proportion of gonorrhea cases estimated to be among men who have sex with men (85.3%), while Baltimore had the lowest proportion of cases among men who have sex with men (22.4%). In total, across all SSuN sites, 42.3% of gonorrhea cases were estimated to be among men who have sex with men, 25.4% among men who have sex with women only, and 32.3% among women.

Gonorrhea — Estimated Rates of Reported Gonorrhea Cases by MSM, MSW, and Women, STD Surveillance Network (SSuN), 2010–2019

Gonorrhea — Estimated Rates of Reported Gonorrhea Cases by MSM, MSW, and Women, STD Surveillance Network (SSuN), 2010–2019



* Per 100,000 population

NOTE: Estimate based on weighted analysis of data obtained from interviews (n=28,979) conducted among a random sample of reported gonorrhea cases. Sites include Baltimore, Philadelphia, New York City, Washington State, San Francisco, and California (excluding San Francisco).

ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men; MSW = Men who have sex with women only

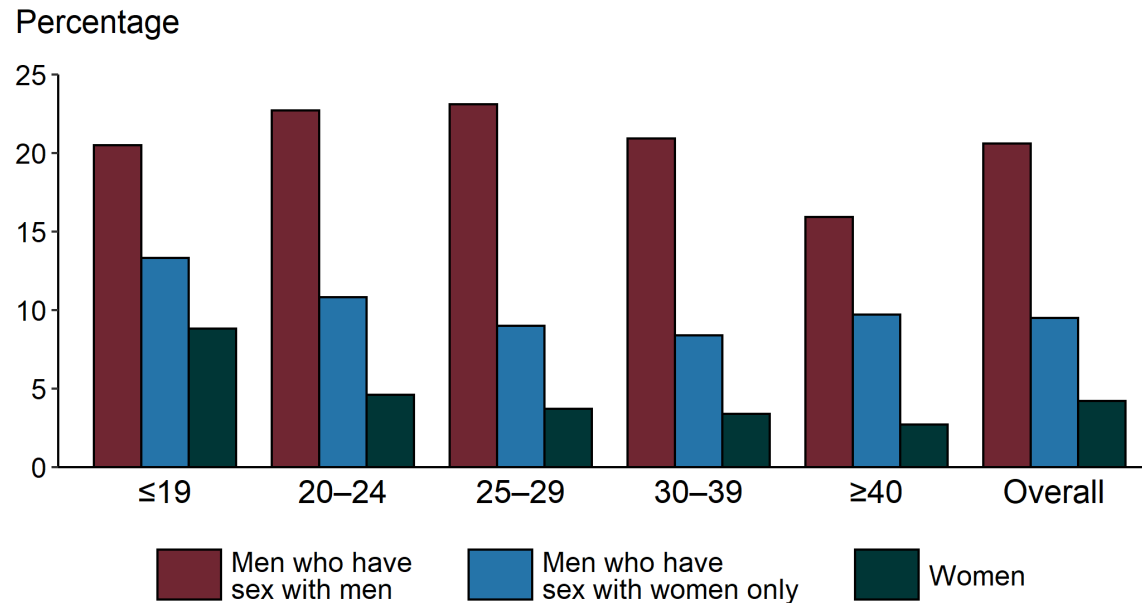


Among 6 jurisdictions participating in the STD Surveillance Network (SSuN) continuously since 2010, the estimated gonorrhea case rate among men who have sex with men increased 263.4% during 2010–2019, from 1,421.5 cases per 100,000 men who have sex with men (MSM) in 2010 to 5,165.6 cases per 100,000 MSM in 2019. Over the same time period, case rates among women and men who have sex with women only (MSW) also increased by 59.8% and 69.5%, respectively.

ADAPTED FROM: Stenger M, Pathela P, Anschuetz G, et al. Increases in the rate of *Neisseria gonorrhoeae* among gay, bisexual and other men who have sex with men (MSM) — findings from the STD Surveillance Network 2010–2015. *Sex Transm Dis.* 2017;44(7):393–397.

Gonorrhea — Proportion of STD Clinic Patients Testing Positive by Age Group, Sex, and Sex of Sex Partners, STD Surveillance Network (SSuN), 2019

Gonorrhea — Proportion of STD Clinic Patients Testing Positive by Age Group, Sex, and Sex of Sex Partners, STD Surveillance Network (SSuN), 2019



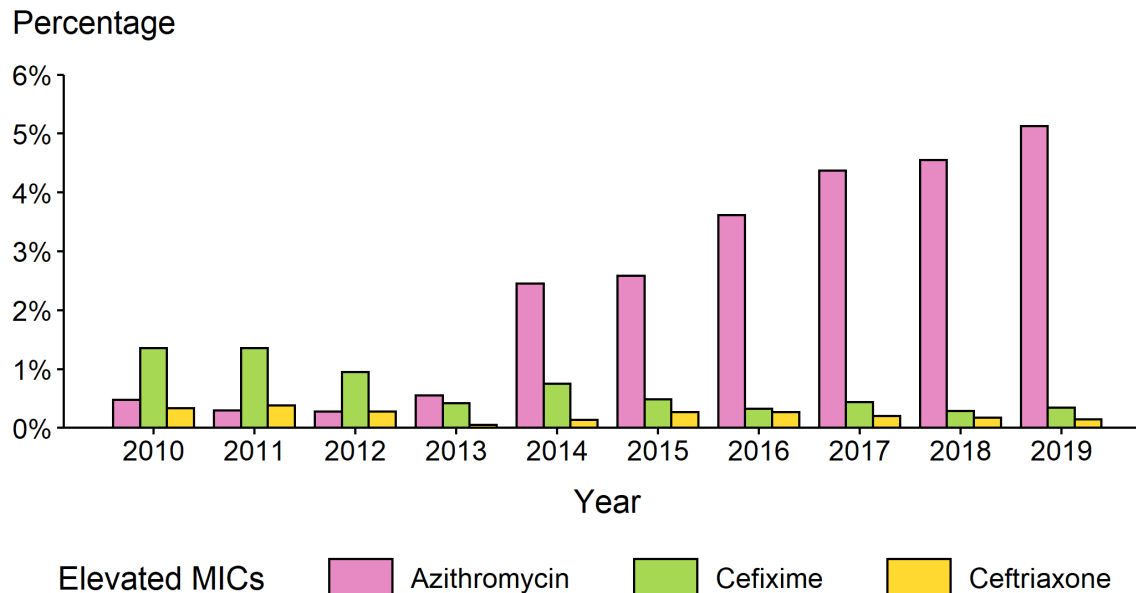
NOTE: Results are based on data obtained from unique patients with known sex of sex partners (n=81,812) attending SSuN STD clinics who were tested ≥ 1 times for gonorrhea in 2019.



Among patients accessing care in STD clinics in jurisdictions participating in the STD Surveillance Network (SSuN) who were tested for gonorrhea in 2019, 20.6% of men who have sex with men, 9.5% of men who have sex with women only, and 4.2% of women were positive. The proportion of STD clinic patients who tested positive for gonorrhea varied by sex and sex of sex partners, as well as age group, with highest proportions among men who have sex with men in all age groups.

Neisseria gonorrhoeae — Percentage of Isolates with Elevated Minimum Inhibitory Concentrations (MICs) to Azithromycin, Cefixime, and Ceftriaxone, Gonococcal Isolate Surveillance Project (GISP), 2010–2019

***Neisseria gonorrhoeae* — Percentage of Isolates with Elevated Minimum Inhibitory Concentrations (MICs) to Azithromycin, Cefixime, and Ceftriaxone, Gonococcal Isolate Surveillance Project (GISP), 2010–2019**



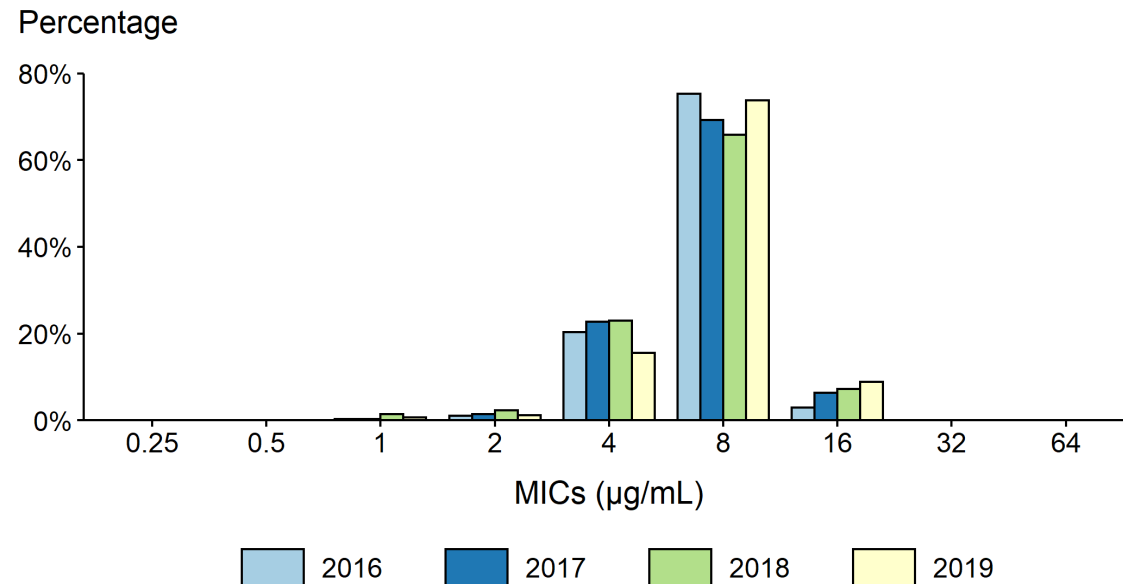
NOTE: Elevated MIC = Azithromycin: ≥ 2.0 $\mu\text{g/mL}$; Cefixime: ≥ 0.25 $\mu\text{g/mL}$; Ceftriaxone: ≥ 0.125 $\mu\text{g/mL}$



During 2010–2019, the percentage of *Neisseria gonorrhoeae* isolates that exhibited elevated ceftriaxone minimum inhibitory concentrations, defined as ≥ 0.125 $\mu\text{g/mL}$, fluctuated between 0.1% and 0.4%. In 2019, 0.1% of isolates had elevated ceftriaxone minimum inhibitory concentrations. The percentage of isolates with elevated cefixime minimum inhibitory concentrations (≥ 0.25 $\mu\text{g/mL}$) declined from 1.4% in 2011 to 0.3% in 2019. During 2012–2014, the percentage of isolates with elevated azithromycin minimum inhibitory concentrations (≥ 2 $\mu\text{g/mL}$) ranged from 0.3% to 2.5% with a sharp increase during 2013–2014 (0.6% to 2.5%); during 2014–2019, the percentage increased from 2.5% to 5.1%.

Neisseria gonorrhoeae — Distribution of Gentamicin Minimum Inhibitory Concentrations (MICs) by Year, Gonococcal Isolate Surveillance Project (GISP), 2016–2019

***Neisseria gonorrhoeae* — Distribution of Gentamicin Minimum Inhibitory Concentrations (MICs) by Year, Gonococcal Isolate Surveillance Project (GISP), 2016–2019**



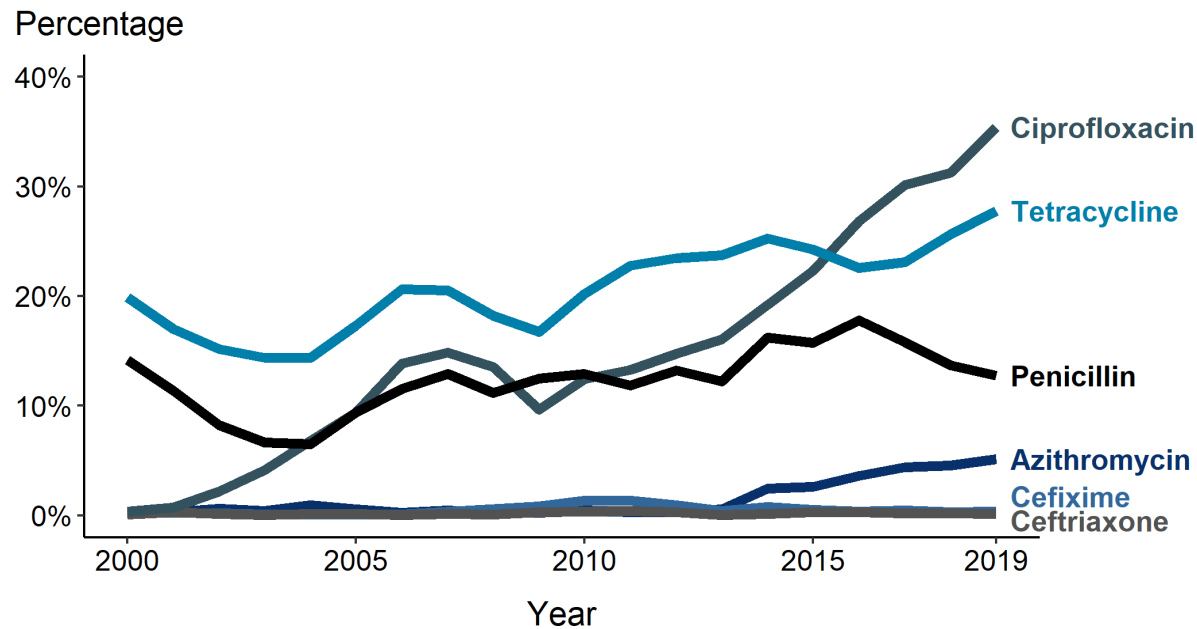
NOTE: Beginning in 2018, the antibiotic susceptibility testing range for gentamicin was expanded from MICs of 1 µg/mL–32 µg/mL in previous years to 0.25 µg/mL–64 µg/mL.



During 2016 to 2019, 65.0–75.3% of all tested *Neisseria gonorrhoeae* isolates had a gentamycin minimum inhibitory concentration value of 8 µg/mL. In 2019, 0.02% of all tested *Neisseria gonorrhoeae* isolates had a gentamycin minimum inhibitory concentration above 16 µg/mL.

Neisseria gonorrhoeae — Prevalence of Tetracycline, Penicillin, or Ciprofloxacin Resistance* or Elevated Cefixime, Ceftriaxone, or Azithromycin Minimum Inhibitory Concentrations (MICs)†, by Year — Gonococcal Isolate Surveillance Project (GISP), 2000–2019

***Neisseria gonorrhoeae* — Prevalence of Tetracycline, Penicillin, or Ciprofloxacin Resistance* or Elevated Cefixime, Ceftriaxone, or Azithromycin Minimum Inhibitory Concentrations (MICs)†, by Year — Gonococcal Isolate Surveillance Project (GISP), 2000–2019**



* Resistance: Ciprofloxacin = MIC ≥ 1.0 $\mu\text{g/mL}$; Penicillin = MIC ≥ 2.0 $\mu\text{g/mL}$ or Beta-lactamase positive; Tetracycline = MIC ≥ 2.0 $\mu\text{g/mL}$

† Elevated MICs: Azithromycin = MIC ≥ 1.0 $\mu\text{g/mL}$ 29 (2000–2004); ≥ 2.0 $\mu\text{g/mL}$ (2005–2019); Ceftriaxone = MIC ≥ 0.125 $\mu\text{g/mL}$; Cefixime = MIC ≥ 0.25 $\mu\text{g/mL}$

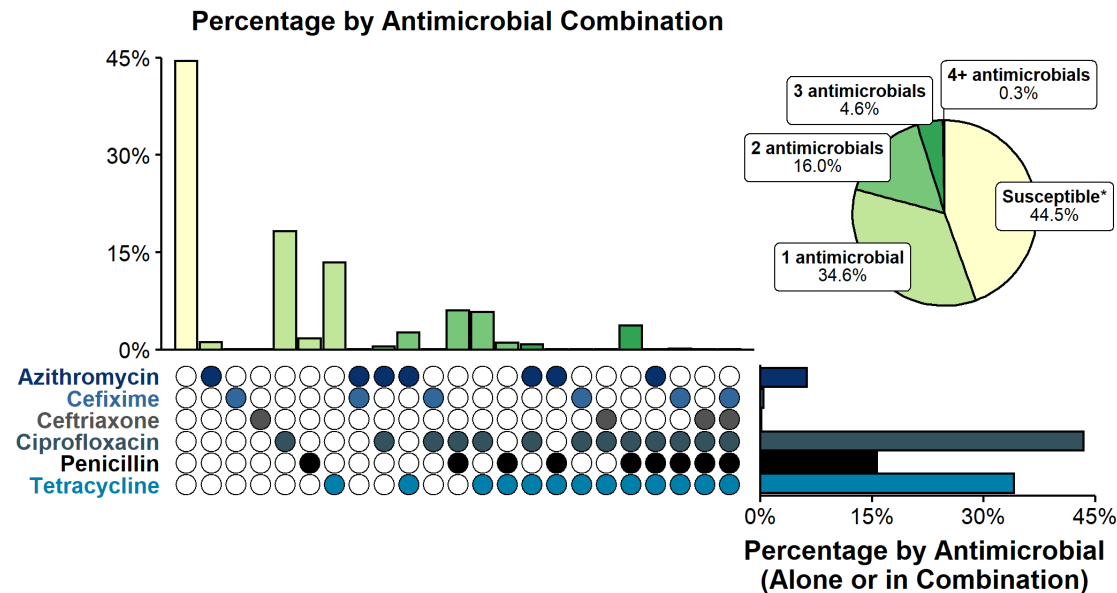
NOTE: Cefixime susceptibility was not tested in 2007 and 2008.



In 2019, 35.4% of *Neisseria gonorrhoeae* isolates collected from GISP sites were resistant to ciprofloxacin, 27.8% to tetracycline, and 12.8% to penicillin.

Resistance or Elevated Minimum Inhibitory Concentration (MIC) Patterns of *Neisseria gonorrhoeae* Isolates to Antimicrobials, Gonococcal Isolate Surveillance Project (GISP), 2019

Resistance or Elevated Minimum Inhibitory Concentration (MIC) Patterns of *Neisseria gonorrhoeae* Isolates to Antimicrobials, Gonococcal Isolate Surveillance Project (GISP), 2019



* Susceptible category only includes isolates with penicillin, tetracycline, and ciprofloxacin MIC values that are considered susceptible and isolates with ceftriaxone, cefixime, and azithromycin MIC values that are not considered elevated.

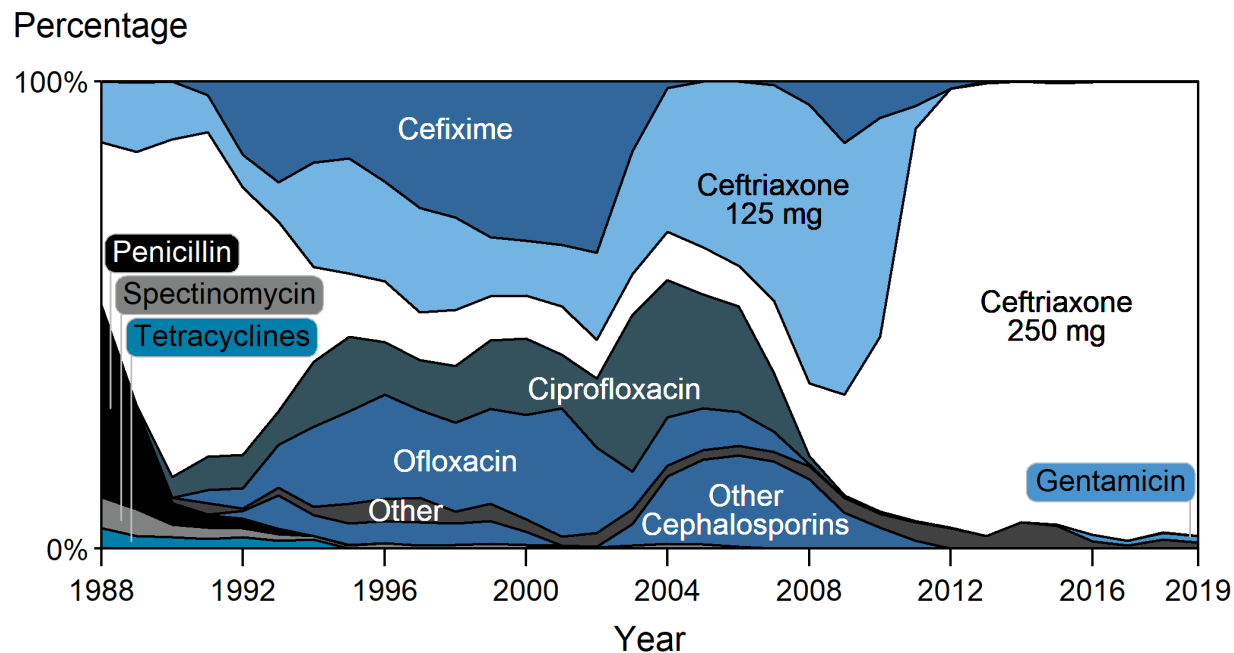
NOTE: Elevated MIC = Ceftriaxone: MIC ≥ 0.125 $\mu\text{g/mL}$; Cefixime: MIC ≥ 0.25 $\mu\text{g/mL}$; Azithromycin: MIC ≥ 2.0 $\mu\text{g/mL}$. Resistance = Tetracycline: MIC ≥ 2.0 $\mu\text{g/mL}$; Ciprofloxacin: MIC ≥ 1.0 $\mu\text{g/mL}$; Penicillin: MIC ≥ 2.0 $\mu\text{g/mL}$ or Beta-lactamase positive. In Panel B, a filled circle reflects resistance or elevated MIC to a specific antimicrobial; only antimicrobial combinations with non-zero percentages are shown.



In 2019, 44.5% of *Neisseria gonorrhoeae* isolates collected through GISP were susceptible to the six antimicrobials tested. More than half (54.3%) were resistant to at least one of three antimicrobials (tetracycline, penicillin, or ciprofloxacin). An additional 1.2% of isolates were susceptible to those antimicrobials, but had elevated minimum inhibitory concentrations to ceftriaxone, cefixime, or azithromycin. Overall, 16.0% of isolates demonstrated resistance or elevated minimum inhibitory concentrations to two antimicrobials tested; 4.6% demonstrated resistance or elevated minimum inhibitory concentrations to three antimicrobials tested. No isolates with elevated azithromycin minimum inhibitory concentrations also had elevated ceftriaxone minimum inhibitory concentrations.

Distribution of Primary Antimicrobial Drugs Used to Treat Gonorrhea Among Participants, Gonococcal Isolate Surveillance Project (GISP), 1988–2019

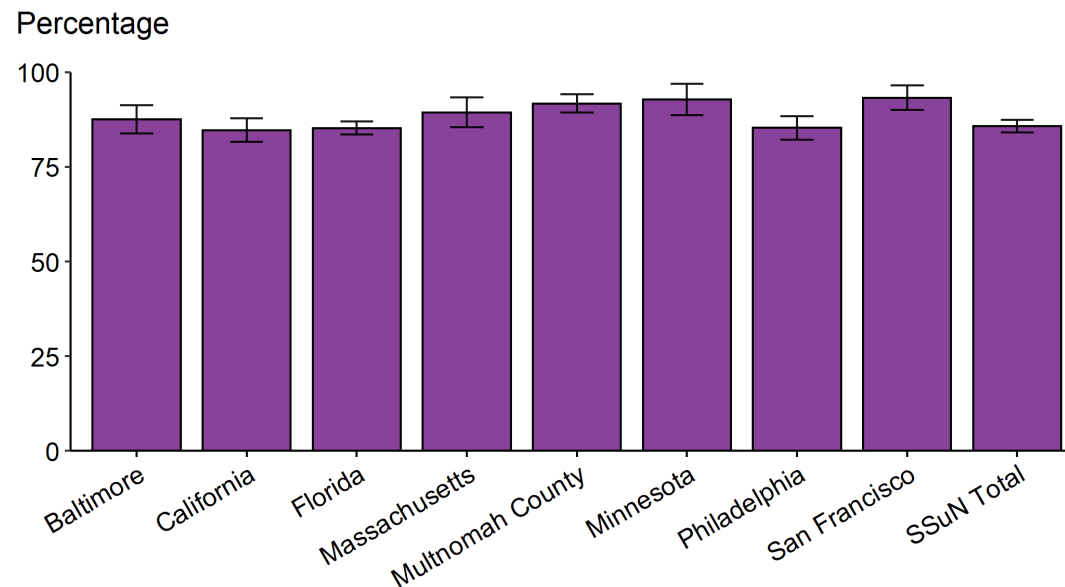
Distribution of Primary Antimicrobial Drugs Used to Treat Gonorrhea Among Participants, Gonococcal Isolate Surveillance Project (GISP), 1988–2019



In 2019, 97.0% of GISP participants were treated with ceftriaxone 250 mg. Participants treated with gentamicin 240 mg increased from 0.2% in 2015 to 1.5% in 2019.

Gonorrhea – Estimated Proportion of Cases Treated with Recommended Regimen by Jurisdiction, STD Surveillance Network (SSuN), 2019

Gonorrhea – Estimated Proportion of Cases Treated with Recommended Regimen by Jurisdiction, STD Surveillance Network (SSuN), 2019



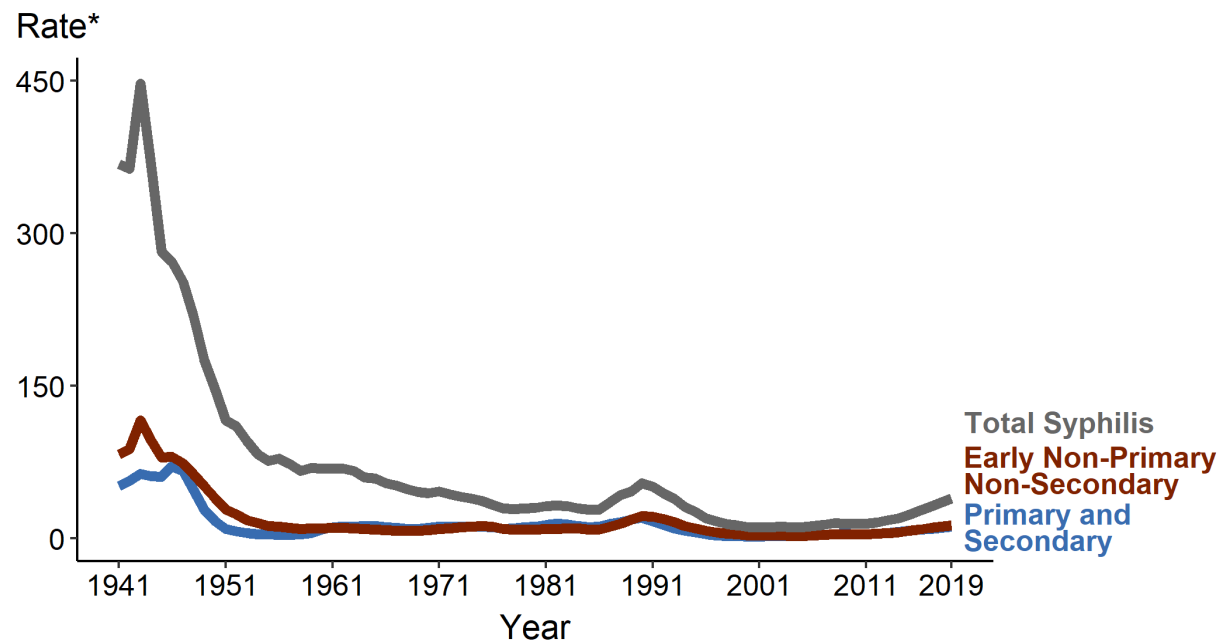
NOTE: Includes SSuN jurisdictions with documented treatment information (antimicrobials and dosages) for $\geq 80\%$ of cases with complete investigations. California data exclude San Francisco (shown separately).



In 2019, based on weighted analysis of randomly sampled cases reported in SSuN jurisdictions with documented treatment information (i.e., antimicrobials and dosages) for 80% or more of cases, 85.8% (95% CI = 84.1–87.4) of reported patients with gonorrhea in SSuN jurisdictions received the recommended treatment for uncomplicated gonorrhea. The proportion of reported patients that received the recommended dual treatment ranged from 84.7% (95% CI = 81.6–87.8) in the state of California to 93.2% (95% CI = 90.0–96.5) in the city of San Francisco, California.

ADAPTED FROM: Weston EJ, Workowski K, Torrone E, et al. Adherence to CDC recommendations for the treatment of uncomplicated gonorrhea – STD Surveillance Network (SSuN), United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2018;67:473–76.

Syphilis — Rates of Reported Cases by Stage of Infection, United States, 1941–2019

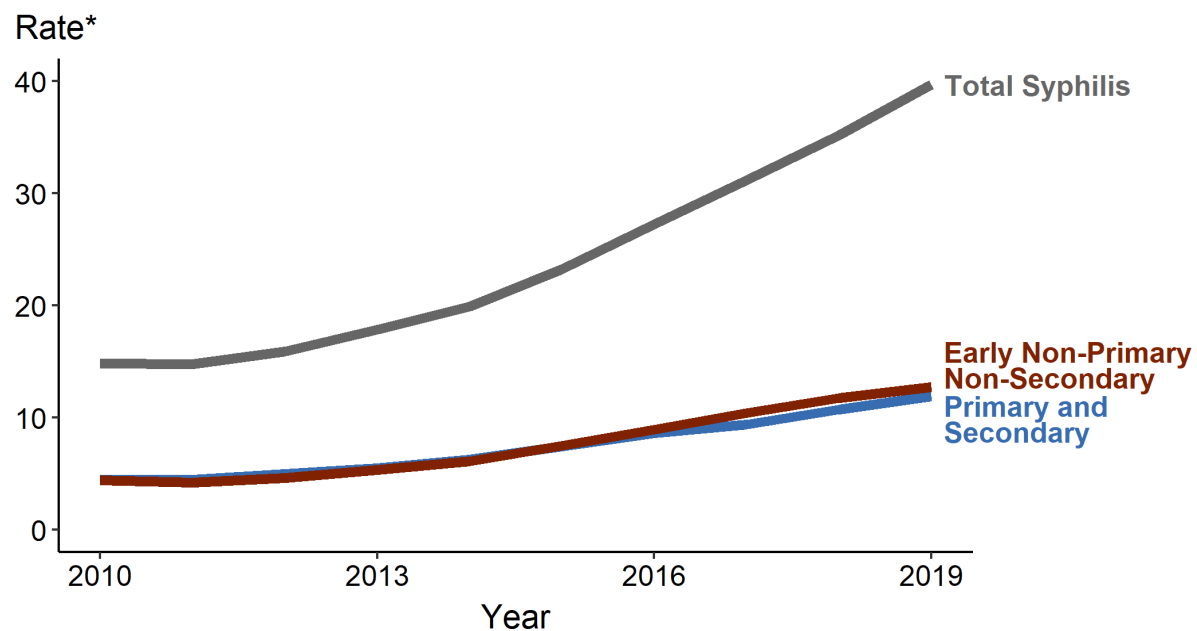


* Per 100,000



In 2019, 129,813 total cases of syphilis representing all stages of disease were reported in the United States. The 2019 case count for total syphilis reflects a 12.8% increase from 2018 when there were 115,062 cases. Reports of primary and secondary syphilis and early non-primary non-secondary syphilis cases—incident stages of infection—increased as well during 2018–2019.

Syphilis — Rates of Reported Cases by Stage of Infection, United States, 2010–2019

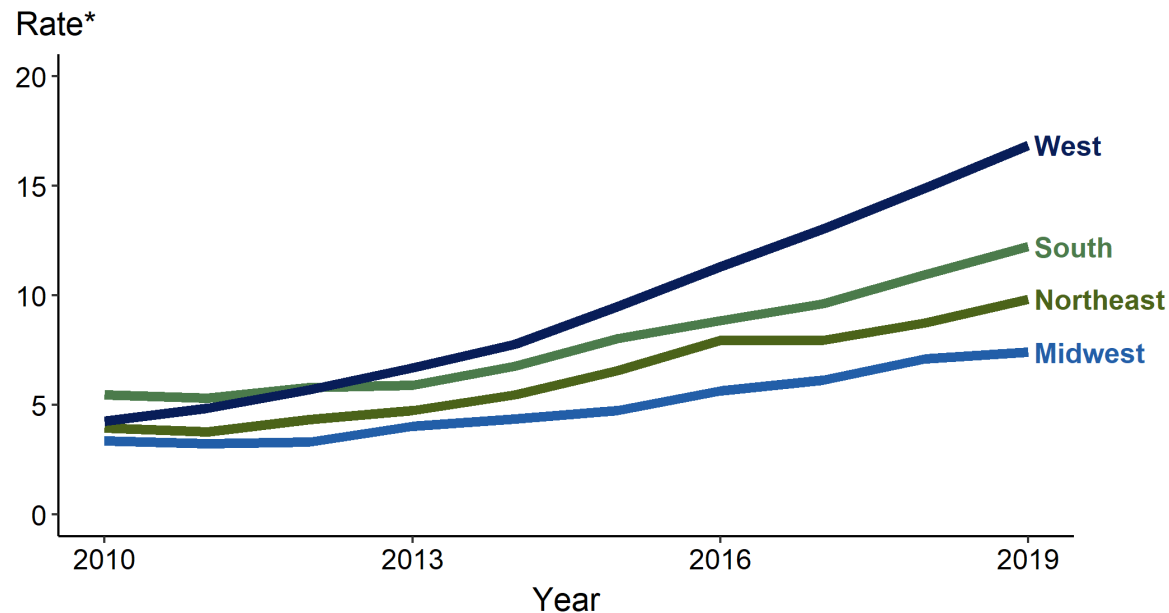


* Per 100,000



During 2010–2019, the rate of total syphilis increased 167.2% (14.8 to 39.7 per 100,000), the rate of early non-primary non-secondary syphilis increased 189.0% (4.4 to 12.7 per 100,000), and the rate of primary and secondary syphilis increased 167.2% (4.5 to 11.9 per 100,000).

Primary and Secondary Syphilis — Rates of Reported Cases by Region, United States, 2010–2019

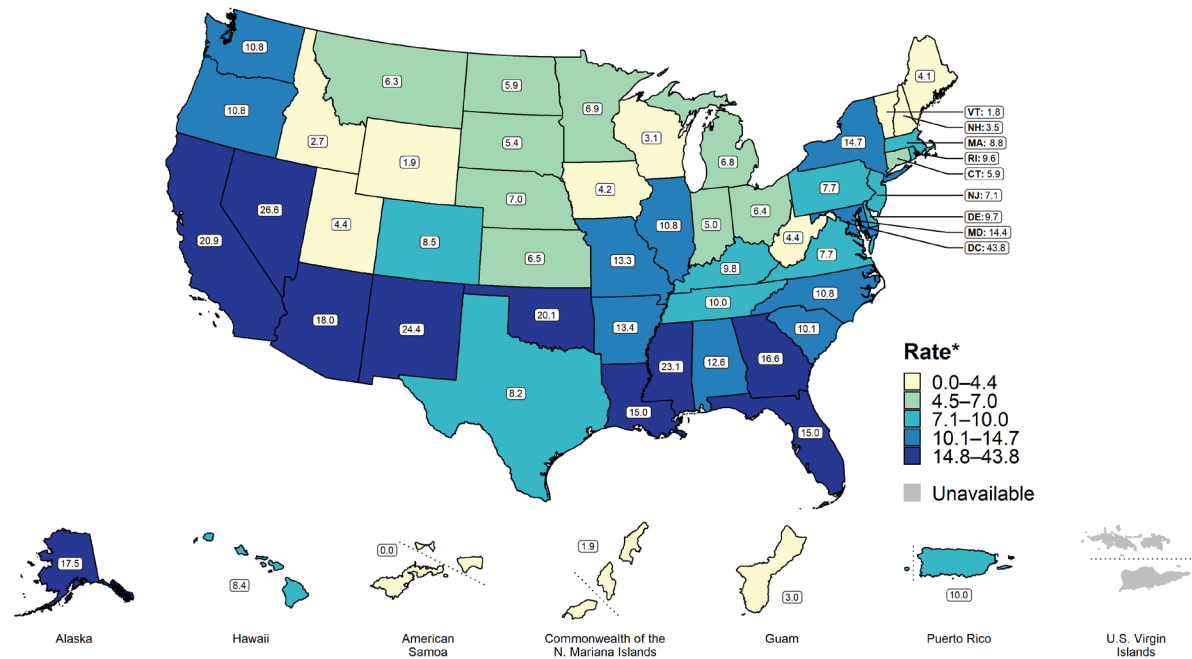


* Per 100,000



In 2019, rates of reported cases of primary and secondary syphilis were highest in the West (16.9 cases per 100,000 population; 13.4% per 100,000 increase from 2018), followed by the South (12.2 per 100,000; 10.9% increase from 2018), Northeast (9.8 per 100,000; 12.6% increase from 2018), and Midwest (7.4 per 100,000; 4.2% increase from 2018). During 2015–2019, the largest increase occurred in the West (9.5 to 16.9 cases per 100,000 population; 77.9% increase).

Primary and Secondary Syphilis — Rates of Reported Cases by State, United States and Territories, 2019

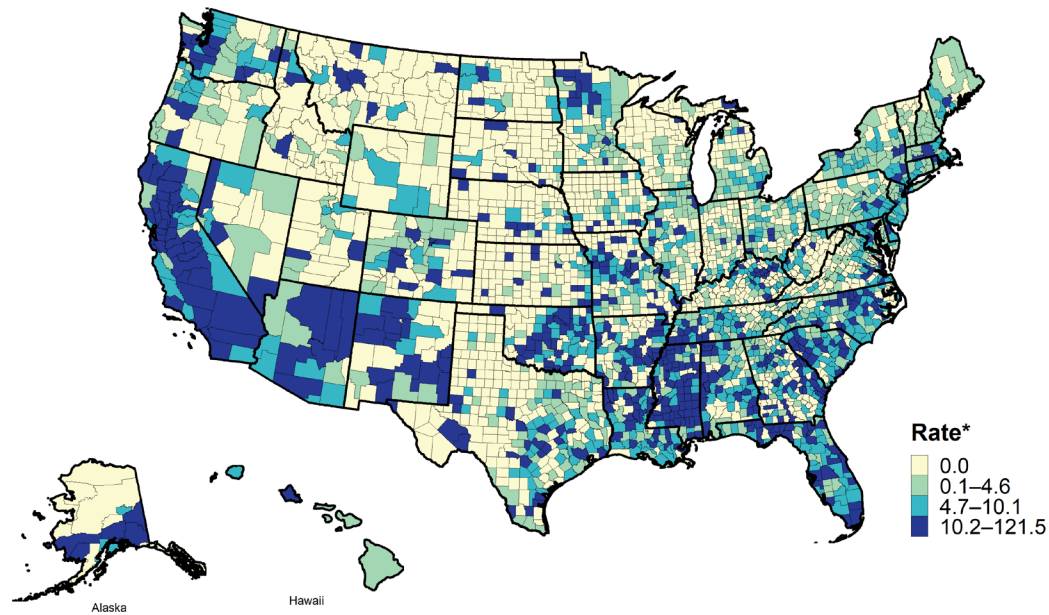


* Per 100,000



Rates of reported cases of primary and secondary syphilis per 100,000 population ranged by state from 1.8 in Vermont to 26.6 in Nevada. The rate of reported cases of primary and secondary syphilis cases in the District of Columbia was 43.8 cases per 100,000 population.

Primary and Secondary Syphilis — Rates of Reported Cases by County, United States, 2019

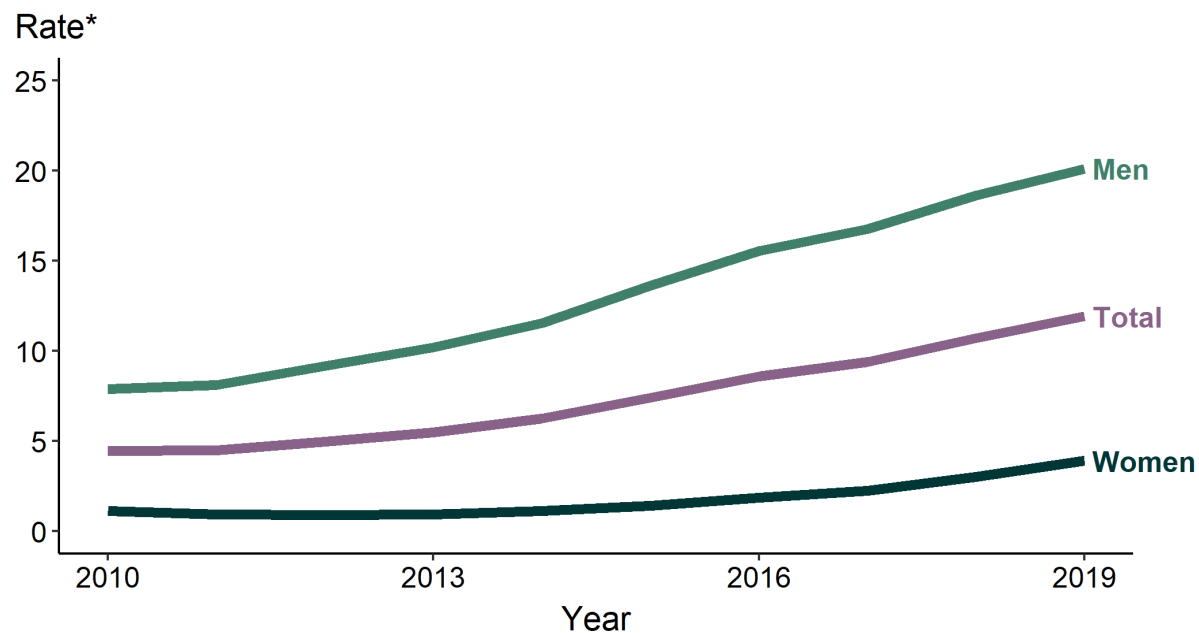


* Per 100,000



In 2019, 45 (1.4%) of the 3,142 U.S. counties and independent cities accounted for half of all reported cases of primary and secondary syphilis. In 2019, 1,413 (45.0%) counties reported no cases of primary and secondary syphilis.

Primary and Secondary Syphilis — Rates of Reported Cases by Sex, United States, 2010–2019

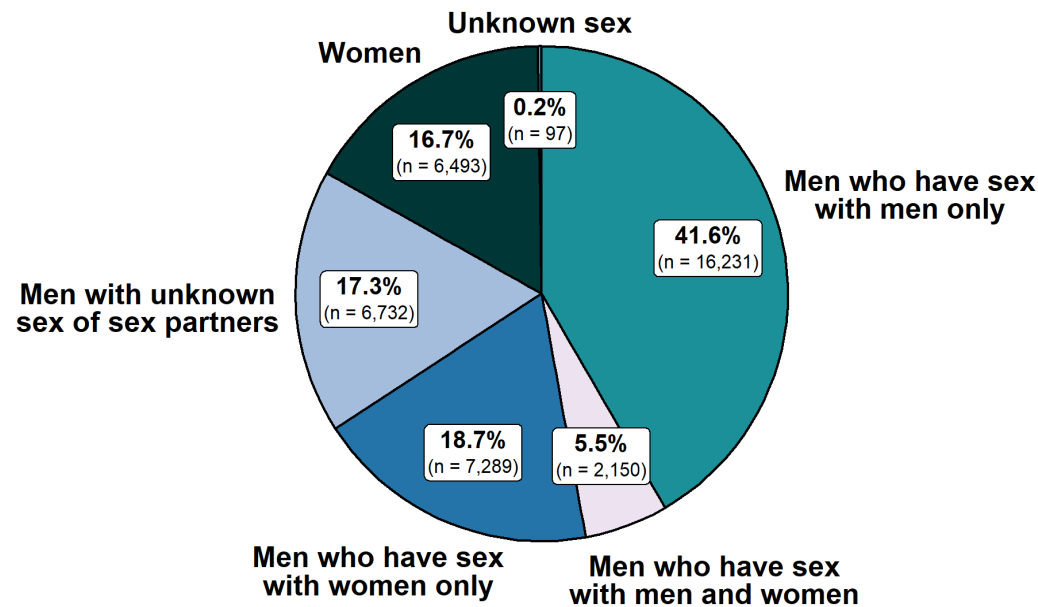


* Per 100,000



During 2018–2019, the primary and secondary syphilis rate among males increased 8.1% (from 18.6 to 20.1 cases per 100,000 males) and the rate among females increased 30.0% (from 3.0 to 3.9 cases per 100,000 females). During 2015–2019, the rate among males increased 47.8% (from 13.6 to 20.1 cases per 100,000 males) and the rate among females increased 178.6% (from 1.4 to 3.9 cases per 100,000 females).

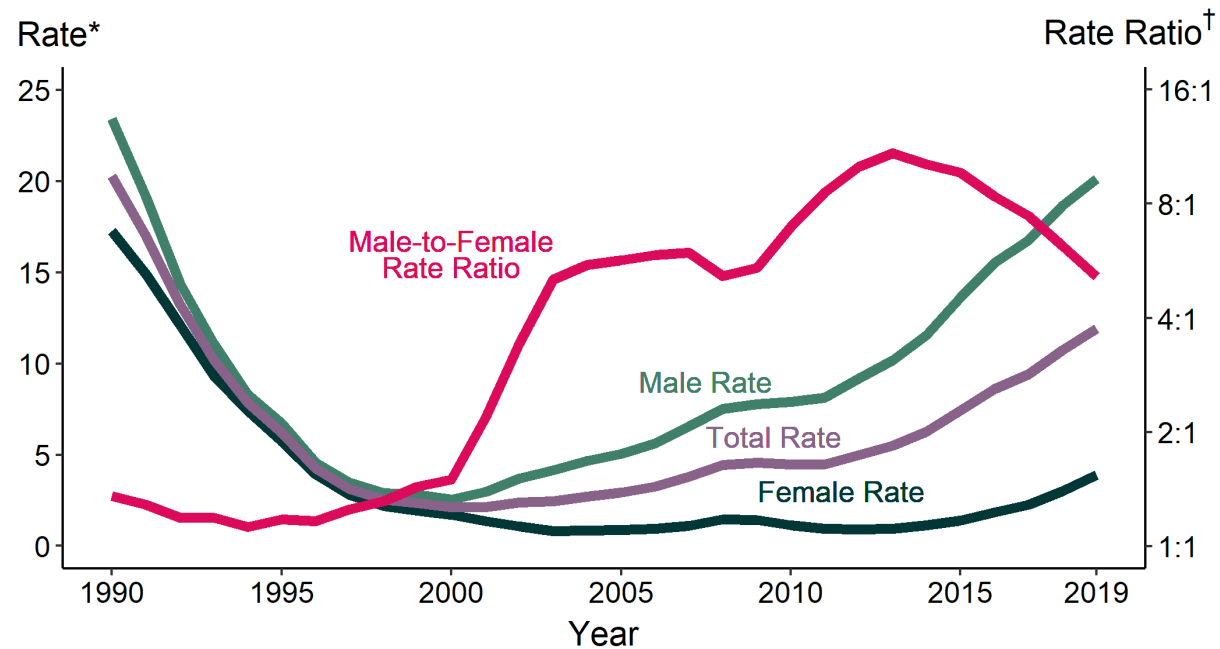
Primary and Secondary Syphilis — Distribution of Cases by Sex and Sex of Sex Partners, United States, 2019



Of 38,992 reported primary and secondary syphilis cases in 2019, 41.6% were among men who have sex with men only. Men who have sex with men only combined with men who have sex with both men and women accounted for 47.1% of all primary and secondary syphilis cases and for 56.7% of all male primary and secondary syphilis cases.

Primary and Secondary Syphilis — Rates of Reported Cases by Sex and Male-to-Female Rate Ratios, United States, 1990–2019

Primary and Secondary Syphilis — Rates of Reported Cases by Sex and Male-to-Female Rate Ratios, United States, 1990–2019



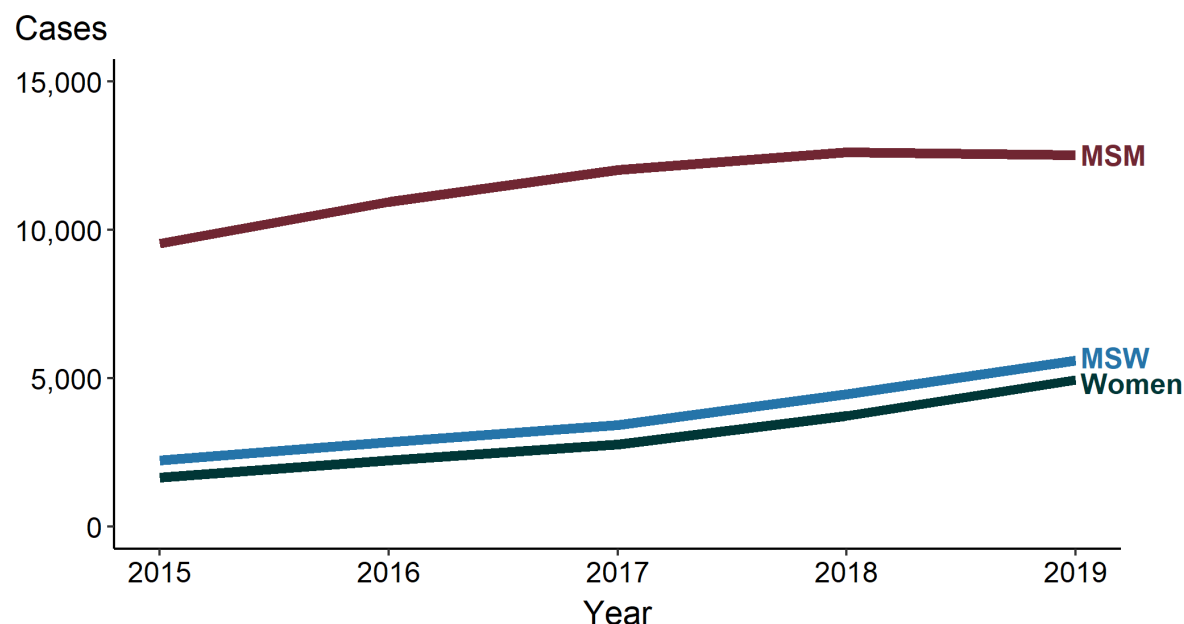
* Per 100,000

† Log scale



Although the male-to-female rate ratio for primary and secondary syphilis increased from 1990 to 2013, the rate ratio is now declining due to the increasing rate of female syphilis. During 2015–2019, the rate of primary and secondary syphilis among women more than doubled (178.6% increase).

Primary and Secondary Syphilis — Reported Cases by Sex and Sex of Sex Partners, 31 States*, 2015–2019



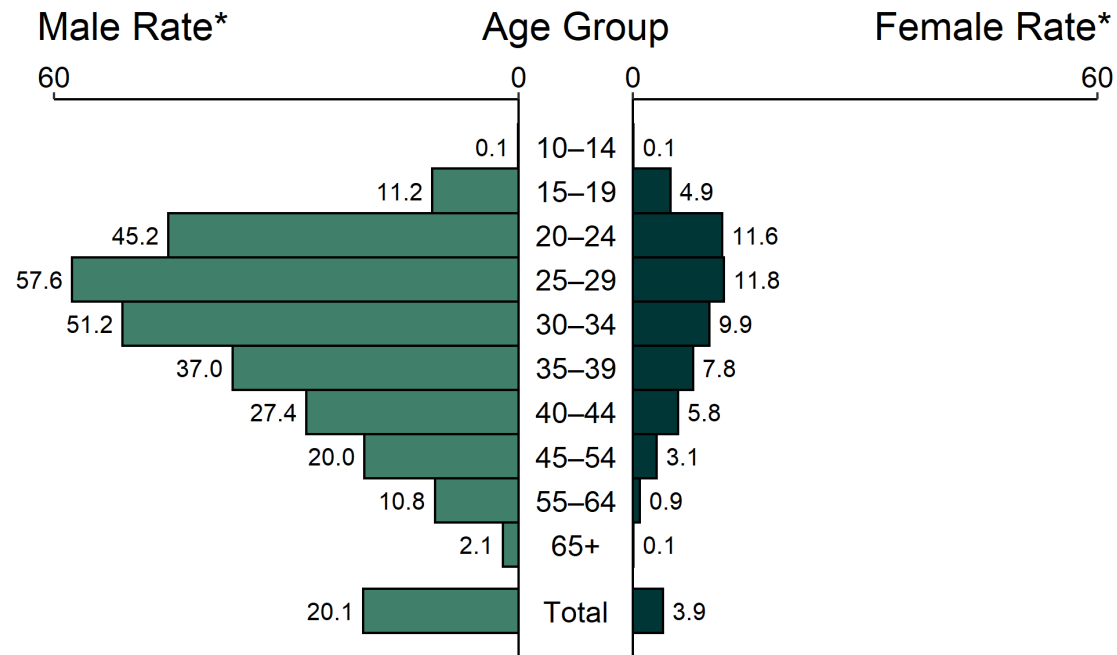
*31 states were able to classify $\geq 70\%$ of reported cases of primary and secondary syphilis among males as either MSM or MSW for each year during 2015–2019.

ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men; MSW = Men who have sex with women only



In 31 states with complete information on sex of sex partners for male cases, most primary and secondary syphilis cases were among men who have sex with men in 2019. During 2018–2019, the number of reported primary and secondary cases decreased among men who have sex with men slightly (12,614 cases in 2018 to 12,532 in 2019), while reported cases among men who have sex with women only (4,473 cases in 2018 to 5,601 in 2019) and women (3,735 cases in 2018 to 4,952 in 2019) increased.

Primary and Secondary Syphilis — Rates of Reported Cases by Age Group and Sex, United States, 2019



* Per 100,000

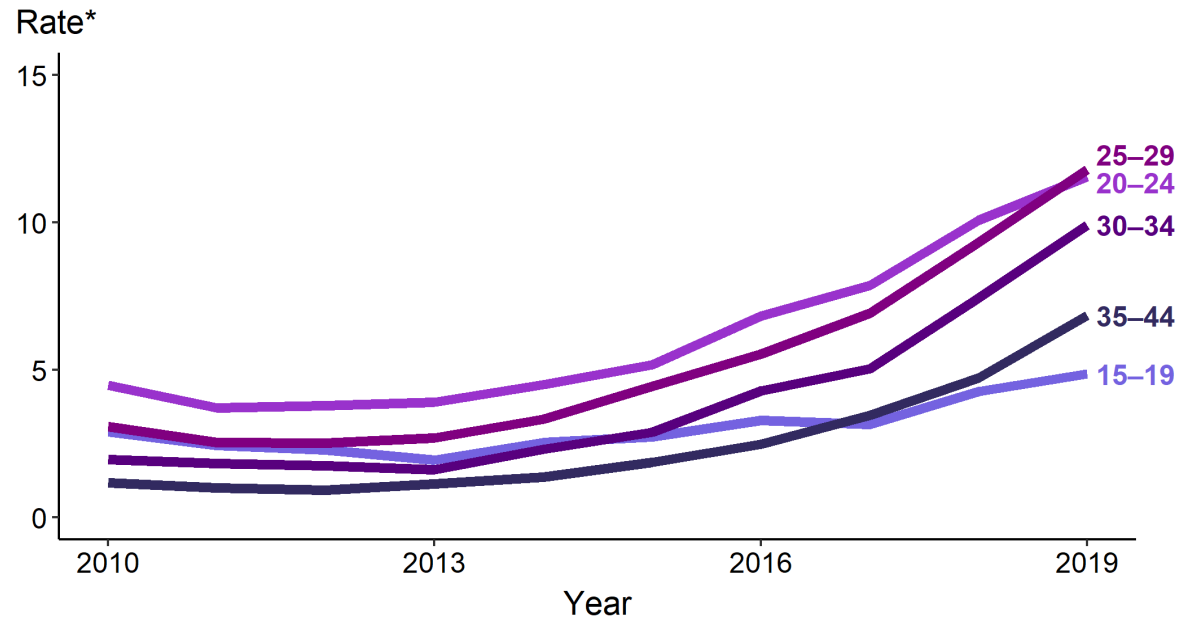
NOTE: Total includes all ages.



The highest rates of primary and secondary syphilis were among men aged 25–29 years (57.6 cases per 100,000 males), men aged 30–34 years (51.2 cases per 100,000 males), and men aged 20–24 years (45.2 cases per 100,000 males). The highest rates among females were among those aged 25–29 years (11.8 cases per 100,000 females) and those aged 20–24 years (11.6 cases per 100,000 females).

Primary and Secondary Syphilis — Rates of Reported Cases Among Females Aged 15–44 Years by Age Group, United States, 2010–2019

Primary and Secondary Syphilis — Rates of Reported Cases Among Females Aged 15–44 Years by Age Group, United States, 2010–2019



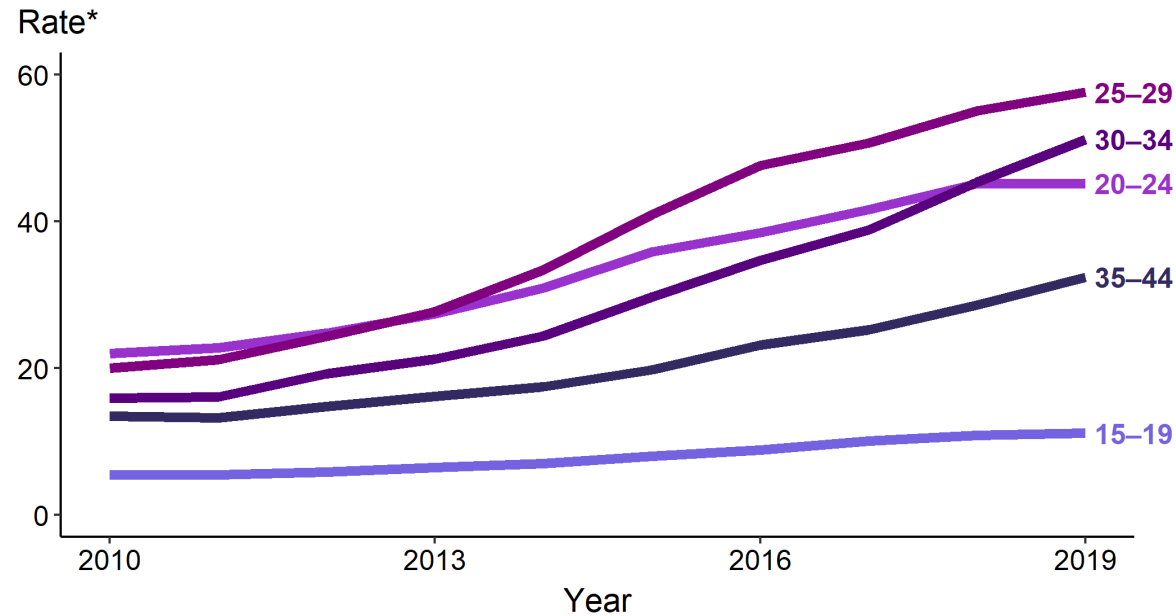
* Per 100,000



The highest rate of primary and secondary syphilis was among 25–29-year-old females, increasing 26.9% during 2018–2019 (9.3 to 11.8 per 100,000 females), with a total increase of 168.2% during 2015–2019 (4.4 to 11.8 cases per 100,000 females). The second highest rate, among 20–24-year-old females, increased 14.9% during 2018–2019 (10.1 to 11.6 per 100,000 females) with a total increase of 123.1% during 2015–2019 (5.2 to 11.6 cases per 100,000 females).

Primary and Secondary Syphilis — Rates of Reported Cases Among Males Aged 15–44 Years by Age Group, United States, 2010–2019

Primary and Secondary Syphilis — Rates of Reported Cases Among Males Aged 15–44 Years by Age Group, United States, 2010–2019

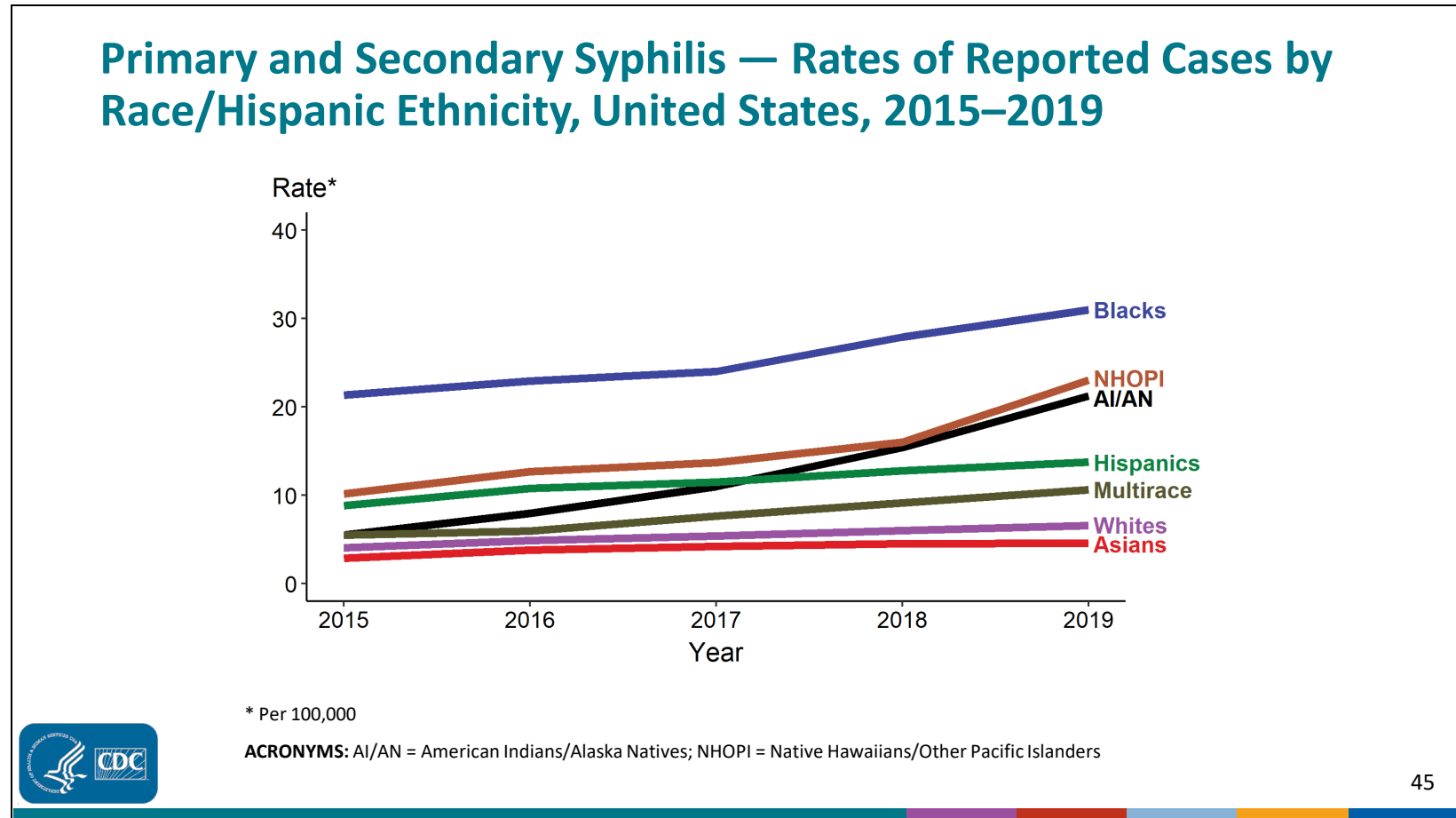


* Per 100,000



During 2018–2019, the rate of reported primary and secondary syphilis cases among males aged 15–44 years increased in all age groups except 20–24 which did not change from the previous year. The rate of primary and secondary syphilis among was highest among 25–29-year-old males, increasing 4.5% during 2018–2019, with a total increase of 40.8% during 2015–2019 (40.9 to 57.6 cases per 100,000 males).

Primary and Secondary Syphilis — Rates of Reported Cases by Race/Hispanic Ethnicity, United States, 2015–2019

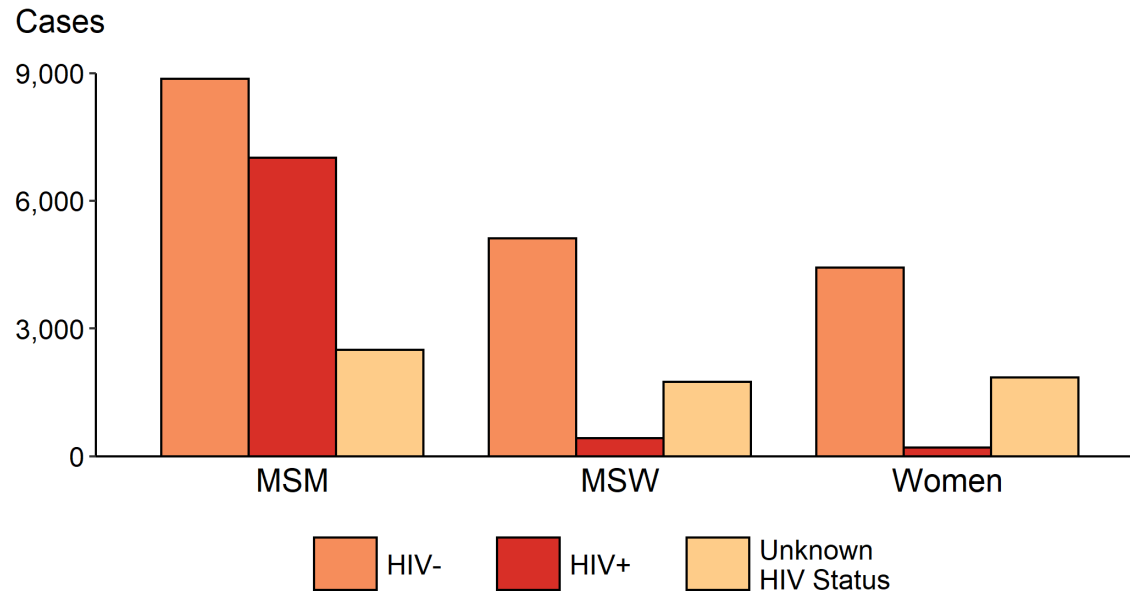


In 2019, the rate of reported cases of primary and secondary syphilis remained highest among Blacks (31.0 cases per 100,000), followed by Native Hawaiians/Other Pacific Islanders (23.0 per 100,000) and American Indians/Alaska Natives (21.2 per 100,000). During 2015–2019, the primary and secondary syphilis rate increased among all race/Hispanic ethnicity groups: American Indians/Alaska Natives increased 285.5%, Native Hawaiians/Other Pacific Islanders increased 125.5%, those who identified as Multirace increased 92.7%, Whites increased 61.0%, Asians increased 58.6%, and Blacks increased 44.9%.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPi, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Primary and Secondary Syphilis — Reported Cases by Sex, Sex of Sex Partners, and HIV Status, United States, 2019

Primary and Secondary Syphilis — Reported Cases by Sex, Sex of Sex Partners, and HIV Status, United States, 2019



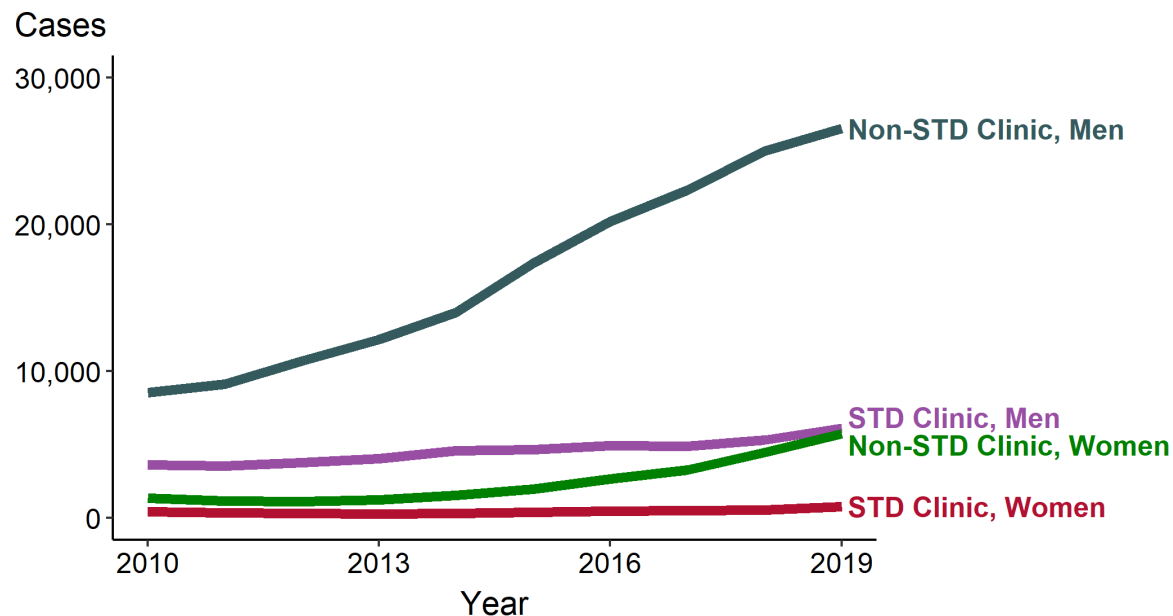
ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men; MSW = Men who have sex with women only



Among primary and secondary syphilis cases with reported HIV status, 44.2% (7,013/15,880) of cases among men who have sex with men were HIV-positive, compared with 7.6% (419/5,535) of cases among men who have sex with women only, and 4.3% (200/4,636) of cases among women.

Note: HIV status is categorized as reported by jurisdictions. Jurisdictions determine HIV status using multiple sources, including self-report, match with HIV registry, and available test results. Cases reported with a missing or unknown status are categorized as having an unknown HIV status.

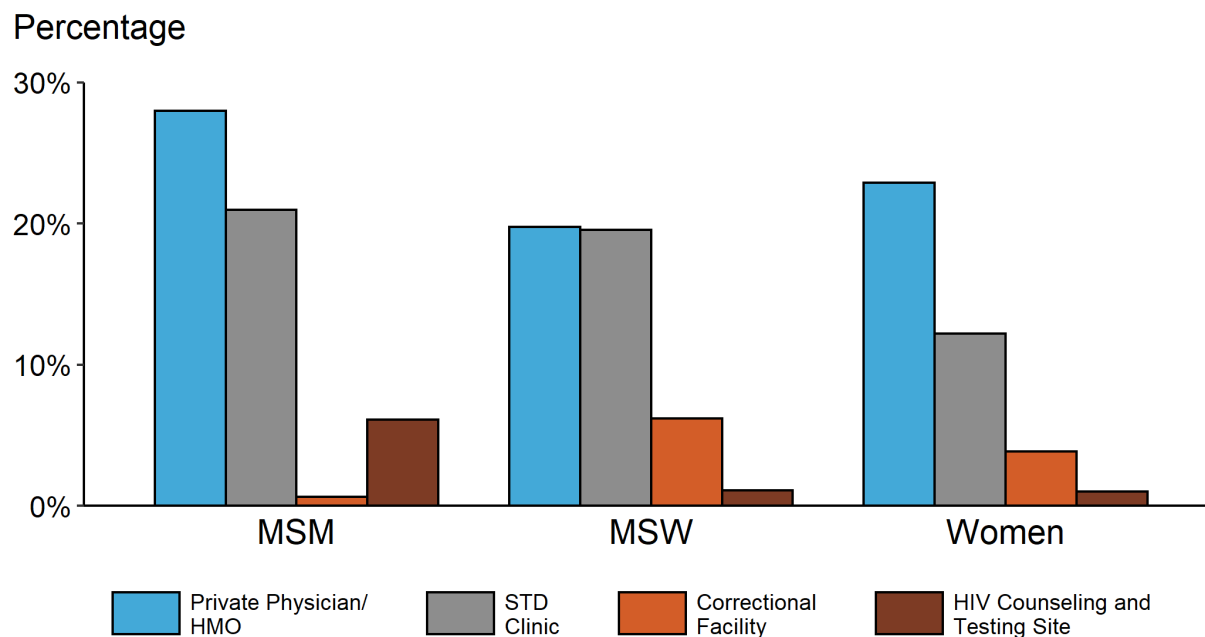
Primary and Secondary Syphilis — Reported Cases by Reporting Source and Sex, United States, 2010–2019



During 2010–2019, the number of primary and secondary syphilis cases reported from STD clinics has remained relatively stable for males and females while the number of cases reported from non-STD clinics increased 210% among males and 326% among females.

Primary and Secondary Syphilis — Percentage of Reported Cases by Sex, Sex of Sex Partners, and Selected Reporting Sources, United States, 2019

Primary and Secondary Syphilis — Percentage of Reported Cases by Sex, Sex of Sex Partners, and Selected Reporting Sources, United States, 2019



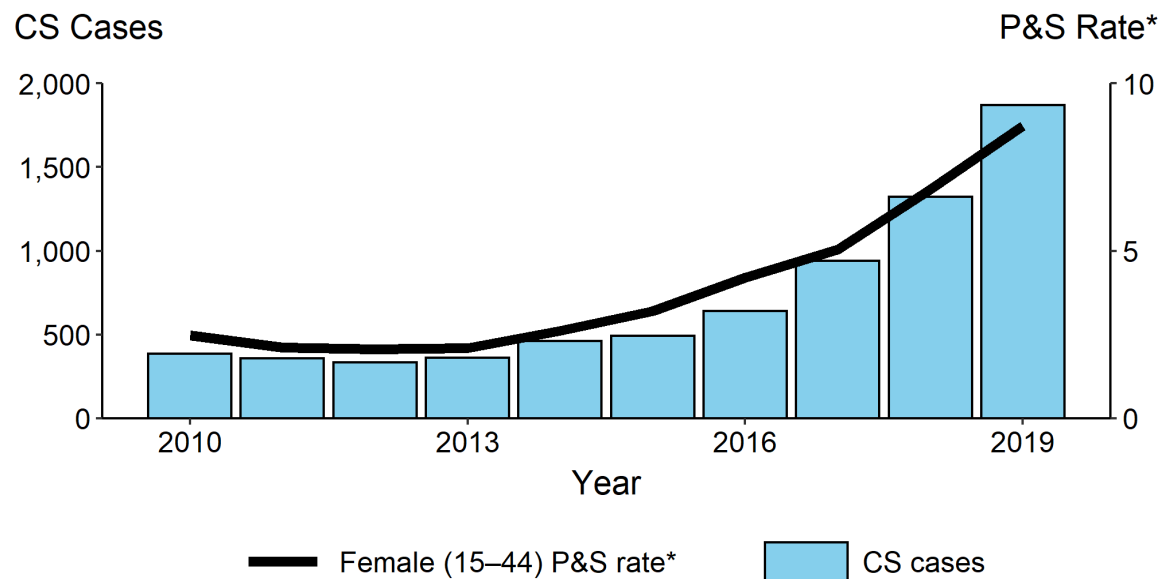
ACRONYMS: HMO = health maintenance organization; MSM = Gay, bisexual, and other men who have sex with men; MSW = Men who have sex with women only



Of cases reported among men who have sex with men, private physicians/health maintenance organizations and STD clinics reported the highest proportion of cases. Although private physicians/health maintenance organizations and STD clinics are also the most common reporting sources for women and men who have sex with women only, correctional facilities make up a more significant reporting source in these two groups.

Congenital Syphilis — Reported Cases by Year of Birth and Rates of Reported Cases of Primary and Secondary Syphilis Among Females Aged 15–44 Years, United States, 2010–2019

Congenital Syphilis — Reported Cases by Year of Birth and Rates of Reported Cases of Primary and Secondary Syphilis Among Females Aged 15–44 Years, United States, 2010–2019



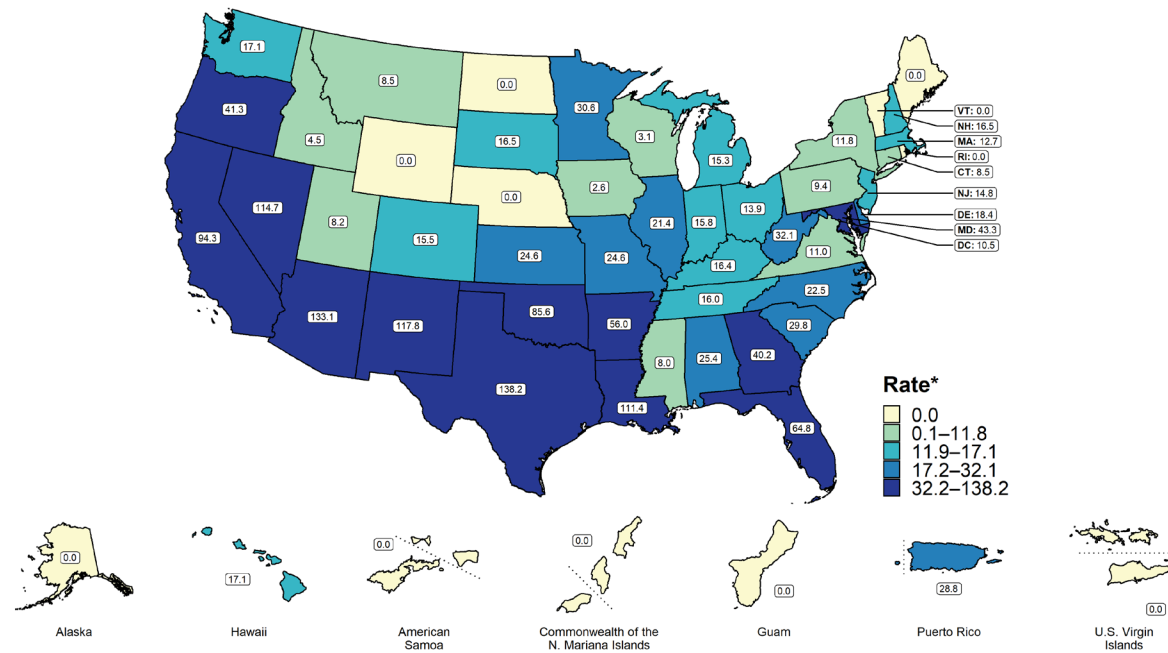
* Per 100,000

ACRONYMS: CS = Congenital syphilis; P&S = Primary and secondary syphilis



In 2019, there were a total of 1,870 cases of congenital syphilis reported for a rate of 48.5 cases per 100,000 live births. During 2018–2019, the rate of congenital syphilis increased 41.4% (34.3 to 48.5 per 100,000 live births), concurrent with a 27.9% (6.8 to 8.7 per 100,000 females) increase in the rate of primary and secondary syphilis among women aged 15–44 years. During 2015–2019, the rate of congenital syphilis increased 291.1% (12.4 to 48.5 per 100,000 live births) and the rate of primary and secondary syphilis among women aged 15–44 years increased 171.9% (3.2 to 8.7 per 100,000 females).

Congenital Syphilis — Rates of Reported Cases by Year of Birth and State, United States and Territories, 2019



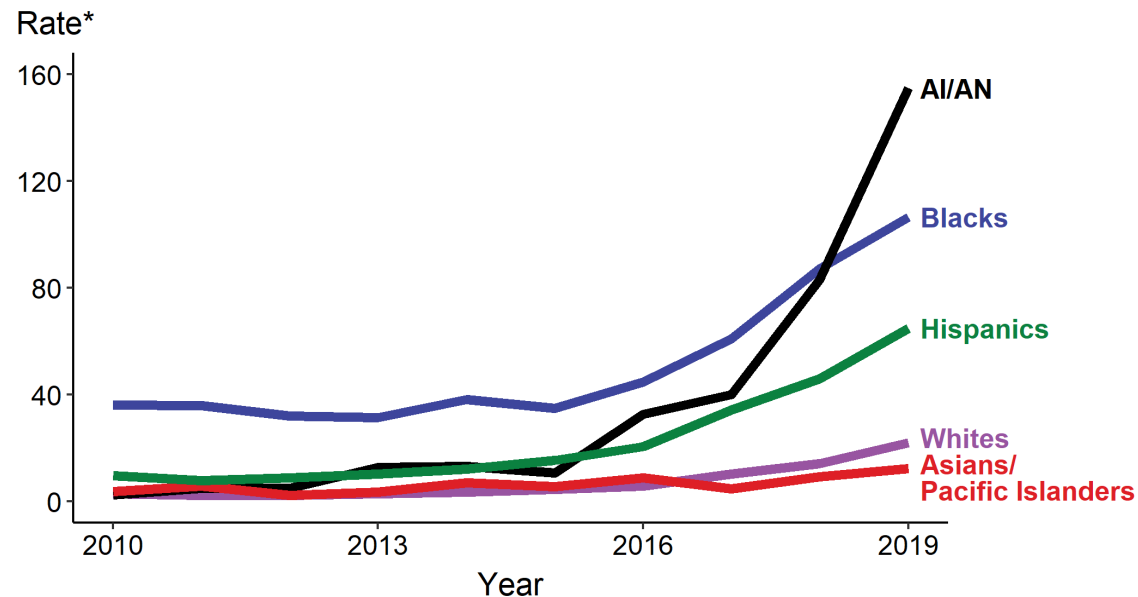
* Per 100,000 live births



In 2019, 43 states plus the District of Columbia reported at least one case of congenital syphilis. Rates of reported congenital syphilis per 100,000 live births ranged by state from 2.6 in Iowa to 138.2 in Texas; the congenital syphilis rate in the District of Columbia was 10.5 cases per 100,000 live births.

Congenital Syphilis — Rates of Reported Cases by Year of Birth, Race, and Hispanic Ethnicity of Mother, United States, 2010–2019

Congenital Syphilis — Rates of Reported Cases by Year of Birth, Race, and Hispanic Ethnicity of Mother, United States, 2010–2019



* Per 100,000 live births

ACRONYMS: AI/AN = American Indians/Alaska Natives

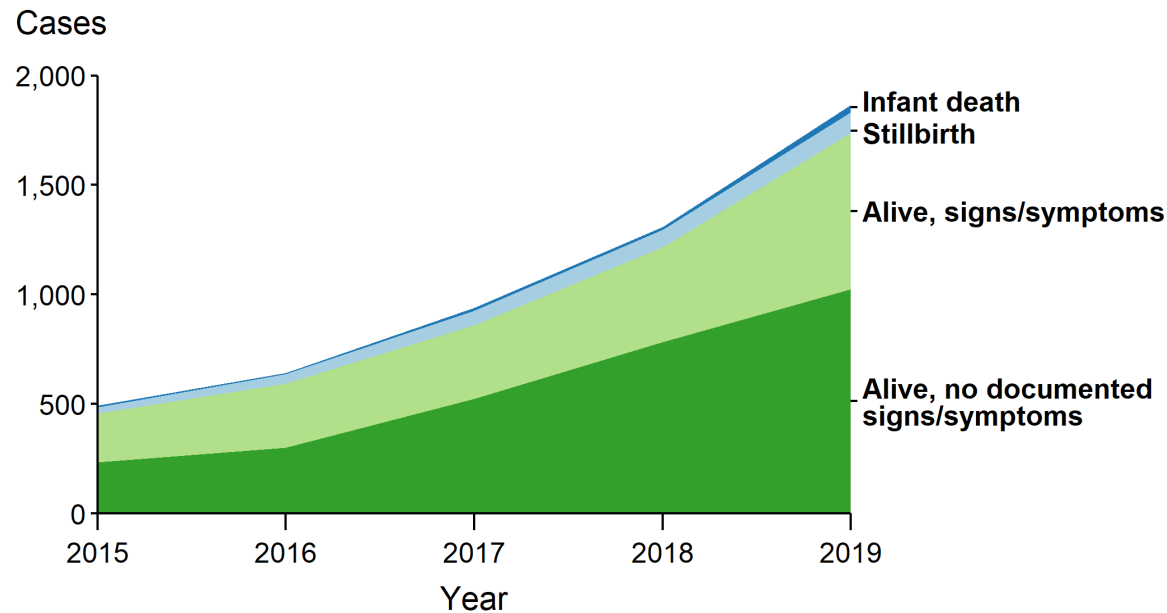
51

Rates of reported congenital syphilis cases increased for all race/Hispanic ethnicity groups during 2015–2019, including a 1,347.7% increase among American Indians/Alaska Natives (from 10.7 to 154.9 cases per 100,000 live births), a 391.1% increase among Whites (from 4.5 to 22.1 cases per 100,000 live births), a 318.7% among Hispanics (from 15.5 to 64.9 cases per 100,000 live births), a 204.0% increase among Blacks (from 35.0 to 106.4 cases per 100,000 live births), and a 123.6% increase among Asian/Pacific Islanders (from 5.5 to 12.3 cases per 100,000 live births).

National Center for Health Statistics bridged race categories are presented to allow the display of data across several years.

Congenital Syphilis — Reported Cases by Vital Status and Clinical Signs and Symptoms* of Infection, United States, 2015–2019

Congenital Syphilis — Reported Cases by Vital Status and Clinical Signs and Symptoms* of Infection, United States, 2015–2019



*Infants with signs/symptoms of congenital syphilis have documentation of at least one of the following: long bone changes consistent with congenital syphilis, snuffles, condyloma lata, syphilitic skin rash, pseudoparalysis, hepatosplenomegaly, edema, jaundice due to syphilitic hepatitis, reactive CSF-VDRL, elevated CSF WBC or protein, or evidence of direct detection of *T. Pallidum*.

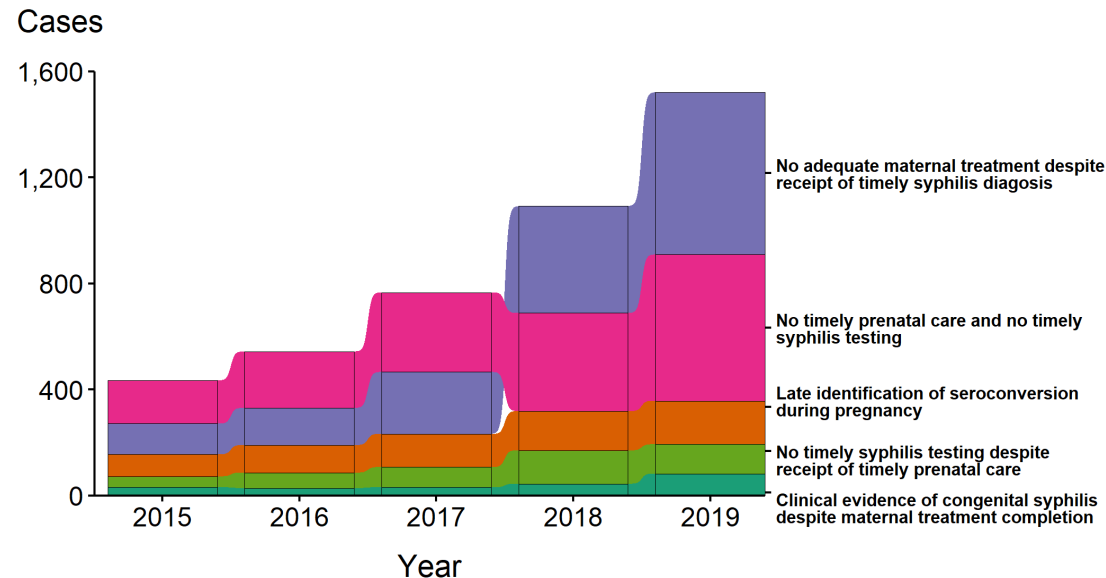
NOTE: Of the 5,269 congenital syphilis cases reported during 2015–2019, 22 (0.4%) did not have sufficient information to be categorized



In 2019, there were 128 congenital syphilis-related deaths (94 stillbirths and 34 infant deaths), and an increase of 36.2% from 2018 (94 to 128 deaths) and of 255.6% from 2015 (36 to 128 deaths).

Congenital Syphilis — Missed Prevention Opportunities among Mothers Delivering Infants with Congenital Syphilis, United States, 2015–2019

Congenital Syphilis — Missed Prevention Opportunities among Mothers Delivering Infants with Congenital Syphilis, United States, 2015–2019



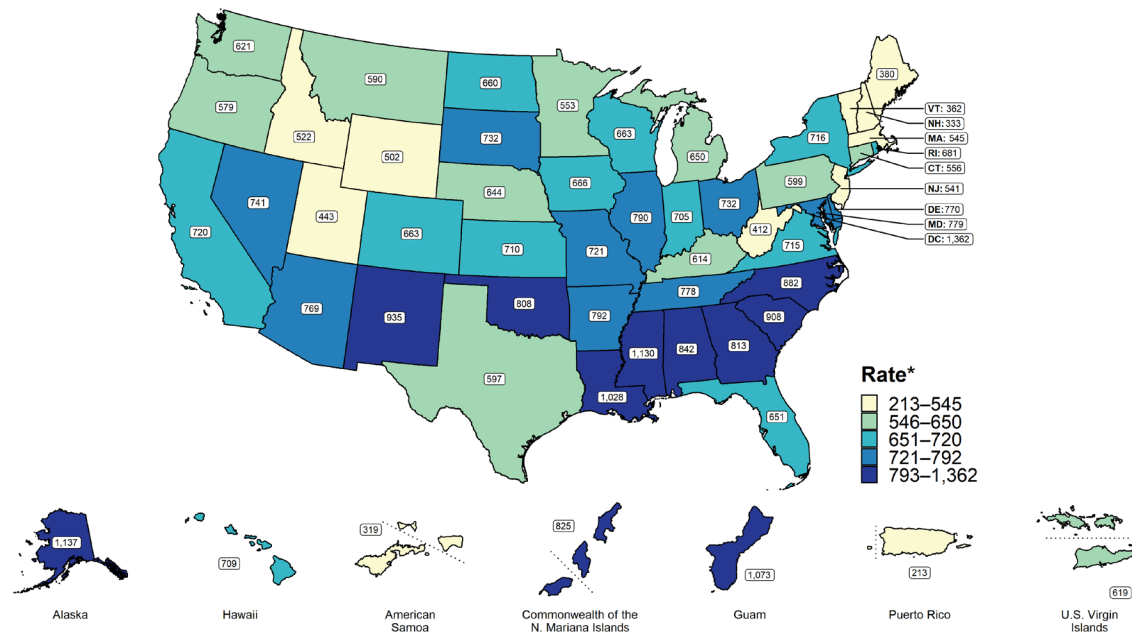
NOTE: Of the 5,269 congenital syphilis cases reported during 2015–2019, 912 (17.3%) were not able to have the primary missed prevention opportunity identified due to insufficient information submitted to CDC related to maternal prenatal care, testing, or treatment.



During 2015–2019, the majority of missed prevention opportunities among mothers of infants with congenital syphilis were no adequate maternal treatment despite receipt of timely syphilis diagnosis and no timely prenatal care/no timely syphilis testing. In 2019, the most common missed congenital syphilis prevention opportunity was a lack of adequate maternal syphilis treatment despite receipt of a timely syphilis diagnosis (40.2%). The second most common missed congenital syphilis prevention opportunity in 2019 was a lack of timely prenatal care and subsequent lack of timely syphilis testing (36.3%).

ADAPTED FROM: Kimball A, Torrone E, Miele K, et al. Missed Opportunities for Prevention of Congenital Syphilis - United States, 2018. *MMWR Morb Mortal Wkly Rep.* 2020 Jun 5;69(22):661-665.

Chlamydia — Rates of Reported Cases Among Females by State, United States and Territories, 2019

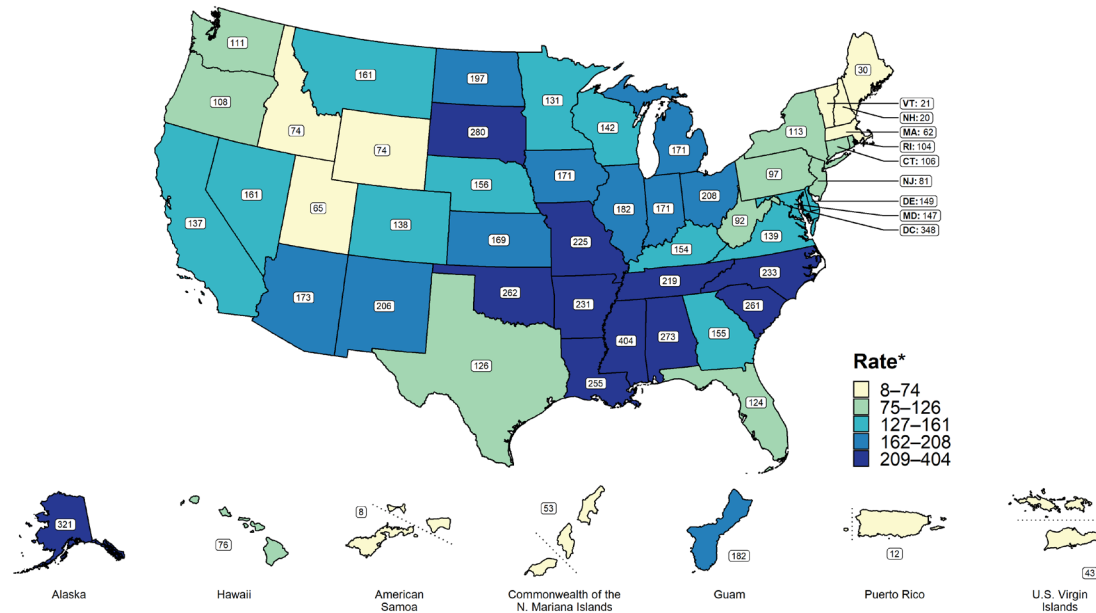


* Per 100,000



In 2019, the overall rate of reported cases of chlamydia among females was 698.9 per 100,000 females. Rates of reported chlamydia cases among females per 100,000 population ranged by state from 333 in New Hampshire to 1,137 in Alaska. The rate of reported chlamydia cases among females in the District of Columbia was 1,362 cases per 100,000 population.

Gonorrhea — Rates of Reported Cases Among Females by State, United States and Territories, 2019

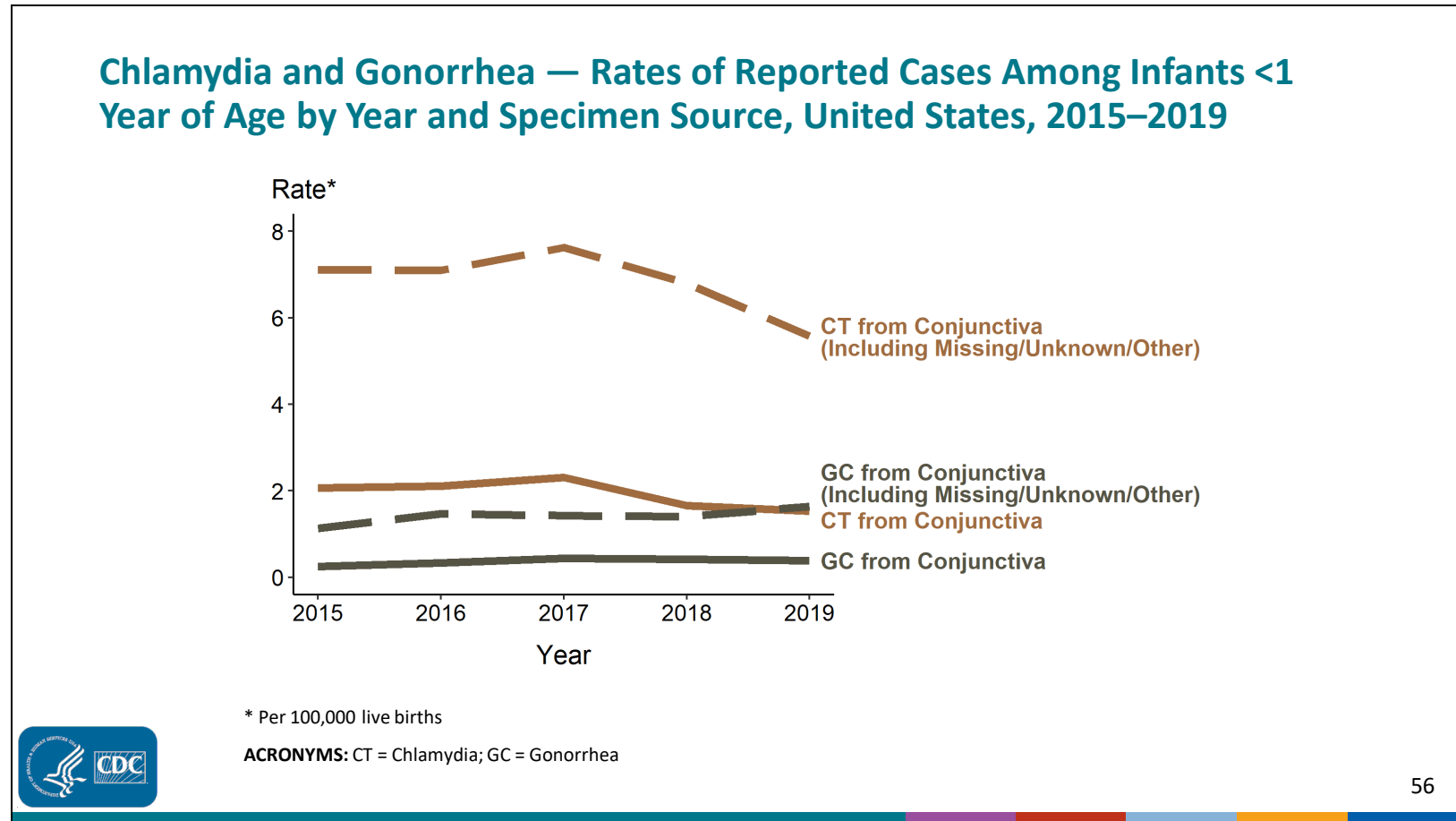


* Per 100,000



In 2019, the overall rate of reported cases of gonorrhea among females was 152.6 per 100,000 females. Rates of reported gonorrhea cases among females per 100,000 population ranged by state from 20 in New Hampshire to 404 in Mississippi. The rate of reported gonorrhea cases among females in the District of Columbia was 348 cases per 100,000 population.

Chlamydia and Gonorrhea — Rates of Reported Cases Among Infants <1 Year of Age by Year and Specimen Source, United States, 2015–2019

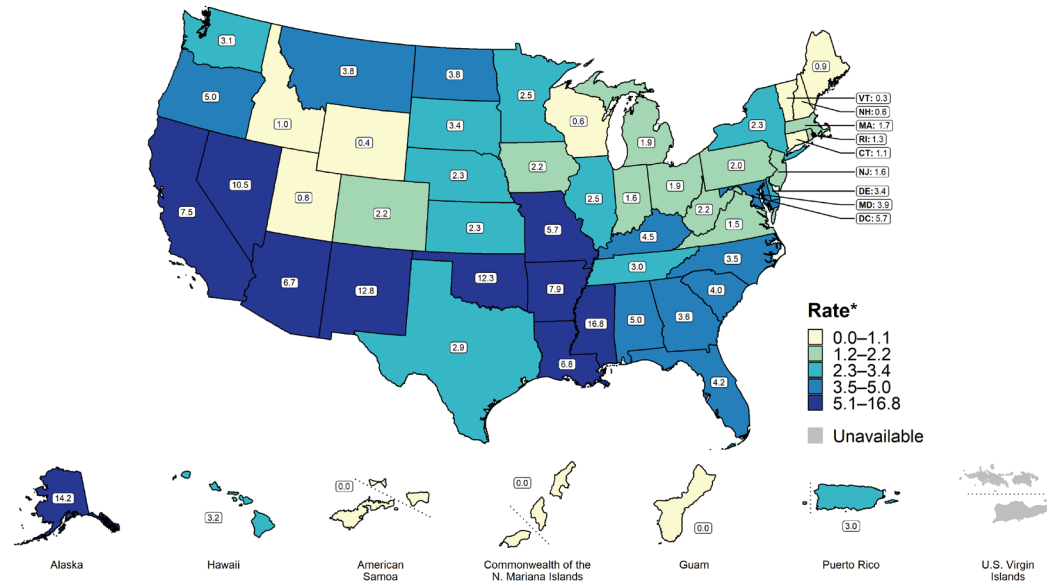


During 2015–2019, 448 chlamydia or gonorrhea cases among infants aged less than one year with a specimen source of either ‘eye’ or ‘conjunctiva’ (conjunctivitis infections) were reported to CDC. The overall reported rate of chlamydial conjunctivitis in infants was relatively stable during 2015–2019, ranging from 1.5 to 2.3 cases per 100,000 live births. Similarly, the rate of gonococcal conjunctivitis in infants remained relatively constant and low during 2015–2019, ranging from 0.3–0.4 cases per 100,000 live births. An additional 1,609 chlamydia or gonorrhea cases among infants aged less than one year with a specimen source of other, unknown, or missing were reported during 2015–2019.

ADAPTED FROM: Kreisel K, Weston E, Braxton J, et al. Keeping an eye on chlamydia and gonorrhea conjunctivitis in infants in the United States, 2010–2015. *Sex Transm Dis.* 2017; 44(6): 356–358.

Primary and Secondary Syphilis — Rates of Reported Cases Among Females by State, United States and Territories, 2019

Primary and Secondary Syphilis — Rates of Reported Cases Among Females by State, United States and Territories, 2019



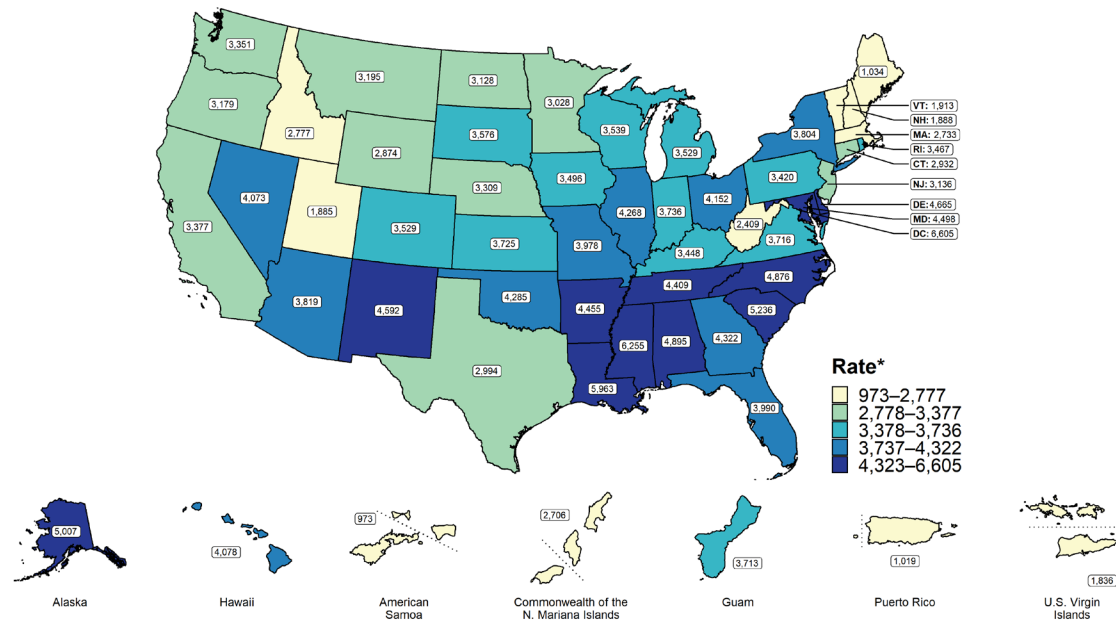
* Per 100,000



In 2019, the overall rate of reported primary and secondary syphilis cases among females was 3.9 cases per 100,000 females. Rates of reported primary and secondary syphilis cases among females per 100,000 population ranged by state from 0.3 in Vermont to 16.8 in Mississippi. The rate of reported primary and secondary syphilis cases among females in the District of Columbia was 5.7 cases per 100,000 population.

Chlamydia — Rates of Reported Cases Among Females Aged 15–24 Years by State, United States and Territories, 2019

Chlamydia — Rates of Reported Cases Among Females Aged 15–24 Years by State, United States and Territories, 2019



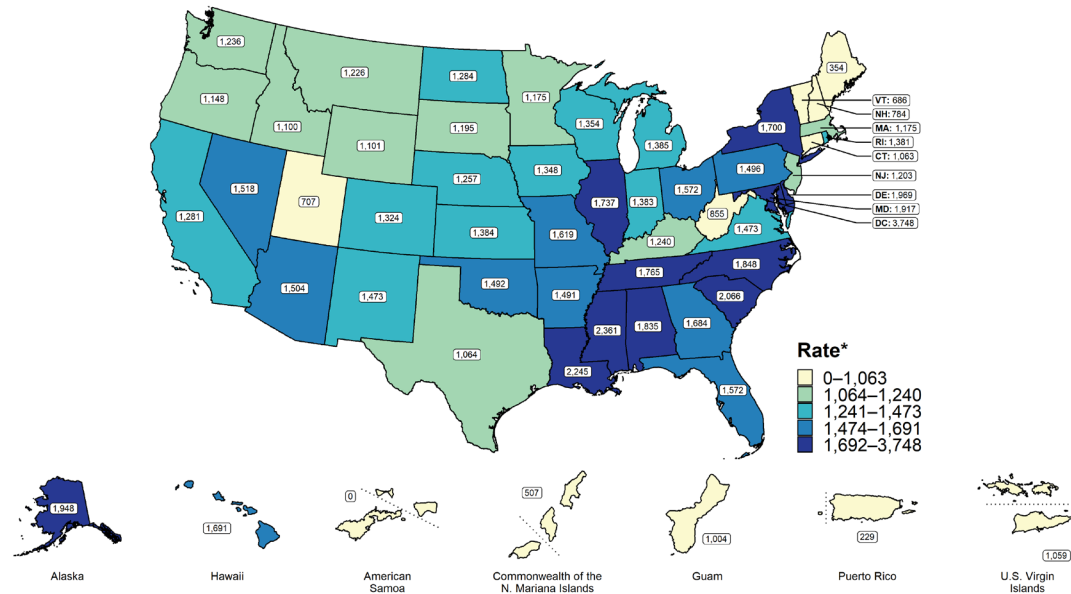
* Per 100,000



Among females aged 15–24 years, the population targeted for chlamydia screening, the overall rate of reported cases of chlamydia in 2019 was 3,728.1 cases per 100,000 females. Rates of reported chlamydia cases varied by state for females aged 15–24 years, with the majority of states having the highest reported case rates in the South.

Chlamydia — Rates of Reported Cases Among Males Aged 15–24 Years by State, United States and Territories, 2019

Chlamydia — Rates of Reported Cases Among Males Aged 15–24 Years by State, United States and Territories, 2019



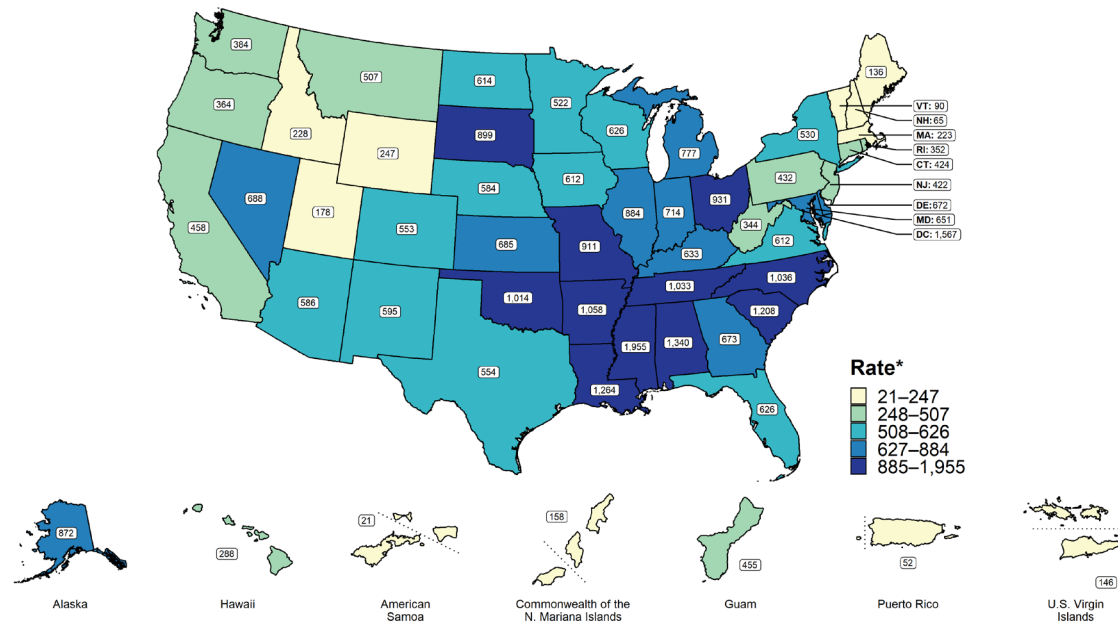
* Per 100,000



Among males aged 15–24 years, the overall rate of reported cases of chlamydia in 2019 was 1,448.6 cases per 100,000 males. Rates of reported chlamydia cases varied by state for males aged 15–24 years, with the majority of states having the highest reported case rates in the South.

Gonorrhea — Rates of Reported Cases Among Females Aged 15–24 Years by State, United States and Territories, 2019

Gonorrhea — Rates of Reported Cases Among Females Aged 15–24 Years by State, United States and Territories, 2019



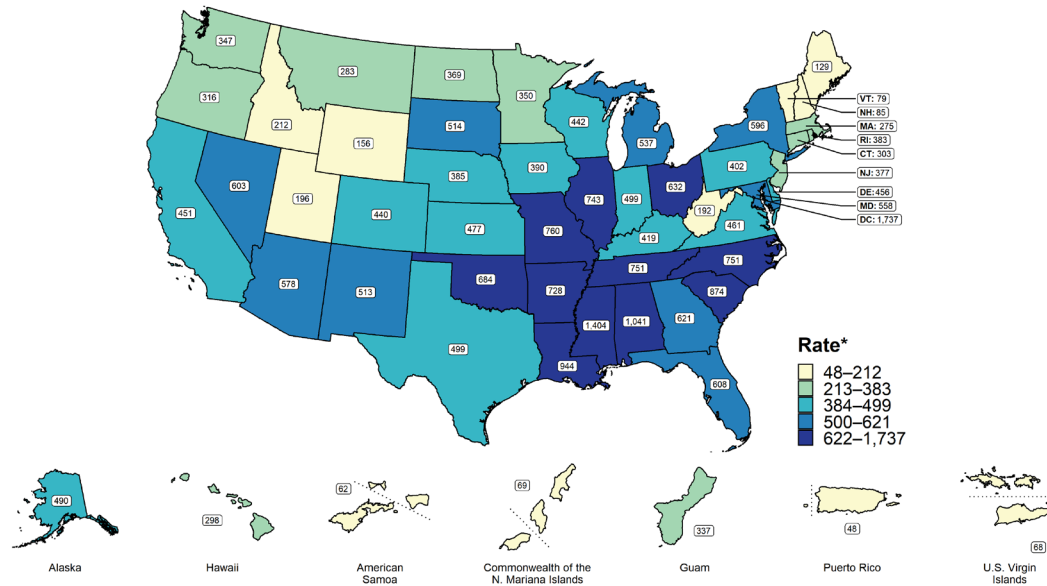
* Per 100,000



In 2019, among females aged 15–24 years, the rate of reported gonorrhea was 650.0 cases per 100,000 females. Rates of reported gonorrhea cases varied by state for females aged 15–24 years, with the majority of states having the highest reported case rates in the South.

Gonorrhea — Rates of Reported Cases Among Males Aged 15–24 Years by State, United States and Territories, 2019

Gonorrhea — Rates of Reported Cases Among Males Aged 15–24 Years by State, United States and Territories, 2019



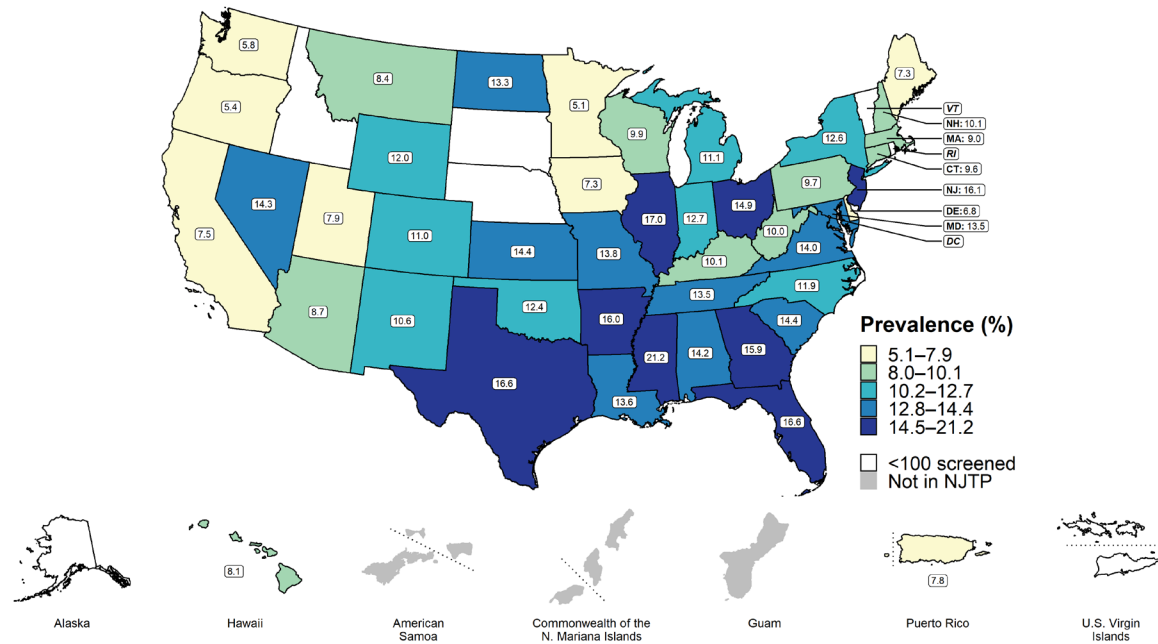
* Per 100,000



Among males aged 15–24 years, the rate of reported gonorrhea was 540.0 cases per 100,000 males in 2019. Rates of reported gonorrhea cases varied by state for males aged 15–24 years, with the majority of states having the highest reported case rates in the South.

Chlamydia — Prevalence Among Females Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019

Chlamydia — Prevalence Among Females Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019



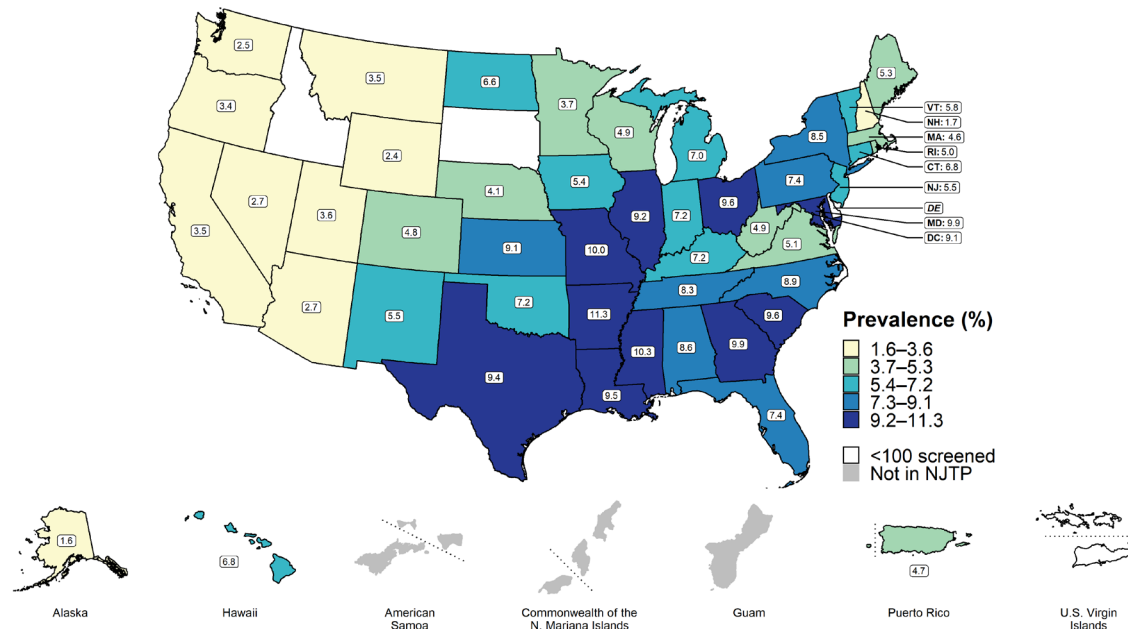
* Fewer than 100 females who resided in these states/areas and entered the National Job Training Program were screened for chlamydia in 2019.



Among females aged 16–24 years entering the National Job Training Program in 2019 in 41 states and the District of Columbia, the median state-specific chlamydia prevalence was 11.9% (range: 5.1% to 21.2%).

Chlamydia — Prevalence Among Males Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019

Chlamydia — Prevalence Among Males Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019



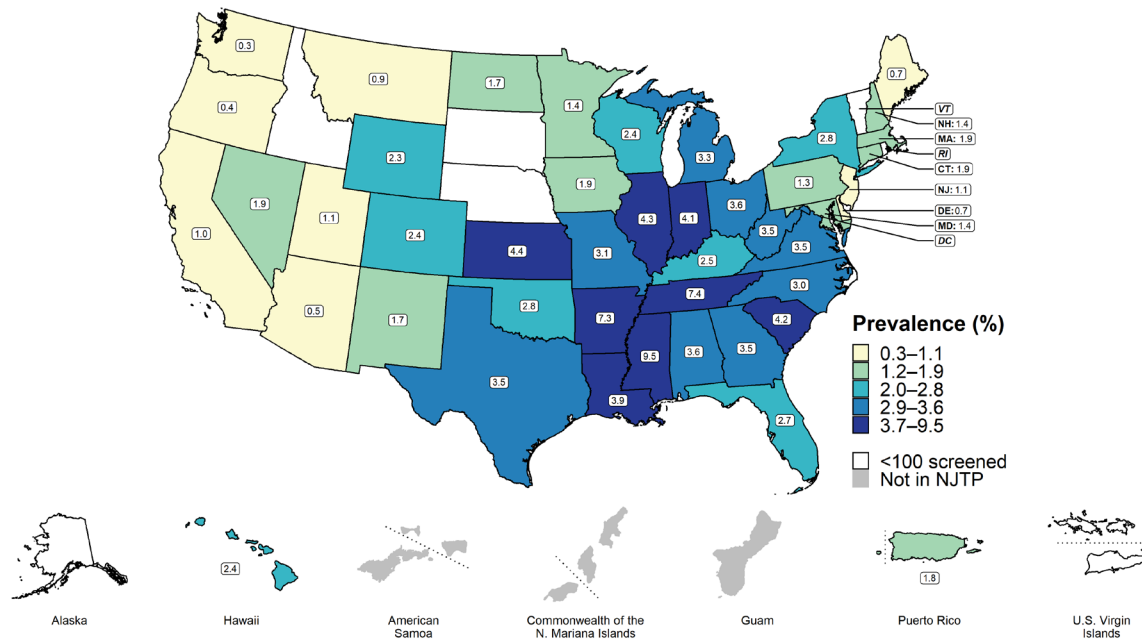
* Fewer than 100 males who resided in these states/areas and entered the NJTP were screened for chlamydia in 2019.



Among males aged 16–24 years entering the National Job Training Program in 2019 in all 50 states, the District of Columbia, and Puerto Rico, the median state-specific chlamydia prevalence was 6.6% (range: 1.6% to 11.3%).

Gonorrhea — Prevalence Among Females Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019

Gonorrhea — Prevalence Among Females Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019



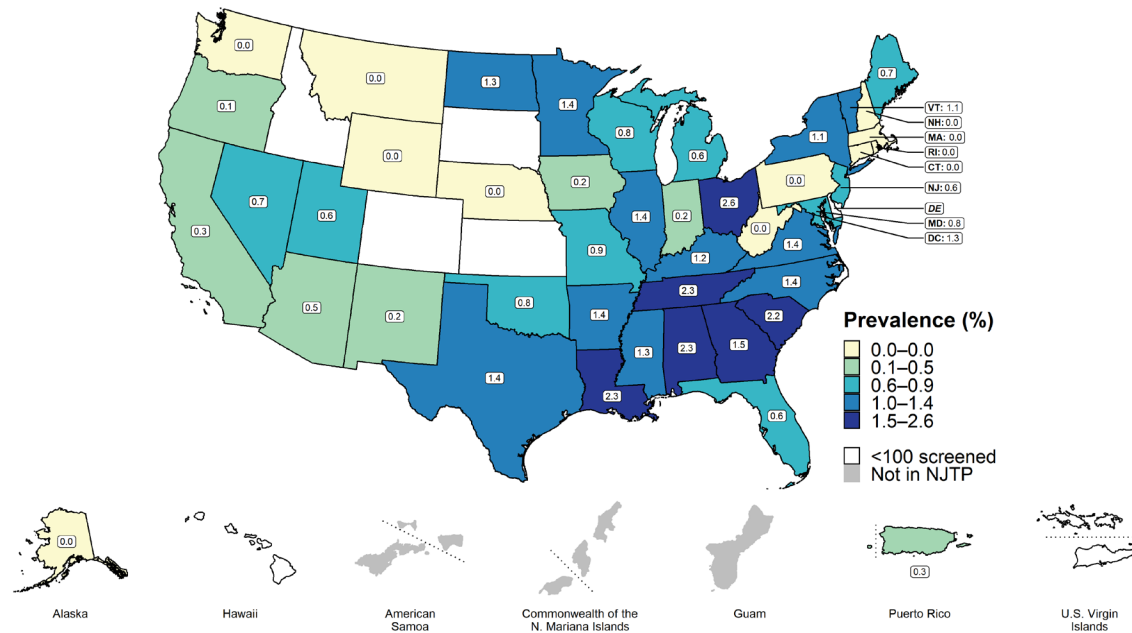
* Fewer than 100 females who resided in these states/areas and entered the National Job Training Program were screened for gonorrhea in 2019.



Among females aged 16–24 years entering the National Job Training Program in 41 states and the District of Columbia, the median state-specific gonorrhea prevalence in 2019 was 2.4% (range: 0.3% to 9.5%).

Gonorrhea — Prevalence Among Males Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019

Gonorrhea — Prevalence Among Males Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Territories, 2019



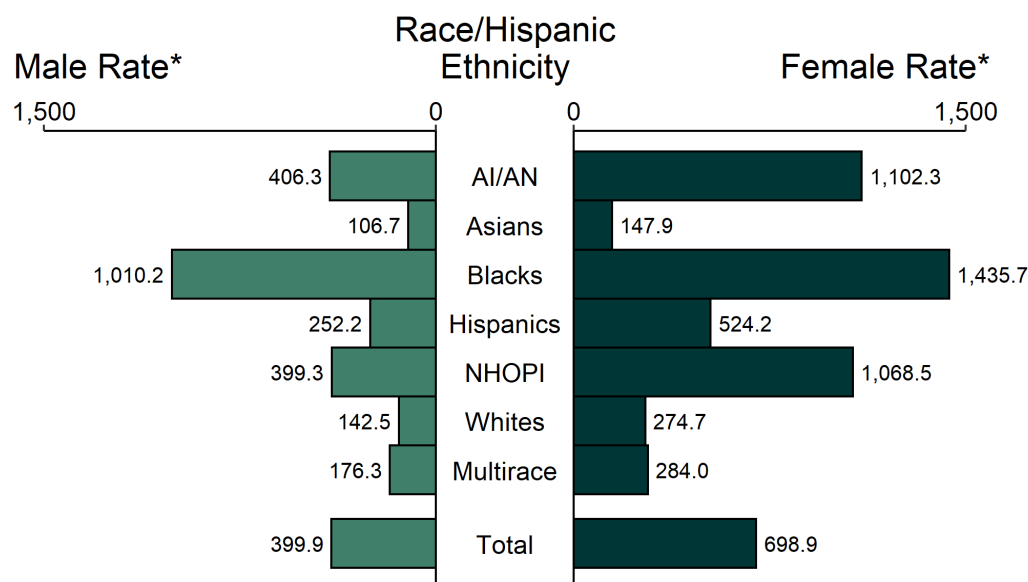
* Fewer than 100 males who resided in these states/areas and entered the National Job Training Program were screened for gonorrhea in 2019.



Among males aged 16–24 years entering the National Job Training Program in 46 states, the District of Columbia, and Puerto Rico, the median state-specific gonorrhea prevalence in 2019 was 0.7% (range: 0.0% to 2.6%).

Chlamydia — Rates of Reported Cases by Race/Hispanic Ethnicity and Sex, United States, 2019

Chlamydia — Rates of Reported Cases by Race/Hispanic Ethnicity and Sex, United States, 2019



* Per 100,000

ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders

NOTE: Total includes all cases including those with unknown race/Hispanic ethnicity.

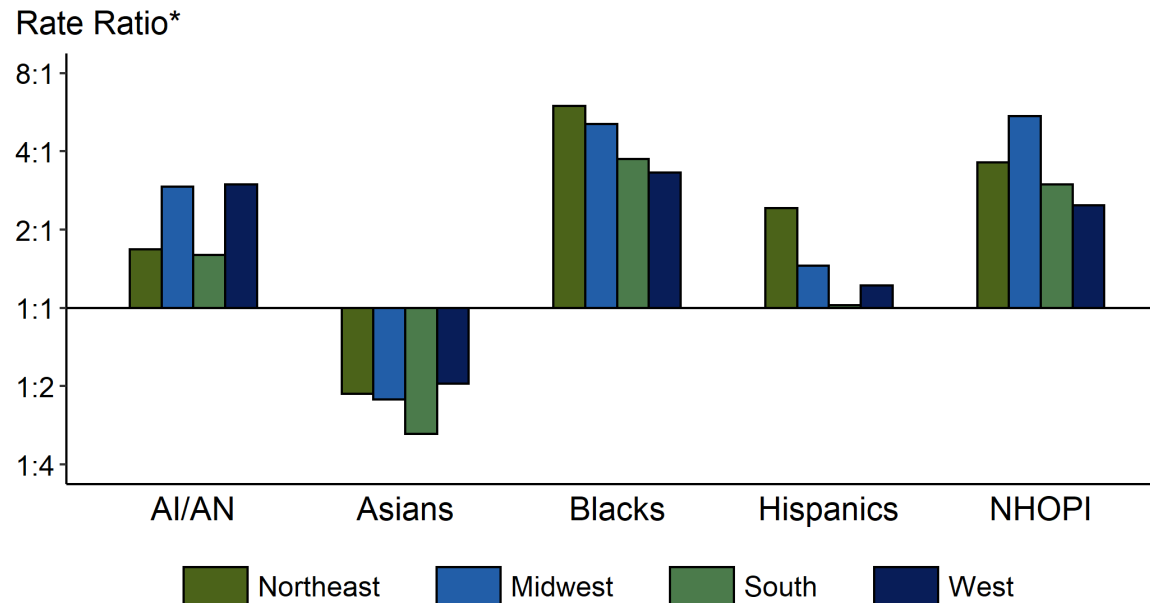


In 2019, the rate of reported chlamydia cases among Black females was 5.2 times the rate among White females (1,435.7 and 274.7 cases per 100,000 population, respectively). The rate of reported chlamydia cases among Black males was 7.1 times the rate among White males (1,010.2 and 142.5 cases per 100,000 population, respectively). The rate of reported chlamydia cases among American Indian/Alaska Natives females was 4.0 times the rate among White females (1,102.3 and 274.7 cases per 100,000 population, respectively). The rate of reported gonorrhea cases among American Indian/Alaska Natives males was 3.2 times the rate among White males (406.3 and 142.5 cases per 100,000 population, respectively).

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPI, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Chlamydia — Rate Ratios Among Females Aged 15–24 Years by Race/Hispanic Ethnicity and Region, United States, 2019

Chlamydia — Rate Ratios Among Females Aged 15–24 Years by Race/Hispanic Ethnicity and Region, United States, 2019



* For the rate ratios, Whites are the reference population. Y-axis is log scale.

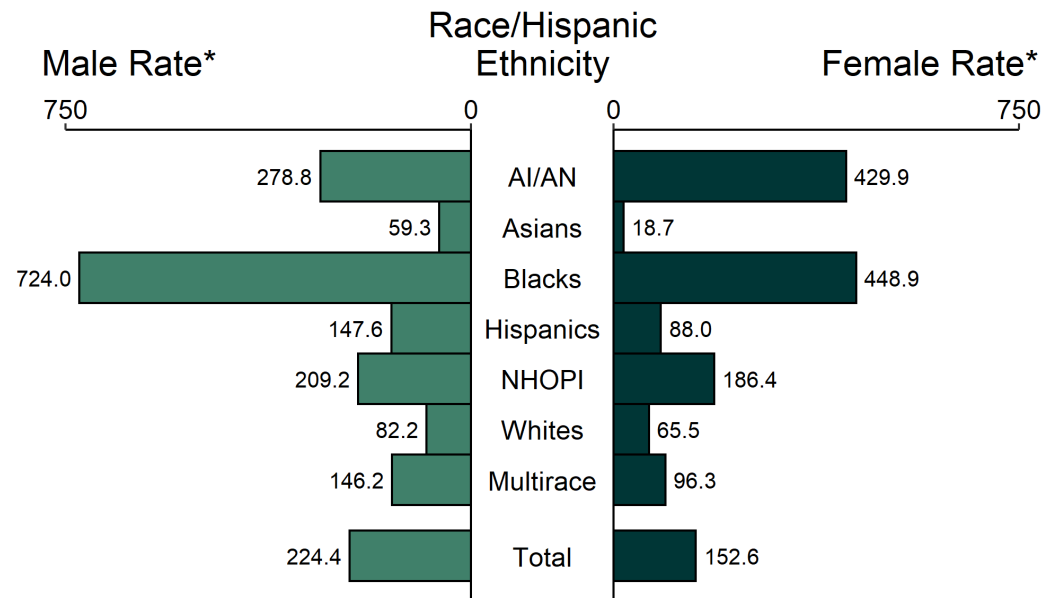
ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders



Among females aged 15–24 years, the population targeted for chlamydia screening, rate ratios (using Whites as the reference population) varied by region in 2019. Differences were greatest in the Northeast where the rate of chlamydia among Black females was 6.0 times the rate among White females.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPI, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Gonorrhea — Rate of Reported Cases by Race/Hispanic Ethnicity and Sex, United States, 2019



* Per 100,000

ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders

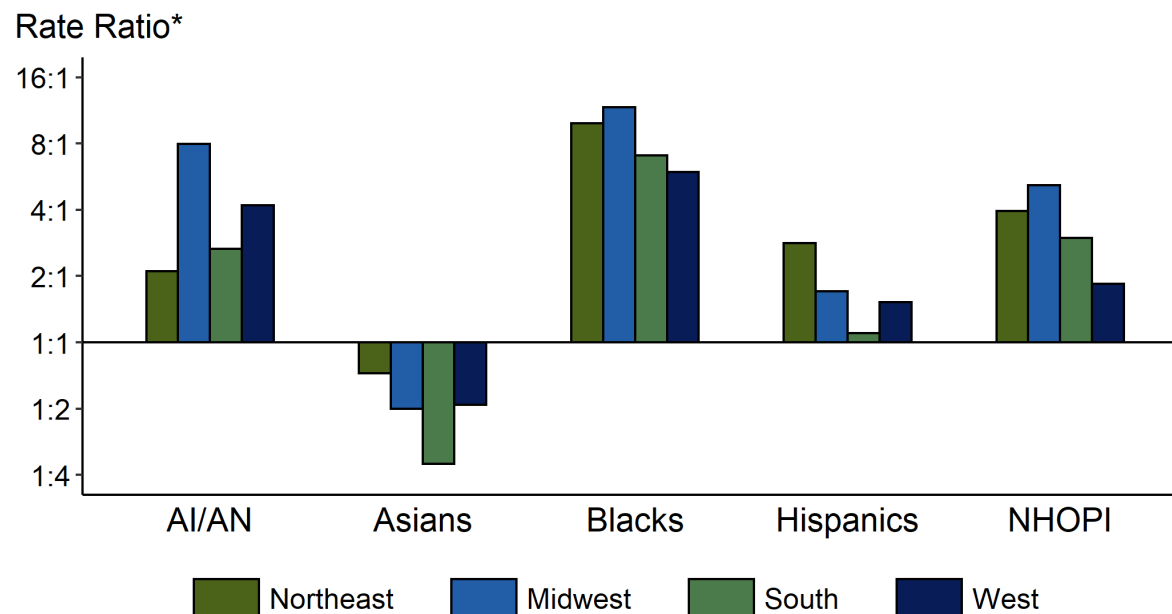
NOTE: Total includes all cases including those with unknown race/Hispanic ethnicity.



In 2019, the rate of reported gonorrhea cases among Black females was 6.8 times the rate among White females (448.9 and 65.5 cases per 100,000 population, respectively). The rate of reported gonorrhea cases among Black males was 8.8 times the rate among White males (724.0 and 82.2 cases per 100,000 population, respectively). The rate of reported gonorrhea cases among American Indian/Alaska Natives females was 6.6 times the rate among White females (429.9 and 65.5 cases per 100,000 population, respectively). The rate of reported gonorrhea cases among American Indian/Alaska Natives males was 3.4 times the rate among White males (278.8 and 82.2 cases per 100,000 population, respectively).

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPI, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Gonorrhea — Rate Ratios by Race/Hispanic Ethnicity and Region, United States, 2019



* For the rate ratios, Whites are the reference population. Y-axis is log scale.

ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders

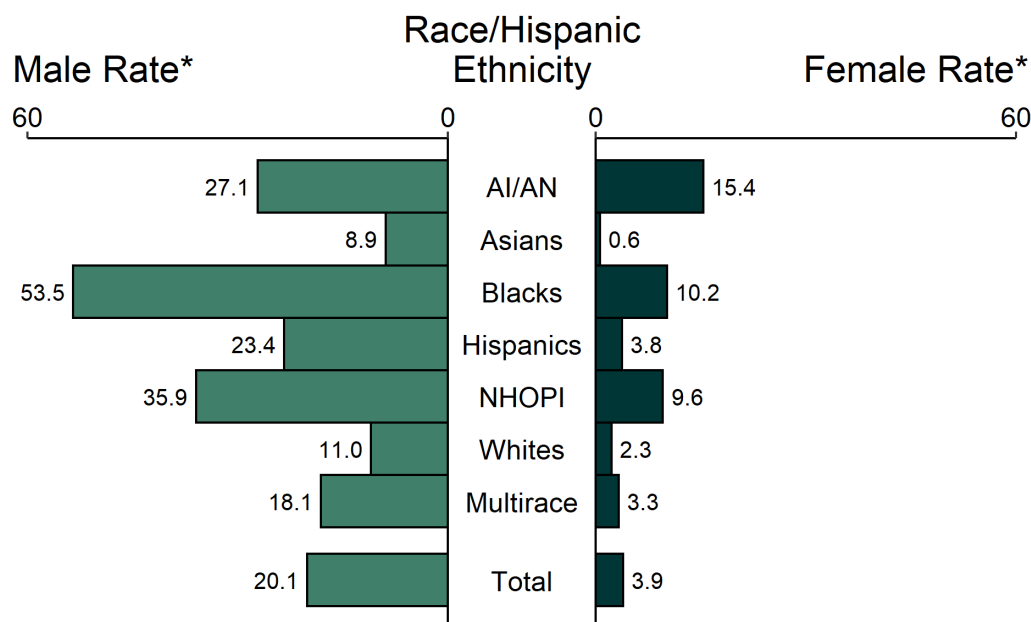


Rate ratios of reported rates of gonorrhea (using Whites as the reference population) varied by region in 2019. Differences were greatest in the Midwest where the rate of gonorrhea among Blacks was 11.7 times the rate among White females.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPI, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Primary and Secondary Syphilis — Rates of Reported Cases by Race/Hispanic Ethnicity and Sex, United States, 2019

Primary and Secondary Syphilis — Rates of Reported Cases by Race/Hispanic Ethnicity and Sex, United States, 2019



* Per 100,000

ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders

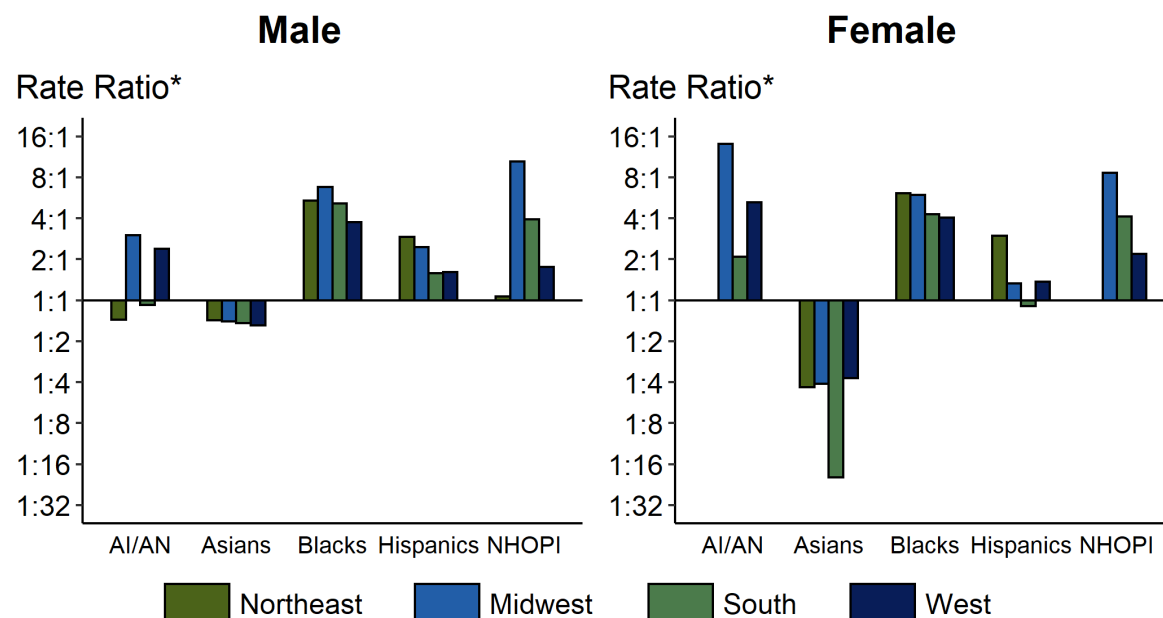
NOTE: Total includes all cases including those with unknown race/Hispanic ethnicity.



In 2019, the highest rates of primary and secondary syphilis were observed among Black men with 53.5 cases per 100,000 males and Native Hawaiian Other Pacific Islander men with 35.9 cases per 100,000 males. Among women, the highest rates were among American Indian/Alaska Natives with 15.4 cases per 100,000 females and Blacks with 10.2 cases per 100,000 females.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOPI, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Primary and Secondary Syphilis — Rate Ratios by Sex, Race/Hispanic Ethnicity, and Region, United States, 2019



* For the rate ratios, Whites are the reference population. Y-axis is log scale.

ACRONYMS: AI/AN = American Indians/Alaska Natives; NHOP = Native Hawaiians/Other Pacific Islanders

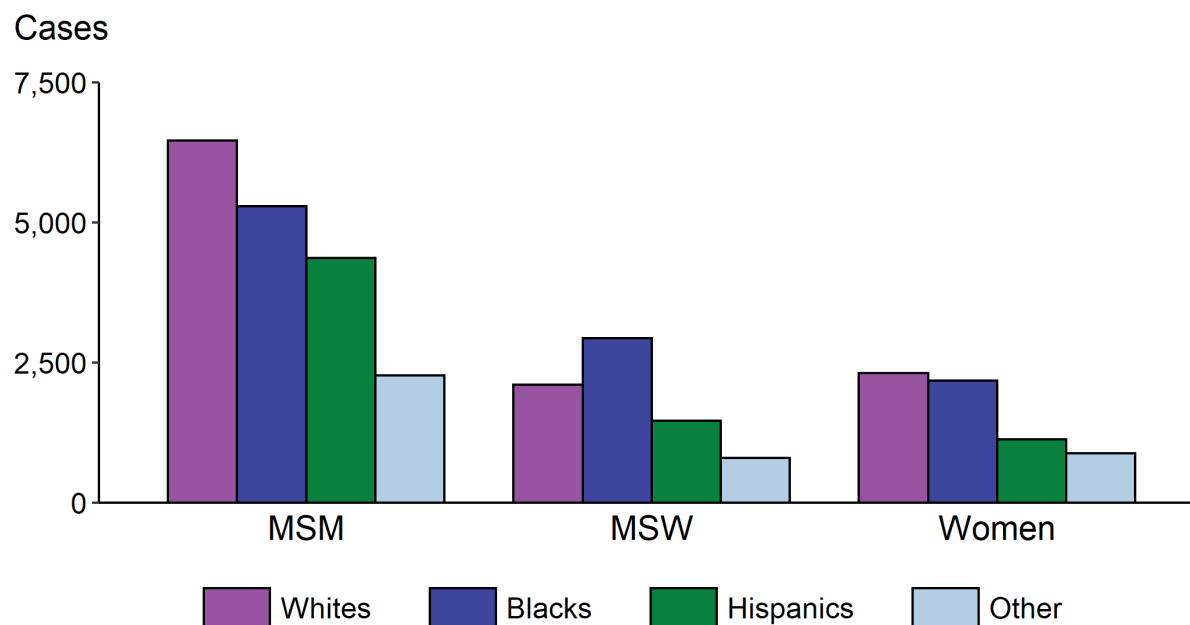


Across both sexes, the rates of reported primary and secondary syphilis cases among American Indians/Alaska Natives, Blacks, Hispanics, and Native Hawaiians/Other Pacific Islanders were higher than the rate among Whites in 2019. Similar disparities were seen in all regions of the United States.

Not all US jurisdictions reported cases in Office of Management and Budget compliant race categories in 2019. This may minimally under- or overestimate rates for Asians, NHOP, or Multirace individuals. For completeness, data in this figure include cases reported from all jurisdictions.

Primary and Secondary Syphilis — Reported Cases by Sex, Sex of Sex Partners, Race, and Hispanic Ethnicity, United States, 2019

Primary and Secondary Syphilis — Reported Cases by Sex, Sex of Sex Partners, Race, and Hispanic Ethnicity, United States, 2019



NOTE: Of all reported cases of primary and secondary syphilis, 17.3% were among men without data on sex of sex partners, and 0.3% were cases with unknown sex; 5.4% of all cases had missing or unknown race/Hispanic ethnicity. Cases with missing or unknown race/Hispanic ethnicity are included in the “Other” category.

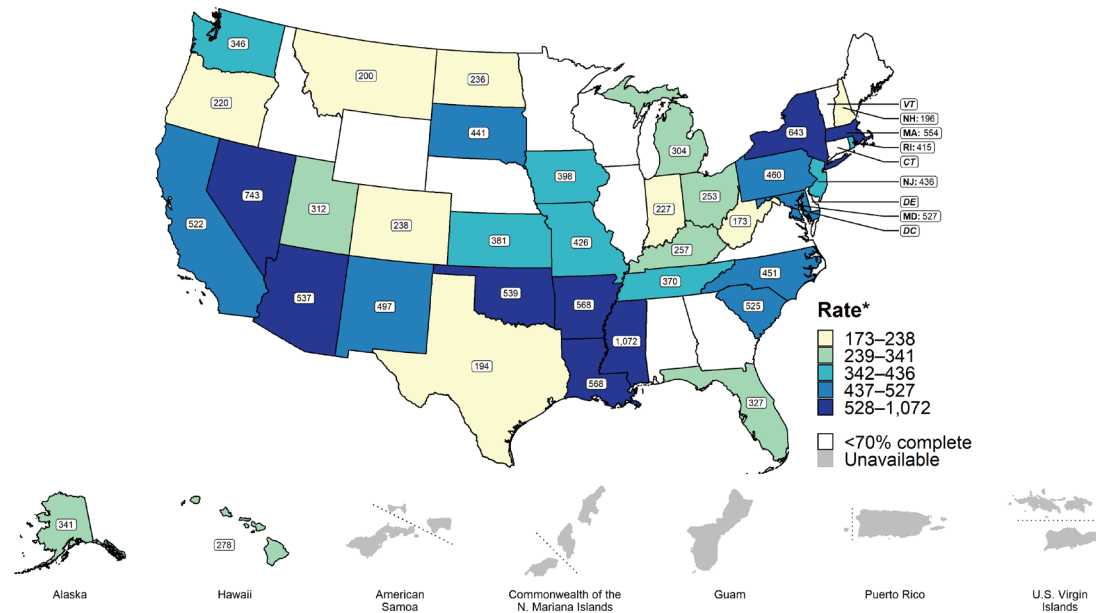


Across the four race/Hispanic ethnicity groups displayed, men who have sex with men accounted for the highest proportion of primary and secondary syphilis cases. Of primary and secondary syphilis cases among men who have sex with men, 35.2% were White, 28.8% were Black, and 23.7% were Hispanic.

For completeness, data in this figure includes cases reported from all jurisdictions.

Primary and Secondary Syphilis — Estimated Rates of Reported Cases Among MSM by State, United States, 2019

Primary and Secondary Syphilis — Estimated Rates of Reported Cases Among MSM by State, United States, 2019



* Per 100,000

NOTE: States reporting <70% of male cases identified as MSM or MSW in 2019 are suppressed.

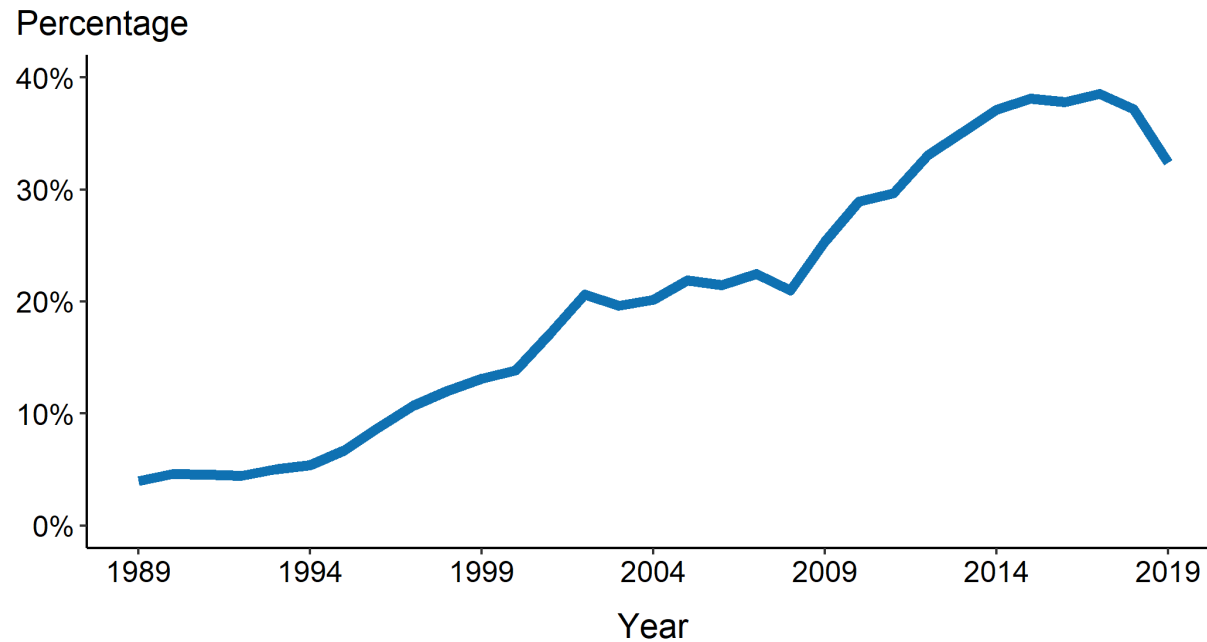
ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men; MSW = Men who have sex with women only

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In 2019, 37 states provided data to classify at least 70% of male primary and secondary syphilis cases as men who have sex with men (MSM) or men who have sex with women only. Among these areas, estimated rates of primary and secondary syphilis cases in MSM ranged from 172.7 cases per 100,000 MSM in West Virginia to 1071.7 cases per 100,000 MSM in Mississippi.

Neisseria gonorrhoeae — Percentage of Urethral Isolates Obtained from MSM Attending STD Clinics, Gonococcal Isolate Surveillance Project (GISP), 1989–2019

***Neisseria gonorrhoeae* — Percentage of Urethral Isolates Obtained from MSM Attending STD Clinics, Gonococcal Isolate Surveillance Project (GISP), 1989–2019**



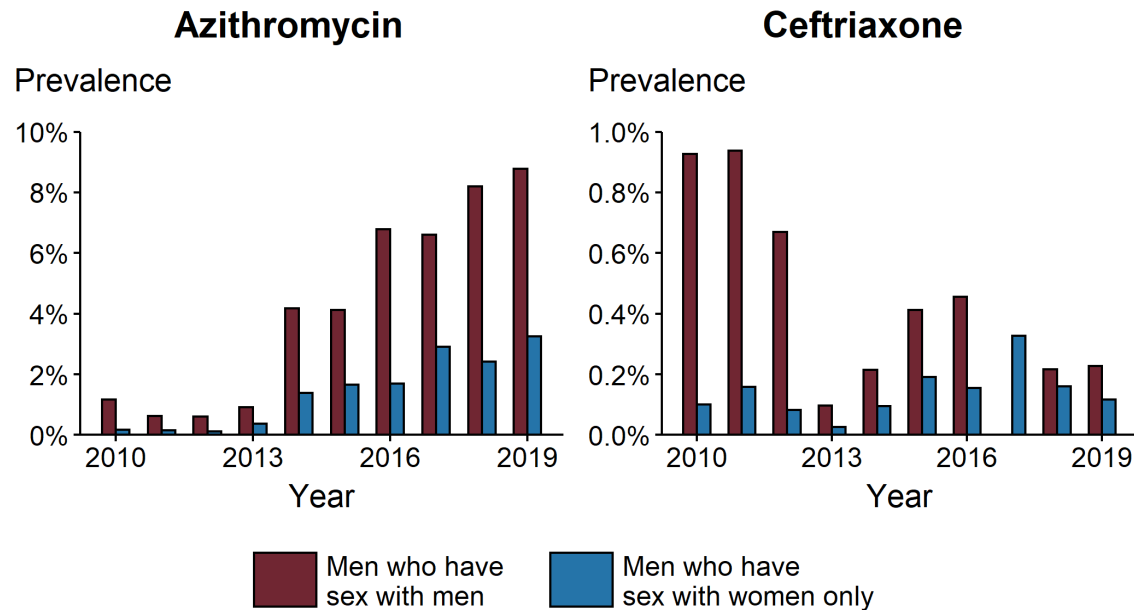
ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men



Overall, the proportion of *Neisseria gonorrhoeae* isolates collected in selected STD clinics participating in GISP that were from men who have sex with men increased steadily from 3.9% in 1989 to a high of 38.5% in 2017. In 2019, this proportion was 32.4%.

Neisseria gonorrhoeae — Percentage of Urethral Isolates with Elevated Minimum Inhibitory Concentrations (MICs) to Azithromycin* and Ceftriaxone† by Sex and Sex of Sex Partners, Gonococcal Isolate Surveillance Project (GISP), 2010–2019

***Neisseria gonorrhoeae* — Percentage of Urethral Isolates with Elevated Minimum Inhibitory Concentrations (MICs) to Azithromycin* and Ceftriaxone† by Sex and Sex of Sex Partners, Gonococcal Isolate Surveillance Project (GISP), 2010–2019**



* Elevated Azithromycin MIC: ≥ 2.0 $\mu\text{g/mL}$

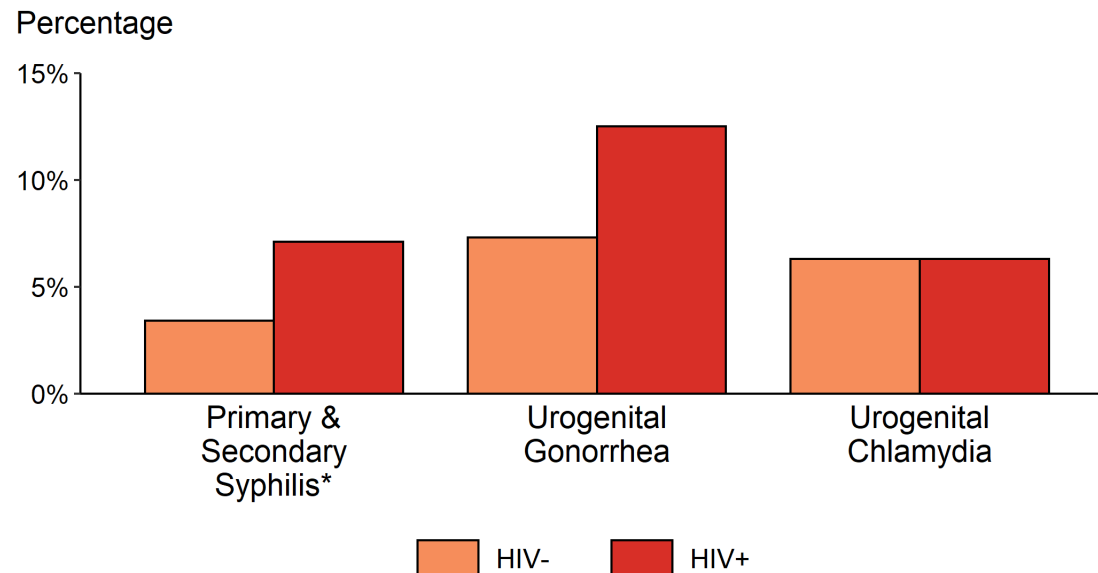
† Elevated Ceftriaxone MIC: ≥ 0.125 $\mu\text{g/mL}$



In 2019, the proportion of *Neisseria gonorrhoeae* isolates with elevated azithromycin minimum inhibitory concentrations (≥ 2.0 $\mu\text{g/mL}$) and elevated ceftriaxone minimum inhibitory concentrations (≥ 0.125 $\mu\text{g/mL}$) was higher in isolates from men who have sex with men (MSM) than from men who have sex with women (MSW) only. For azithromycin, 8.8% of isolates from men who have sex with men had elevated minimum inhibitory concentrations compared to 3.3% in men who have sex with women only. For ceftriaxone, the proportion was slightly higher at 0.2% in men who have sex with men compared to 0.1% in men who have sex with women only.

Proportion of HIV negative compared to HIV positive MSM with Primary and Secondary Syphilis*, Urogenital Gonorrhea, or Urogenital Chlamydia, STD Surveillance Network (SSuN), 2019

Proportion of HIV negative compared to HIV positive MSM with Primary and Secondary Syphilis*, Urogenital Gonorrhea, or Urogenital Chlamydia, STD Surveillance Network (SSuN), 2019



* Includes SSuN jurisdictions that reported data on ≥ 20 patients with a diagnosis of primary and secondary syphilis in 2019

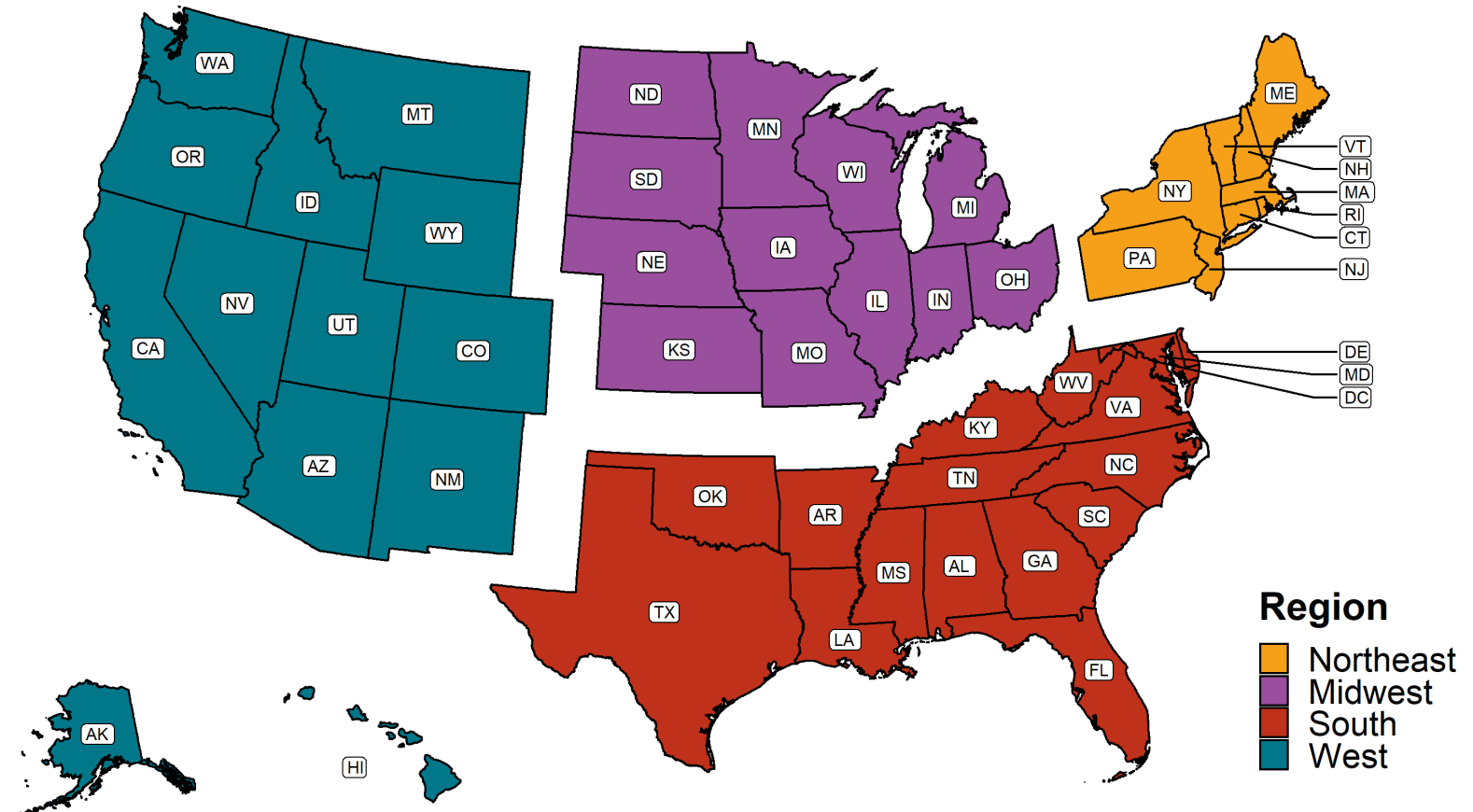
ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men



Among HIV-positive men who have sex with men attending STD clinics in participating SSuN jurisdictions in 2019, urogenital chlamydia positivity was 6.3% and urogenital gonorrhea positivity was 12.5% (compared to 6.3% and 7.3%, respectively, among HIV-negative men who have sex with men). Among HIV-positive men who have sex with men, 7.1% were diagnosed with primary and secondary syphilis compared to 3.4% of HIV-negative men who have sex with men.

Note: HIV status is categorized as documented in the clinic records based on most the recent HIV test result.

Reference Map of U.S. Census Regions



Tables – Sexually Transmitted Disease Surveillance, 2019

STIs continue to increase in the United States. These tables highlight recent trends of nationally notifiable STDs, including chlamydia, gonorrhea, syphilis, and chancroid.

State Rankings are available in Table 2, Table 13, Table 26, and Table 40.

Table 1. Sexually Transmitted Diseases – Reported Cases and Rates of Reported Cases*, United States, 1941-2019

Syphilis																
Year†	All Stages‡		Primary and Secondary		Early Non-P&S		Unk. Duration or Late§		Congenital		Chlamydia		Gonorrhea		Chancroid	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
1941	485,560	368.2	68,231	51.7	109,018	82.6	202,984	153.9	17,600	651.1	NR	—	193,468	146.7	3,384	2.5
1942	479,601	363.4	75,312	57.0	116,245	88.0	202,064	153.1	16,918	566.0	NR	—	212,403	160.9	5,477	4.1
1943	575,593	447.0	82,204	63.8	149,390	116.0	251,958	195.7	16,164	520.7	NR	—	275,070	213.6	8,354	6.4
1944	467,755	367.9	78,443	61.6	123,038	96.7	202,848	159.6	13,578	462.0	NR	—	300,676	236.5	7,878	6.1
1945	359,114	282.3	77,007	60.5	101,719	79.9	142,187	111.8	12,339	431.7	NR	—	287,181	225.8	5,515	4.3
1946	363,647	271.7	94,957	70.9	107,924	80.6	125,248	93.6	12,106	354.9	NR	—	368,020	275.0	7,091	5.2
1947	355,592	252.3	93,545	66.4	104,124	73.9	122,089	86.6	12,200	319.6	NR	—	380,666	270.0	9,515	6.7
1948	314,313	218.2	68,174	47.3	90,598	62.9	123,312	85.6	13,931	383.0	NR	—	345,501	239.8	7,661	5.3
1949	256,463	175.3	41,942	28.7	75,045	51.3	116,397	79.5	13,952	382.4	NR	—	317,950	217.3	6,707	4.6
1950	217,558	146.0	23,939	16.7	59,256	39.7	113,569	70.2	13,377	368.3	NR	—	286,746	192.5	4,977	3.3
1951	174,924	116.1	14,485	9.6	43,316	28.7	98,311	65.2	11,094	290.4	NR	—	254,470	168.9	4,233	2.8
1952	167,762	110.2	10,449	6.9	36,454	24.0	105,238	69.1	8,553	218.8	NR	—	244,957	160.8	3,738	2.5
1953	148,573	95.9	8,637	5.6	28,295	18.3	98,870	63.8	7,675	193.9	NR	—	238,340	153.9	3,338	2.2
1954	130,697	82.9	7,147	4.5	23,861	15.1	89,123	56.5	6,676	164.0	NR	—	242,050	153.5	3,003	1.9
1955	122,392	76.2	6,454	4.0	20,054	12.5	86,526	53.8	5,354	130.7	NR	—	236,197	147.0	2,649	1.7
1956	130,201	78.7	6,392	3.9	19,783	12.0	95,097	57.5	5,491	130.4	NR	—	224,346	135.7	2,135	1.3

1957	123,758	73.5	6,576	3.9	17,796	10.6	91,309	54.2	5,288	123.0	NR	—	214,496	127.4	1,637	1.0
1958	113,884	66.4	7,176	4.2	16,556	9.7	83,027	48.4	4,866	114.6	NR	—	232,386	135.6	1,595	0.9
1959	120,824	69.2	9,799	5.6	17,025	9.8	86,740	49.7	5,130	119.7	NR	—	240,254	137.6	1,537	0.9
1960	122,538	68.8	16,145	9.1	18,017	10.1	81,798	45.9	4,416	103.7	NR	—	258,933	145.4	1,680	0.9
1961	124,658	68.8	19,851	11.0	19,486	10.8	79,304	43.8	4,163	97.5	NR	—	264,158	145.8	1,438	0.8
1962	126,245	68.7	21,067	11.5	19,585	10.7	79,533	43.3	4,070	97.7	NR	—	263,714	143.6	1,344	0.7
1963	124,137	66.5	22,251	11.9	18,235	9.8	78,076	41.8	4,031	98.4	NR	—	278,289	149.0	1,220	0.7
1964	114,325	60.4	22,969	12.1	17,781	9.4	68,629	36.3	3,516	87.3	NR	—	300,666	158.9	1,247	0.7
1965	112,842	58.9	23,338	12.2	17,458	9.1	67,317	35.1	3,564	94.8	NR	—	324,925	169.5	982	0.5
1966	105,159	54.2	21,414	11.0	15,950	8.2	63,541	32.7	3,170	87.9	NR	—	351,738	181.2	838	0.4
1967	102,581	52.2	21,053	10.7	15,554	7.9	61,975	31.5	2,894	82.2	NR	—	404,836	205.9	784	0.4
1968	96,271	48.4	19,019	9.6	15,150	7.6	58,564	29.4	2,381	68.0	NR	—	464,543	233.4	845	0.4
1969	92,162	45.7	19,130	9.5	15,402	7.6	54,587	27.1	2,074	57.6	NR	—	534,872	265.4	1,104	0.5
1970	91,382	44.8	21,982	10.8	16,311	8.0	50,348	24.7	1,953	52.3	NR	—	600,072	294.2	1,416	0.7
1971	95,997	46.4	23,783	11.5	19,417	9.4	49,993	24.2	2,052	57.7	NR	—	670,268	324.1	1,320	0.6
1972	91,149	43.6	24,429	11.7	20,784	9.9	43,456	20.8	1,758	54.0	NR	—	767,215	366.6	1,414	0.7
1973	87,469	41.4	24,825	11.7	23,584	11.2	37,054	17.5	1,527	48.7	NR	—	842,621	398.7	1,165	0.6
1974	83,771	39.3	25,385	11.9	25,124	11.8	31,854	14.9	1,138	36.0	NR	—	906,121	424.7	945	0.4
1975	80,356	37.3	25,561	11.9	26,569	12.3	27,096	12.6	916	29.1	NR	—	999,937	464.1	700	0.3
1976	71,761	33.0	23,731	10.9	25,363	11.7	21,905	10.1	626	19.8	NR	—	1,001,994	460.6	628	0.3
1977	64,621	29.4	20,399	9.3	21,329	9.7	22,313	10.2	463	13.9	NR	—	1,002,219	456.0	455	0.2

1978	64,875	29.2	21,656	9.8	19,628	8.8	23,038	10.4	434	13.0	NR	—	1,013,436	456.3	521	0.2
1979	67,049	29.9	24,874	11.1	20,459	9.1	21,301	9.5	332	9.5	NR	—	1,004,058	447.1	840	0.4
1980	68,832	30.3	27,204	12.0	20,297	8.9	20,979	9.2	277	7.7	NR	—	1,004,029	442.1	788	0.3
1981	72,799	31.7	31,266	13.6	21,033	9.2	20,168	8.8	287	7.9	NR	—	990,864	431.8	850	0.4
1982	75,579	32.6	33,613	14.5	21,894	9.5	19,779	8.5	259	7.0	NR	—	960,633	414.7	1,392	0.6
1983	74,637	31.9	32,698	14.0	23,738	10.2	17,896	7.7	239	6.6	NR	—	900,435	385.1	847	0.4
1984	69,872	29.6	28,607	12.1	23,131	9.8	17,829	7.6	305	8.3	7,594	6.5	878,556	372.5	665	0.3
1985	67,563	28.4	27,131	11.4	21,689	9.1	18,414	7.7	329	8.7	25,848	17.4	911,419	383.0	2,067	0.9
1986	67,779	28.2	27,667	11.5	21,656	9.0	18,046	7.5	410	10.9	58,001	35.2	892,229	371.5	3,045	1.3
1987	87,286	36.0	35,585	14.7	28,233	11.7	22,988	9.5	480	12.6	91,913	50.8	787,532	325.0	4,986	2.1
1988	104,546	42.8	40,474	16.6	35,968	14.7	27,363	11.2	741	19.0	157,854	87.1	738,160	301.9	4,891	2.0
1989	115,089	46.6	45,826	18.6	45,394	18.4	22,032	8.9	1,837	45.5	200,904	102.5	733,294	297.1	4,697	1.9
1990	135,590	54.3	50,578	20.3	55,397	22.2	25,750	10.3	3,865	92.9	323,663	160.2	690,042	276.4	4,212	1.7
1991	128,719	50.9	42,950	17.0	53,855	21.3	27,490	10.9	4,424	107.6	381,228	179.7	621,918	245.8	3,476	1.4
1992	114,730	44.7	34,009	13.3	49,929	19.5	26,725	10.4	4,067	100.0	409,694	182.3	502,858	196.0	1,906	0.7
1993	102,612	39.5	26,527	10.2	41,919	16.1	30,746	11.8	3,420	85.5	405,332	178.0	444,649	171.1	1,292	0.5
1994	82,713	31.4	20,641	7.8	32,017	12.2	27,603	10.5	2,452	62.0	451,785	192.5	419,602	163.9	782	0.3
1995	69,359	26.0	16,543	6.2	26,657	10.0	24,296	9.1	1,863	47.8	478,577	187.8	392,651	147.5	607	0.2
1996	53,240	19.8	11,405	4.2	20,187	7.5	20,366	7.6	1,282	32.9	492,631	190.6	328,169	121.8	386	0.1
1997	46,716	17.1	8,556	3.1	16,631	6.1	20,447	7.5	1,082	27.9	537,904	205.5	327,665	120.2	246	0.1
1998	38,289	13.9	7,007	2.5	12,696	4.6	17,743	6.4	843	21.4	614,250	231.8	356,492	129.2	189	0.1

1999	35,386	12.7	6,617	2.4	11,534	4.1	16,655	6.0	580	14.6	662,647	247.2	360,813	129.3	110	0.0
2000	31,618	11.2	5,979	2.1	9,465	3.4	15,594	5.5	580	14.3	709,452	251.4	363,136	128.7	78	0.0
2001	32,286	11.3	6,103	2.1	8,701	3.0	16,976	5.9	506	12.6	783,242	274.5	361,705	126.8	38	0.0
2002	32,919	11.4	6,862	2.4	8,429	2.9	17,168	6.0	460	11.4	834,555	289.4	351,852	122.0	48	0.0
2003	34,289	11.8	7,177	2.5	8,361	2.9	18,319	6.3	432	10.6	877,478	301.7	335,104	115.2	54	0.0
2004	33,423	11.4	7,980	2.7	7,768	2.6	17,300	5.9	375	9.1	929,462	316.5	330,132	112.4	30	0.0
2005	33,288	11.2	8,724	2.9	8,176	2.8	16,049	5.4	339	8.2	976,445	329.4	339,593	114.6	17	0.0
2006	36,958	12.3	9,756	3.3	9,186	3.1	17,644	5.9	372	8.7	1,030,911	344.3	358,366	119.7	19	0.0
2007	40,925	13.6	11,466	3.8	10,768	3.6	18,256	6.1	435	10.1	1,108,374	367.5	355,991	118.0	23	0.0
2008	46,292	15.2	13,500	4.4	12,401	4.1	19,945	6.6	446	10.5	1,210,523	398.1	336,742	110.7	25	0.0
2009	44,832	14.6	13,997	4.6	13,066	4.3	17,338	5.6	431	10.4	1,244,180	405.3	301,174	98.1	28	0.0
2010	45,844	14.8	13,774	4.5	13,604	4.4	18,079	5.9	387	9.7	1,307,893	423.6	309,341	100.2	24	0.0
2011	46,040	14.8	13,970	4.5	13,136	4.2	18,576	6.0	358	9.1	1,412,791	453.4	321,849	103.3	8	0.0
2012	49,915	15.9	15,667	5.0	14,503	4.6	19,411	6.2	334	8.4	1,422,976	453.3	334,826	106.7	15	0.0
2013	56,485	17.9	17,375	5.5	16,929	5.4	21,819	6.9	362	9.2	1,401,906	443.5	333,004	105.3	10	0.0
2014	63,454	19.9	19,999	6.3	19,452	6.1	23,541	7.4	462	11.6	1,441,789	452.2	350,062	109.8	6	0.0
2015	74,709	23.2	23,872	7.4	24,173	7.5	26,170	8.1	494	12.4	1,526,658	475.0	395,216	123.0	11	0.0
2016	88,055	27.3	27,814	8.6	28,924	9.0	30,676	9.5	641	16.2	1,598,354	494.7	468,514	145.0	7	0.0
2017	101,590	31.2	30,644	9.4	34,013	10.4	35,992	11.1	941	24.4	1,708,569	524.6	555,608	170.6	7	0.0
2018	115,062	35.2	35,063	10.7	38,539	11.8	40,137	12.3	1,323	34.3	1,758,668	537.5	583,405	178.3	3	0.0
2019	129,813	39.7	38,992	11.9	41,655	12.7	47,296	14.5	1,870	48.5	1,808,703	552.8	616,392	188.4	8	0.0

* Per 100,000

† For 1941–1946, data were reported for the federal fiscal year ending June 30 of the year indicated. From 1947 to the present, data were reported for the calendar year ending December 31. For 1941–1958, data for Alaska and Hawaii were not included.

‡ Includes stage of syphilis not stated.

§ The case classification of ‘Unknown duration or late syphilis’ went into effect in January of 2018. Prior to 2018, cases in this category include cases classified as late latent syphilis, latent syphilis of unknown duration, late syphilis with clinical manifestations, and neurosyphilis.

|| Rates include all cases of congenitally acquired syphilis per 100,000 live births. As of 1995, cases of congenital syphilis are obtained in hardcopy and electronic format on the basis of case reporting form CDC 73.126.

NR = No report.

NOTE: Adjustments to the number of cases reported from state health departments were made for hardcopy forms and for electronic data submissions through December 21, 2020. The number of cases and the rates shown here supersede those published in previous reports. Cases and rates shown in this table exclude US territories. Case definitions have changed over time. See [Technical Notes](#) for more information.

Table 2. Chlamydia — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2019

Rank*	State	Cases	Rate per 100,000 Population
1	Alaska	6,254	848.1
2	Mississippi	25,303	847.2
3	Louisiana	36,131	775.3
4	South Carolina	35,950	707.1
5	New Mexico	14,283	681.6
6	North Carolina	70,257	676.6
7	Georgia	67,720	643.8
8	Alabama	31,228	638.9
9	New York	124,622	637.7
10	Illinois	81,012	635.8
11	Maryland	37,779	625.2
12	Tennessee	41,089	606.9
13	Delaware	5,864	606.3
14	Arizona	43,058	600.4
15	California	236,719	598.4
16	Oklahoma	23,518	596.4
17	Nevada	17,827	587.5
18	Arkansas	17,196	570.6
19	Hawaii	8,093	569.7
20	Virginia	48,169	565.5
21	Missouri	34,416	561.8
22	Ohio	65,393	559.4
	US TOTAL†	1,808,703	552.8
23	Rhode Island	5,718	540.8
24	Indiana	35,430	529.4
25	Kansas	15,286	525.0

26	Colorado	29,821	523.6
27	Florida	110,794	520.2
28	South Dakota	4,547	515.4
29	North Dakota	3,880	510.5
30	Iowa	16,044	508.3
31	Washington	37,795	501.6
32	Michigan	50,104	501.2
33	Wisconsin	29,080	500.2
34	Pennsylvania	61,694	481.7
35	Nebraska	9,291	481.6
36	Kentucky	20,911	468.0
37	Oregon	19,279	460.0
38	Massachusetts	31,622	458.1
39	Texas	129,075	449.7
40	Montana	4,753	447.4
41	Minnesota	24,470	436.1
42	Connecticut	15,290	428.0
43	New Jersey	37,591	422.0
44	Idaho	6,863	391.2
45	Wyoming	2,189	378.9
46	Utah	11,075	350.4
47	West Virginia	5,609	310.6
48	Maine	3,989	298.0
49	Vermont	1,718	274.3
50	New Hampshire	3,577	263.7

* States were ranked by rate, then by case count, then in alphabetical order, with rates shown rounded to the nearest tenth.

† Total includes cases reported by the District of Columbia with 9,327 cases and a rate of 1,327.8, but excludes territories.

Table 3. Chlamydia — Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	26,359	26,901	29,935	28,437	31,228	542.5	553.1	614.1	581.8	638.9
Alaska	5,660	5,698	5,934	6,159	6,254	766.5	768.0	802.1	835.2	848.1
Arizona	32,387	34,923	39,598	40,807	43,058	474.3	503.9	564.4	569.0	600.4
Arkansas	16,166	16,737	17,320	17,663	17,196	542.8	560.1	576.5	586.1	570.6
California	189,170	198,155	218,785	231,415	236,719	483.3	504.9	553.4	585.0	598.4
Colorado	23,857	25,569	26,995	29,124	29,821	437.2	461.5	481.4	511.3	523.6
Connecticut	13,126	13,911	17,750	16,732	15,290	365.5	389.0	494.7	468.3	428.0
Delaware	4,605	5,365	5,392	6,038	5,864	486.8	563.5	560.5	624.3	606.3
District of Columbia	7,894	7,283	9,107	9,014	9,327	1,174.3	1,069.2	1,312.3	1,283.2	1,327.8
Florida	90,468	94,742	100,018	104,758	110,794	446.3	459.6	476.6	491.8	520.2
Georgia	57,639	62,776	65,104	65,936	67,720	564.3	608.9	624.2	626.8	643.8
Hawaii	7,074	6,902	6,850	7,735	8,093	494.1	483.1	479.8	544.5	569.7
Idaho	5,631	5,897	6,200	6,572	6,863	340.3	350.4	361.1	374.6	391.2
Illinois	69,610	72,201	75,518	77,325	81,012	541.3	564.0	589.9	606.9	635.8
Indiana	28,886	30,847	34,278	34,926	35,430	436.4	465.0	514.2	521.9	529.4
Iowa	12,085	12,983	13,893	14,682	16,044	386.9	414.2	441.6	465.2	508.3
Kansas	11,464	12,160	13,554	14,231	15,286	393.7	418.3	465.3	488.8	525.0

Kentucky	17,444	18,286	19,320	19,440	20,911	394.2	412.1	433.7	435.1	468.0
Louisiana	32,325	31,727	34,756	36,293	36,131	692.1	677.7	742.0	778.8	775.3
Maine	3,965	4,156	4,555	4,345	3,989	298.3	312.1	341.0	324.6	298.0
Maryland	27,450	30,658	33,416	35,482	37,779	457.0	509.6	552.1	587.2	625.2
Massachusetts	24,100	26,807	29,315	30,460	31,622	354.7	393.5	427.3	441.3	458.1
Michigan	46,486	45,936	50,595	50,592	50,104	468.5	462.7	507.9	506.1	501.2
Minnesota	21,243	22,685	23,539	23,569	24,470	387.0	411.0	422.1	420.0	436.1
Mississippi	17,371	20,112	21,149	22,086	25,303	580.5	672.9	708.7	739.5	847.2
Missouri	28,948	30,843	32,683	34,728	34,416	475.8	506.2	534.6	566.9	561.8
Montana	4,184	4,416	4,560	4,917	4,753	405.1	423.6	434.1	462.9	447.4
Nebraska	7,956	8,197	8,595	8,026	9,291	419.6	429.8	447.6	416.0	481.6
Nevada	12,925	14,649	16,260	17,508	17,827	447.1	498.3	542.4	577.0	587.5
New Hampshire	3,095	3,467	4,412	3,734	3,577	232.6	259.7	328.6	275.3	263.7
New Jersey	31,337	34,519	35,239	36,514	37,591	349.8	385.9	391.3	409.9	422.0
New Mexico	12,632	13,108	13,560	14,000	14,283	605.8	629.9	649.4	668.1	681.6
New York	103,615	109,433	116,814	119,571	124,622	523.4	554.2	588.5	611.9	637.7
North Carolina	64,376	58,006	62,876	66,553	70,257	641.0	571.7	612.0	640.9	676.6
North Dakota	3,159	3,455	3,278	3,525	3,880	417.3	455.8	433.9	463.8	510.5
Ohio	56,726	60,496	61,389	63,220	65,393	488.5	520.9	526.6	540.8	559.4
Oklahoma	21,025	21,449	21,752	21,974	23,518	537.5	546.7	553.4	557.3	596.4
Oregon	16,305	17,425	18,634	19,224	19,279	404.7	425.7	449.8	458.7	460.0

Pennsylvania	53,460	56,930	56,447	59,340	61,694	417.6	445.3	440.8	463.3	481.7
Rhode Island	4,575	4,936	5,282	5,487	5,718	433.1	467.2	498.5	519.0	540.8
South Carolina	27,538	28,179	32,235	33,910	35,950	562.4	568.0	641.6	667.0	707.1
South Dakota	3,949	4,331	4,437	4,432	4,547	460.0	500.4	510.2	502.4	515.4
Tennessee	31,272	32,304	35,087	38,212	41,089	473.8	485.7	522.4	564.4	606.9
Texas	141,158	142,952	151,533	146,510	129,075	513.9	513.1	535.4	510.5	449.7
Utah	8,633	9,457	10,135	10,541	11,075	288.2	309.9	326.7	333.5	350.4
Vermont	1,901	1,690	1,858	1,712	1,718	303.7	270.6	297.9	273.4	274.3
Virginia	35,349	39,666	42,374	42,965	48,169	421.7	471.6	500.3	504.4	565.5
Washington	28,699	31,254	32,231	34,449	37,795	400.2	428.8	435.2	457.2	501.6
West Virginia	4,958	4,821	4,140	3,599	5,609	268.9	263.3	228.0	199.3	310.6
Wisconsin	24,381	26,894	27,740	28,027	29,080	422.4	465.4	478.6	482.1	500.2
Wyoming	2,037	2,060	2,142	2,169	2,189	347.5	351.8	369.7	375.4	378.9
US TOTAL	1,526,658	1,598,354	1,708,569	1,758,668	1,808,703	475.0	494.7	524.6	537.5	552.8
Northeast	239,174	255,849	271,672	277,895	285,821	424.9	455.2	481.1	495.3	509.4
Midwest	314,893	331,028	349,499	357,283	368,953	463.7	487.2	512.6	523.0	540.1
South	623,397	641,964	685,514	698,870	715,920	514.4	524.8	554.4	560.2	573.9
West	349,194	369,513	401,884	424,620	438,009	459.2	482.0	519.2	544.4	561.6
American Samoa	NR	NR	NR	55	81	—	—	—	108.2	159.4
Guam	881	934	1,107	944	1,234	544.5	559.6	661.5	562.7	735.5
Northern Mariana Islands	NR	NR	NR	246	249	—	—	—	473.1	478.9

Puerto Rico	5,295	7,198	5,961	5,942	4,817	152.4	211.0	177.8	180.4	146.2
Virgin Islands	743	571	458	NR	537	721.7	530.1	427.0	—	502.0
TERRITORIES	6,919	8,703	7,526	7,187	6,918	185.1	236.1	207.5	201.6	188.4
TOTAL	1,533,577	1,607,057	1,716,095	1,765,855	1,815,621	471.6	491.7	521.1	533.9	548.8

NR = No report.

Table 4. Chlamydia Among Females – Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	18,674	19,131	20,993	19,537	21,260	745.2	762.9	834.7	774.1	842.4
Alaska	3,786	3,807	3,941	3,965	4,011	1,083.6	1,076.1	1,116.4	1,123.7	1,136.7
Arizona	22,299	23,693	26,453	26,717	27,716	648.9	679.2	749.8	740.8	768.5
Arkansas	12,088	12,216	12,453	12,513	12,146	797.7	803.5	814.9	815.9	792.0
California	121,387	123,906	135,040	142,006	143,319	616.1	627.2	679.0	713.8	720.4
Colorado	16,151	16,945	17,251	18,474	18,748	595.4	615.1	619.5	653.3	663.0
Connecticut	9,089	9,495	11,487	10,751	10,168	494.2	518.6	625.5	587.7	555.9
Delaware	3,118	3,678	3,562	3,992	3,842	638.8	748.5	717.5	799.6	769.6
District of Columbia	4,632	4,018	4,754	4,812	5,026	1,309.9	1,122.5	1,303.3	1,303.5	1,361.5
Florida	62,048	63,415	66,173	68,509	70,892	598.4	601.5	616.8	629.2	651.1
Georgia	40,302	43,377	44,080	43,903	43,914	769.9	820.0	823.3	812.4	812.6
Hawaii	4,720	4,480	4,424	4,811	5,032	668.3	630.1	621.8	678.1	709.2
Idaho	3,963	4,022	4,198	4,452	4,566	479.7	479.0	490.1	508.7	521.8
Illinois	47,268	48,128	49,336	49,746	51,168	722.1	739.3	757.9	767.7	789.6
Indiana	20,385	21,664	23,595	23,768	23,896	607.1	644.1	698.1	700.8	704.6
Iowa	8,372	8,872	9,261	9,793	10,559	532.6	563.1	585.8	617.7	666.0
Kansas	8,325	8,688	9,472	9,794	10,375	571.0	595.3	648.2	670.3	710.1
Kentucky	12,140	12,345	13,035	13,055	13,918	540.5	548.6	576.8	575.9	614.0

Louisiana	23,351	22,942	24,544	25,225	24,524	978.3	959.0	1,024.9	1,057.6	1,028.2
Maine	2,735	2,795	2,959	2,854	2,595	403.4	411.7	434.3	417.8	379.9
Maryland	18,612	20,145	21,957	22,912	24,264	601.3	649.4	704.2	735.8	779.2
Massachusetts	15,588	17,299	18,716	19,096	19,368	445.6	493.4	530.3	537.7	545.3
Michigan	32,425	31,497	34,120	33,687	32,955	642.8	624.5	674.5	663.9	649.5
Minnesota	14,112	14,967	15,338	15,021	15,565	511.4	539.9	547.8	533.3	552.7
Mississippi	12,335	14,123	14,740	15,325	17,381	800.7	917.1	958.2	995.9	1,129.5
Missouri	19,926	20,757	21,701	22,787	22,490	643.1	669.4	697.5	730.6	721.1
Montana	2,846	2,962	3,030	3,206	3,110	554.1	572.1	581.0	607.8	589.6
Nebraska	5,409	5,527	5,660	5,233	6,222	568.8	577.9	588.4	541.8	644.2
Nevada	8,743	9,849	10,473	11,057	11,205	607.0	671.8	700.9	730.9	740.7
New Hampshire	2,089	2,316	2,917	2,474	2,278	310.4	343.7	430.4	361.6	332.9
New Jersey	22,274	24,021	23,811	24,688	24,627	485.7	524.9	516.6	541.8	540.5
New Mexico	9,227	9,306	9,328	9,683	9,895	877.4	886.0	885.1	915.1	935.1
New York	66,164	67,602	70,379	70,348	72,012	649.7	665.5	689.2	699.7	716.3
North Carolina	47,178	41,085	43,580	45,450	47,053	915.9	788.0	826.6	852.3	882.3
North Dakota	2,028	2,187	2,127	2,303	2,448	551.0	592.7	577.8	621.2	660.3
Ohio	39,825	41,797	42,132	42,674	43,643	671.9	705.7	708.6	716.2	732.4
Oklahoma	14,904	14,933	15,183	15,282	16,088	754.9	754.3	765.5	767.9	808.4
Oregon	11,075	11,542	12,203	12,567	12,235	544.0	558.5	583.9	594.7	579.0
Pennsylvania	35,201	37,030	36,201	37,938	39,132	538.4	567.7	554.0	580.8	599.0

Rhode Island	3,064	3,278	3,454	3,584	3,695	562.9	603.3	634.2	660.1	680.5
South Carolina	19,743	19,783	22,343	22,822	23,789	784.3	774.8	863.8	870.8	907.7
South Dakota	2,831	3,072	3,094	3,008	3,198	663.8	715.8	718.4	688.8	732.3
Tennessee	21,112	21,714	23,348	25,151	26,965	624.1	637.0	678.7	725.4	777.7
Texas	102,141	101,618	105,995	100,417	86,192	738.5	724.2	744.2	695.3	596.8
Utah	5,704	6,031	6,606	6,808	6,955	383.1	398.0	428.9	433.9	443.3
Vermont	1,352	1,171	1,242	1,171	1,149	425.8	370.4	393.8	369.3	362.4
Virginia	23,859	26,146	27,606	27,849	30,950	560.3	611.6	641.5	643.6	715.3
Washington	19,047	20,276	20,515	21,432	23,378	531.2	556.0	554.1	569.1	620.8
West Virginia	3,449	3,330	2,775	2,374	3,758	369.6	359.9	302.5	260.5	412.3
Wisconsin	16,660	18,382	18,667	18,617	19,372	573.7	632.7	640.9	637.3	663.1
Wyoming	1,387	1,356	1,399	1,422	1,423	482.9	473.2	492.8	502.1	502.5
US TOTAL	1,045,143	1,072,719	1,127,651	1,145,063	1,160,470	640.4	653.9	682.1	689.6	698.9
Northeast	157,556	165,007	171,166	172,904	175,024	546.0	572.8	591.4	601.4	608.8
Midwest	217,566	225,538	234,503	236,431	241,891	632.2	655.5	679.3	683.7	699.5
South	439,686	443,999	467,121	469,128	471,962	711.7	711.8	741.0	737.5	741.9
West	230,335	238,175	254,861	266,600	271,593	604.0	619.4	656.7	681.9	694.7
American Samoa	NR	NR	NR	53	81	—	—	—	208.5	318.7
Guam	618	654	753	670	874	774.4	806.8	926.6	822.7	1,073.1
Northern Mariana Islands	NR	NR	NR	189	201	—	—	—	776.0	825.3
Puerto Rico	3,950	5,551	4,702	4,697	3,697	217.4	310.5	267.2	271.1	213.4

Virgin Islands	563	405	318	NR	346	1,020.6	720.9	567.6	—	618.8
TERRITORIES	5,131	6,610	5,773	5,609	5,199	262.9	343.4	304.4	301.0	270.9
TOTAL	1,050,274	1,079,329	1,133,424	1,150,672	1,165,669	636.0	650.3	677.9	685.3	694.0

NR = No report.

NOTE: Cases reported with unknown sex are not included in this table. See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 5. Chlamydia Among Males – Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	7,549	7,585	8,837	8,807	9,882	320.8	322.0	374.5	372.5	418.0
Alaska	1,871	1,891	1,993	2,189	2,240	480.9	487.2	515.3	569.2	582.5
Arizona	10,028	11,217	13,055	13,972	15,316	295.7	325.8	374.3	391.9	429.6
Arkansas	4,078	4,521	4,866	5,147	5,041	278.8	308.0	329.7	347.7	340.6
California	67,475	73,625	83,273	88,787	92,707	347.0	377.7	423.8	451.5	471.5
Colorado	7,706	8,624	9,744	10,650	11,073	280.9	309.6	345.2	371.4	386.1
Connecticut	3,926	4,268	5,618	5,829	5,054	224.1	244.5	320.7	334.3	289.9
Delaware	1,487	1,687	1,830	2,031	2,004	324.8	366.2	393.1	434.0	428.3
District of Columbia	3,108	3,112	4,279	4,135	4,192	975.5	962.8	1,299.8	1,240.6	1,257.7
Florida	28,332	31,275	33,811	36,219	39,850	286.1	310.6	329.6	347.9	382.7
Georgia	17,212	19,338	20,837	21,691	22,662	345.6	385.2	410.5	424.0	443.0
Hawaii	2,352	2,421	2,426	2,911	3,047	324.2	337.4	338.8	409.4	428.6
Idaho	1,663	1,869	1,990	2,102	2,297	200.7	221.6	231.3	239.1	261.3
Illinois	21,966	24,008	26,089	27,555	29,561	347.9	381.6	414.6	440.1	472.2
Indiana	8,492	9,174	10,673	11,131	11,518	260.3	280.6	324.7	337.3	349.0
Iowa	3,712	4,111	4,631	4,889	5,485	239.2	263.7	296.0	311.2	349.2
Kansas	3,139	3,472	4,082	4,437	4,911	215.9	239.8	281.1	305.9	338.6
Kentucky	5,273	5,590	6,194	6,249	6,878	242.0	255.7	282.3	283.9	312.4

Louisiana	8,974	8,784	10,212	11,068	11,598	392.9	383.7	446.0	486.6	509.9
Maine	1,230	1,356	1,596	1,491	1,394	188.9	207.8	243.8	227.5	212.7
Maryland	8,780	10,479	11,449	12,539	13,514	301.6	359.6	390.2	428.1	461.4
Massachusetts	8,406	9,433	10,517	11,231	12,166	255.0	285.4	315.8	335.2	363.1
Michigan	14,015	14,417	16,420	16,844	17,129	287.3	295.1	334.8	342.2	348.0
Minnesota	7,122	7,703	8,183	8,527	8,875	260.9	280.4	294.7	305.1	317.6
Mississippi	5,018	5,955	6,363	6,723	7,873	345.6	411.0	440.1	464.4	543.8
Missouri	9,022	10,086	10,982	11,941	11,926	302.2	337.1	365.8	397.0	396.5
Montana	1,338	1,454	1,528	1,710	1,640	257.6	277.1	288.9	319.7	306.6
Nebraska	2,531	2,649	2,927	2,789	3,058	267.8	278.6	305.5	289.5	317.4
Nevada	4,152	4,777	5,741	6,381	6,595	286.2	324.1	381.8	419.4	433.4
New Hampshire	1,006	1,150	1,494	1,259	1,298	153.0	174.0	224.7	187.3	193.1
New Jersey	9,025	10,435	11,362	11,817	12,869	206.4	238.9	258.4	271.5	295.7
New Mexico	3,400	3,794	4,229	4,313	4,378	329.0	368.1	408.9	415.8	422.1
New York	37,346	41,722	46,349	49,175	52,593	388.6	435.2	480.9	518.3	554.3
North Carolina	17,195	16,918	19,295	21,103	23,204	351.5	343.0	385.8	417.8	459.4
North Dakota	1,131	1,268	1,151	1,222	1,425	290.9	326.0	297.2	313.9	366.0
Ohio	16,901	18,699	19,257	20,546	21,750	297.2	328.5	337.1	358.5	379.5
Oklahoma	6,121	6,516	6,569	6,692	7,428	316.0	335.2	337.3	342.6	380.3
Oregon	5,223	5,876	6,412	6,638	7,017	262.0	289.9	312.3	319.5	337.8
Pennsylvania	18,201	19,840	20,184	21,350	22,496	290.5	316.9	321.8	340.3	358.5

Rhode Island	1,511	1,656	1,825	1,903	2,023	295.1	322.8	354.4	370.0	393.3
South Carolina	7,705	8,286	9,807	10,976	12,053	323.9	344.1	402.3	445.6	489.3
South Dakota	1,118	1,259	1,343	1,424	1,347	258.8	288.6	306.0	319.6	302.3
Tennessee	10,158	10,584	11,736	13,057	14,120	315.7	326.4	358.2	395.3	427.5
Texas	38,539	40,992	45,170	45,450	42,314	282.6	296.4	321.2	318.7	296.7
Utah	2,929	3,424	3,516	3,733	4,116	194.3	222.9	225.1	234.5	258.5
Vermont	549	518	611	527	565	177.9	167.9	198.2	170.4	182.7
Virginia	11,460	13,395	14,311	14,924	17,184	277.8	323.8	343.5	356.1	410.1
Washington	9,651	10,975	11,713	13,006	14,375	269.2	301.4	316.3	345.0	381.3
West Virginia	1,509	1,491	1,365	1,224	1,849	165.6	164.6	151.9	136.9	206.7
Wisconsin	7,703	8,487	9,058	9,386	9,682	268.6	295.4	314.2	324.5	334.8
Wyoming	643	704	741	747	765	215.1	235.5	250.8	253.6	259.7
US TOTAL	478,981	522,870	577,644	610,447	644,337	302.7	328.7	360.1	378.9	399.9
Northeast	81,200	90,378	99,556	104,582	110,458	296.1	329.8	361.6	382.2	403.7
Midwest	96,852	105,333	114,796	120,691	126,667	289.2	314.1	341.1	357.8	375.6
South	182,498	196,508	216,931	228,035	241,646	307.2	327.8	357.9	373.0	395.2
West	118,431	130,651	146,361	157,139	165,566	312.4	342.0	379.2	404.0	425.6
American Samoa	NR	NR	NR	2	0	—	—	—	7.9	0.0
Guam	263	280	354	274	360	320.8	326.2	411.2	317.4	417.0
Northern Mariana Islands	NR	NR	NR	57	48	—	—	—	206.2	173.7
Puerto Rico	1,319	1,647	1,255	1,240	1,118	79.6	101.4	78.8	79.4	71.6

Virgin Islands	180	166	140	NR	191	376.7	322.1	273.2	—	374.1
TERRITORIES	1,762	2,093	1,749	1,573	1,717	98.6	118.8	101.1	92.4	98.0
TOTAL	480,743	524,963	579,393	612,020	646,054	300.4	326.4	357.3	375.9	396.6

NR = No report.

NOTE: Cases reported with unknown sex are not included in this table. See [Technical Notes](#) for more information on interpreting case counts and rates in US territories.

Table 6. Chlamydia — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	19,106†	33,273	34,189	32,883†	32,888†	334.6†	574.7	581.0	552.7†	552.7†
Austin-Round Rock, TX	11,679	12,299	13,015	12,845	10,689	583.7	598.1	615.1	592.4	493.0
Baltimore-Columbia-Towson, MD	14,016	15,829	16,766	17,466	18,894	501.0	565.5	597.0	623.2	674.1
Birmingham-Hoover, AL	5,839	4,982 ‡	7,388	6,391	7,505	509.7	434.2 ‡	642.5	554.9	651.6
Boston-Cambridge-Newton, MA-NH	14,378†	15,880†	18,232†	21,110	22,271	301.2†	331.2†	377.0†	433.0	456.8
Buffalo-Cheektowaga-Niagara Falls, NY	5,900	6,252	6,584	6,443	6,436	519.7	551.9	579.1	570.1	569.5
Charlotte-Concord-Gastonia, NC-SC	16,284	14,314	15,901	16,983	17,788	671.1	578.5	629.7	661.0	692.4
Chicago-Naperville-Elgin, IL-IN-WI	54,248	56,478	59,342	60,221	62,296	568.0	593.7	622.5	634.0	655.8
Cincinnati, OH-KY-IN	11,219	11,392	11,205	11,220	11,793	519.9	526.2	514.2	512.3	538.4
Cleveland-Elyria, OH	11,312	12,475	13,773	13,771	14,629	548.9	606.9	669.0	669.5	711.2
Columbus, OH	11,327	12,113	11,921	12,511	12,927	560.3	593.3	573.5	593.9	613.7
Dallas-Fort Worth-Arlington, TX	35,900	32,771	37,263	36,756	36,166	505.4	453.1	503.6	487.5	479.7
Denver-Aurora-Lakewood, CO	13,942	14,282	15,520	16,928	17,304	495.4	500.6	537.4	577.3	590.1
Detroit-Warren-Dearborn, MI	22,238	21,966	24,278	24,101	24,331	516.9	511.1	562.9	557.1	562.4
Hartford-West Hartford-East Hartford, CT	4,689	4,898	6,153†	5,735†	5,320	387.1	405.9	508.4†	475.4†	441.0
Houston-The Woodlands-Sugar Land, TX	32,823	35,594	35,807	35,960	30,729	493.1	525.6	519.5	513.9	439.1
Indianapolis-Carmel-Anderson, IN	11,544	12,794	13,701	13,709	13,726	580.4	638.3	675.4	669.2	670.0
Jacksonville, FL	8,012	8,434	8,763	9,133	9,962	552.7	570.6	582.3	595.1	649.1

Kansas City, MO-KS	10,240	11,043	11,868	12,859	12,997	490.5	524.7	557.5	599.9	606.3
Las Vegas-Henderson-Paradise, NV	10,049	11,362	11,898	13,695	14,044	475.2	527.1	539.8	613.7	629.3
Los Angeles-Long Beach-Anaheim, CA	68,285	71,943	78,312	82,143	83,977	511.9	540.5	586.4	618.0	631.8
Louisville-Jefferson County, KY-IN	6,735	6,881	7,086	6,311	7,245	526.8	536.1	547.6	486.5	558.5
Memphis, TN-MS-AR	10,342	10,365	11,718	12,555	13,314	769.4	771.9	869.1	929.6	985.8
Miami-Fort Lauderdale-West Palm Beach, FL	26,746	28,070	29,430	30,742	33,151	444.9	462.7	477.9	495.9	534.8
Milwaukee-Waukesha-West Allis, WI	10,645	11,891	12,187	12,441	12,941	675.6	756.2	773.2	789.3	821.1
Minneapolis-St. Paul-Bloomington, MN-WI	14,709†	15,584	16,901	16,617	17,326	417.3†	438.9	469.4	457.9	477.4
Nashville-Davidson-Murfreesboro-Franklin, TN	8,066	8,196	8,928	10,056	11,324	440.7	439.4	469.1	520.8	586.4
New Orleans-Metairie, LA	9,291	9,626	9,850	10,558	10,688	735.7	758.6	772.1	831.1	841.3
New York-Newark-Jersey City, NY-NJ-PA	97,835	105,463	112,808	115,654	120,953	484.8	523.3	555.1	578.9	605.4
Oklahoma City, OK	7,633	7,693	8,198	8,449	9,036	561.9	560.2	592.5	605.0	647.1
Orlando-Kissimmee-Sanford, FL	12,026	12,492	13,870	14,774	15,646	503.8	511.7	552.6	574.2	608.1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	34,910	38,182	38,661	38,884	39,644	575.1	629.0	634.2	637.8	650.3
Phoenix-Mesa-Scottsdale, AZ	21,795	23,567	26,939	28,252	30,413	476.4	505.6	568.7	581.6	626.0
Pittsburgh, PA	8,604	8,623	7,801	8,623	9,379	365.7	368.1	334.3	370.9	403.4
Portland-Vancouver-Hillsboro, OR-WA	9,982	11,052	11,461	11,830	12,019	417.8	455.8	467.2	477.2	484.9
Providence-Warwick, RI-MA	5,907†	6,668†	6,977†	7,537	7,743	366.2†	412.9†	430.4†	464.9	477.6
Raleigh, NC	6,911	6,493	7,243	7,710	7,656	542.6	498.3	542.5	565.9	561.9
Richmond, VA	7,878	8,592	8,562	8,845	9,544	619.7	670.4	661.6	677.2	730.7
Riverside-San Bernardino-Ontario, CA	20,778	20,081	24,294	24,786	26,034	462.8	443.5	530.4	536.2	563.2

Sacramento-Roseville-Arden-Arcade, CA	10,621	10,892	12,408	14,107	13,865	467.0	474.3	533.7	601.5	591.2
Salt Lake City, UT	4,751	5,264	5,516	5,472	5,385†	406.0	443.8	458.5	447.6	440.5†
San Antonio-New Braunfels, TX	14,465	15,149	14,580	12,199	9,942	606.7	623.5	589.3	484.5	394.8
San Diego-Carlsbad, CA	17,378	18,937	20,832	21,912	22,920	526.7	570.8	624.1	655.4	685.5
San Francisco-Oakland-Hayward, CA	23,519	24,894	27,850	29,286	29,281	505.1	532.0	589.1	619.2	619.1
San Jose-Sunnyvale-Santa Clara, CA	6,898	7,166	7,877	8,553	8,417	348.9	362.1	394.2	427.8	421.0
Seattle-Tacoma-Bellevue, WA	15,257	16,886	17,832	18,744	20,892	408.6	444.5	461.1	475.8	530.3
St. Louis, MO-IL	14,961	15,512	16,469	17,222	17,136	532.1	552.6	586.6	613.9	610.8
Tampa-St. Petersburg-Clearwater, FL	13,472	13,996	14,512	15,454	15,957	452.8	461.6	469.4	491.7	507.8
Virginia Beach-Norfolk-Newport News, VA-NC	11,281	13,223	13,571	14,137	15,452	654.0	765.7	786.6	817.8	893.8
Washington-Arlington-Alexandria, DC-VA-MD-WV	18,890†	21,269	33,134	34,211	36,497†	309.8†	346.9	533.0	547.4	584.0†
SELECTED MSAs TOTAL	865,316	923,081	999,374	1,028,784	1,056,472	489.6	518.8	555.7	569.5	584.8

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: County was misclassified in the 2017 District of Columbia STD morbidity data resulting in inaccurate county-level case counts and rates.

Table 7. Chlamydia Among Females – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	12,640†	22,235	22,204	21,168†	20,345†	429.0†	743.6	730.5	688.5†	661.7†
Austin-Round Rock, TX	7,779	7,827	8,216	7,820	6,559	777.8	761.8	778.6	723.3	606.7
Baltimore-Columbia-Towson, MD	9,453	10,359	11,007	11,145	12,141	652.7	714.5	757.0	767.8	836.4
Birmingham-Hoover, AL	3,940	3,386 ‡	4,985	4,126	4,909	662.3	568.9 ‡	835.2	689.1	819.8
Boston-Cambridge-Newton, MA-NH	9,137†	9,987†	11,314†	12,904	13,194	372.0†	405.1†	455.2†	515.0	526.6
Buffalo-Cheektowaga-Niagara Falls, NY	4,035	4,142	4,383	4,233	4,176	690.1	710.1	748.2	726.4	716.6
Charlotte-Concord-Gastonia, NC-SC	11,672	10,033	10,810	11,340	11,607	935.2	786.8	831.3	856.7	876.9
Chicago-Naperville-Elgin, IL-IN-WI	36,547	37,102	38,191	38,003	38,534	749.1	764.1	785.1	784.1	795.1
Cincinnati, OH-KY-IN	8,050	8,052	7,848	7,747	8,119	731.0	729.4	706.5	694.3	727.6
Cleveland-Elyria, OH	7,815	8,601	9,167	9,098	9,500	732.5	809.0	861.2	855.6	893.4
Columbus, OH	7,704	8,027	7,864	8,121	8,161	750.2	774.2	744.9	759.5	763.3
Dallas-Fort Worth-Arlington, TX	25,902	22,719	25,893	24,762	23,371	717.3	617.7	689.0	646.8	610.4
Denver-Aurora-Lakewood, CO	9,265	9,360	9,652	10,514	10,478	656.7	654.8	668.2	717.5	715.0
Detroit-Warren-Dearborn, MI	15,410	14,957	16,198	15,818	15,693	696.5	677.4	731.7	712.8	707.1
Hartford-West Hartford-East Hartford, CT	3,226	3,307	3,945†	3,722†	3,480	520.0	535.5	636.9†	602.9†	563.7
Houston-The Woodlands-Sugar Land, TX	23,828	25,470	25,253	24,769	20,400	711.6	747.1	728.0	702.6	578.7
Indianapolis-Carmel-Anderson, IN	7,816	8,604	9,090	9,102	9,003	768.7	839.5	876.6	869.7	860.2
Jacksonville, FL	5,637	5,757	5,905	6,152	6,523	758.6	759.4	765.5	782.2	829.4

Kansas City, MO-KS	7,108	7,544	7,947	8,461	8,512	668.8	703.9	733.4	775.4	780.0
Las Vegas-Henderson-Paradise, NV	6,885	7,697	7,642	8,619	8,804	650.6	712.5	691.9	770.4	786.9
Los Angeles-Long Beach-Anaheim, CA	42,385	43,278	46,649	48,445	49,090	626.6	641.1	689.1	719.1	728.7
Louisville-Jefferson County, KY-IN	4,686	4,735	4,741	4,198	4,740	716.8	721.7	717.0	632.6	714.3
Memphis, TN-MS-AR	7,238	7,324	8,164	8,657	9,247	1,033.5	1,046.4	1,161.4	1,228.4	1,312.1
Miami-Fort Lauderdale-West Palm Beach, FL	17,461	17,881	18,277	18,770	19,769	563.6	572.6	577.3	589.0	620.4
Milwaukee-Waukesha-West Allis, WI	7,242	8,013	8,155	8,181	8,595	895.8	994.2	1,009.8	1,013.1	1,064.4
Minneapolis-St. Paul-Bloomington, MN-WI	9,497†	9,958	10,694	10,265	10,670	533.5†	555.8	589.0	561.1	583.2
Nashville-Davidson-Murfreesboro-Franklin, TN	5,322	5,374	5,846	6,487	7,220	567.4	562.0	600.6	657.3	731.6
New Orleans-Metairie, LA	6,710	6,843	6,665	6,953	6,959	1,028.6	1,044.5	1,010.1	1,056.6	1,057.5
New York-Newark-Jersey City, NY-NJ-PA	62,905	65,594	68,082	68,215	69,529	603.9	630.7	649.2	661.8	674.6
Oklahoma City, OK	5,420	5,308	5,669	5,786	6,080	786.4	762.5	808.7	817.5	859.1
Orlando-Kissimmee-Sanford, FL	8,505	8,593	9,252	9,778	9,988	696.6	688.5	721.2	743.2	759.2
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	22,967	24,813	24,713	24,445	24,739	732.2	791.6	784.9	776.7	786.0
Phoenix-Mesa-Scottsdale, AZ	14,607	15,621	17,504	18,009	19,086	634.3	665.8	734.9	737.1	781.1
Pittsburgh, PA	5,681	5,551	4,923	5,443	5,866	469.9	461.8	411.2	456.5	492.0
Portland-Vancouver-Hillsboro, OR-WA	6,559	7,076	7,178	7,388	7,283	542.7	577.2	579.2	590.1	581.7
Providence-Warwick, RI-MA	3,989†	4,501†	4,622†	4,980	5,051	479.9†	541.6†	554.1†	597.2	605.7
Raleigh, NC	4,685	4,244	4,721	5,017	4,969	718.3	634.9	690.4	718.4	711.6
Richmond, VA	5,330	5,725	5,653	5,780	6,247	811.1	863.5	844.8	855.9	925.0
Riverside-San Bernardino-Ontario, CA	14,693	13,893	16,830	17,013	17,540	651.4	610.5	731.6	733.3	756.0

Sacramento-Roseville-Arden-Arcade, CA	7,284	7,282	8,123	9,184	8,864	627.3	620.5	683.9	766.4	739.7
Salt Lake City, UT	3,067	3,275	3,520	3,426	3,292†	526.4	554.6	587.7	563.0	541.0†
San Antonio-New Braunfels, TX	10,005	10,466	9,924	8,140	6,454	828.4	850.9	793.4	639.5	507.0
San Diego-Carlsbad, CA	11,154	11,690	12,791	13,410	13,572	680.1	708.7	771.1	807.4	817.1
San Francisco-Oakland-Hayward, CA	12,508	12,900	13,965	14,362	14,204	530.5	544.7	584.3	601.1	594.5
San Jose-Sunnyvale-Santa Clara, CA	4,328	4,445	4,754	5,171	4,867	440.8	453.4	480.8	523.7	492.9
Seattle-Tacoma-Bellevue, WA	9,306	10,085	10,454	10,535	11,863	498.4	530.8	541.1	535.8	603.4
St. Louis, MO-IL	10,158	10,417	11,016	11,421	11,164	701.1	720.8	762.1	790.2	772.4
Tampa-St. Petersburg-Clearwater, FL	9,269	9,360	9,743	10,288	10,264	603.7	598.4	611.6	636.0	634.6
Virginia Beach-Norfolk-Newport News, VA-NC	7,677	8,791	8,873	9,140	9,816	877.4	1,002.4	1,012.3	1,040.2	1,117.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	12,517†	13,635	20,072	20,831	21,961†	401.3†	434.6	631.7	652.2	687.6†
SELECTED MSAs TOTAL	577,004	601,837	639,087	647,342	652,498	639.8	663.0	697.0	702.9	708.5

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: Cases reported with unknown sex are not included in this table. County was misclassified in the 2017 District of Columbia STD morbidity data resulting in inaccurate county-level case counts and rates.

Table 8. Chlamydia Among Males – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	6,429†	11,000	11,888	11,533†	11,865†	232.6†	392.9	417.9	401.1†	412.7†
Austin-Round Rock, TX	3,871	4,444	4,775	4,964	4,072	386.8	431.9	450.2	456.6	374.5
Baltimore-Columbia-Towson, MD	4,514	5,446	5,755	6,297	6,752	334.6	403.7	425.0	466.0	499.7
Birmingham-Hoover, AL	1,886	1,573 ‡	2,377	2,231	2,567	342.4	284.9 ‡	429.9	403.4	464.2
Boston-Cambridge-Newton, MA-NH	5,211†	5,861†	6,887†	8,165	9,028	224.8†	251.7†	292.9†	344.5	380.9
Buffalo-Cheektowaga-Niagara Falls, NY	1,865	2,110	2,201	2,210	2,260	338.8	384.0	399.4	403.7	412.8
Charlotte-Concord-Gastonia, NC-SC	4,607	4,278	5,085	5,631	6,174	391.0	356.7	415.1	452.1	495.7
Chicago-Naperville-Elgin, IL-IN-WI	17,517	19,320	21,071	22,204	23,623	374.9	414.8	451.3	477.3	507.8
Cincinnati, OH-KY-IN	3,168	3,333	3,352	3,467	3,673	299.9	314.1	313.8	322.7	341.9
Cleveland-Elyria, OH	3,497	3,874	4,606	4,673	5,129	351.8	390.3	463.2	470.3	516.2
Columbus, OH	3,623	4,086	4,057	4,390	4,766	364.2	406.7	396.6	423.2	459.4
Dallas-Fort Worth-Arlington, TX	9,941	10,006	11,342	11,936	12,700	284.7	281.4	311.5	321.6	342.2
Denver-Aurora-Lakewood, CO	4,677	4,922	5,868	6,414	6,826	333.3	345.8	406.4	437.2	465.3
Detroit-Warren-Dearborn, MI	6,795	6,992	8,048	8,246	8,627	325.2	334.6	383.4	391.3	409.4
Hartford-West Hartford-East Hartford, CT	1,443	1,541	1,982†	1,987†	1,815	244.2	261.5	335.5†	337.4†	308.2
Houston-The Woodlands-Sugar Land, TX	8,939	10,004	10,434	11,106	10,255	270.2	297.4	304.8	319.9	295.4
Indianapolis-Carmel-Anderson, IN	3,723	4,185	4,604	4,593	4,718	383.0	427.3	464.3	458.3	470.8
Jacksonville, FL	2,367	2,672	2,854	2,974	3,428	335.1	371.1	389.0	397.5	458.2

Kansas City, MO-KS	3,132	3,499	3,921	4,398	4,485	305.6	338.8	375.1	417.9	426.2
Las Vegas-Henderson-Paradise, NV	3,139	3,646	4,228	5,038	5,221	297.1	339.1	384.5	452.7	469.2
Los Angeles-Long Beach-Anaheim, CA	25,764	28,299	31,501	33,493	34,707	391.8	431.4	478.4	511.0	529.5
Louisville-Jefferson County, KY-IN	2,031	2,131	2,323	2,073	2,430	325.1	339.7	367.2	327.1	383.4
Memphis, TN-MS-AR	3,104	3,035	3,546	3,897	4,063	482.2	472.1	549.5	603.4	629.1
Miami-Fort Lauderdale-West Palm Beach, FL	9,270	10,172	11,141	11,965	13,370	318.1	345.6	372.3	397.2	443.9
Milwaukee-Waukesha-West Allis, WI	3,394	3,860	4,021	4,248	4,337	442.3	503.6	523.1	552.7	564.3
Minneapolis-St. Paul-Bloomington, MN-WI	5,206†	5,614	6,192	6,335	6,629	298.4†	319.1	346.9	352.0	368.3
Nashville-Davidson-Murfreesboro-Franklin, TN	2,744	2,822	3,081	3,565	4,103	307.5	310.4	331.4	377.6	434.6
New Orleans-Metairie, LA	2,581	2,783	3,185	3,605	3,729	422.7	453.4	517.1	588.7	609.0
New York-Newark-Jersey City, NY-NJ-PA	34,799	39,725	44,597	47,384	51,332	356.3	407.3	453.5	489.9	530.7
Oklahoma City, OK	2,213	2,385	2,529	2,663	2,955	330.7	352.3	370.4	386.7	429.1
Orlando-Kissimmee-Sanford, FL	3,511	3,896	4,616	4,992	5,650	301.0	326.5	376.2	397.0	449.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	11,912	13,315	13,889	14,401	14,838	406.1	453.5	471.2	488.3	503.2
Phoenix-Mesa-Scottsdale, AZ	7,173	7,944	9,354	10,133	11,313	315.7	343.1	397.1	419.6	468.5
Pittsburgh, PA	2,909	3,062	2,876	3,172	3,507	254.3	268.5	253.2	280.1	309.7
Portland-Vancouver-Hillsboro, OR-WA	3,416	3,970	4,271	4,426	4,714	289.3	331.1	351.8	360.8	384.2
Providence-Warwick, RI-MA	1,913†	2,163†	2,350†	2,547	2,689	244.7†	276.0†	298.6†	323.4	341.5
Raleigh, NC	2,226	2,248	2,522	2,693	2,687	358.3	354.3	387.2	405.4	404.5
Richmond, VA	2,540	2,827	2,797	2,992	3,291	413.5	456.9	447.5	474.3	521.7
Riverside-San Bernardino-Ontario, CA	6,070	6,141	7,415	7,730	8,447	271.8	272.7	325.2	335.7	366.9

Sacramento-Roseville-Arden-Arcade, CA	3,322	3,580	4,255	4,838	4,926	298.5	318.9	374.2	421.8	429.5
Salt Lake City, UT	1,684	1,989	1,991	2,046	2,093†	286.6	333.9	329.5	333.2	340.9†
San Antonio-New Braunfels, TX	4,459	4,683	4,652	4,030	3,424	379.1	390.4	380.3	323.7	275.0
San Diego-Carlsbad, CA	6,190	7,195	8,017	8,475	9,276	373.0	431.3	477.5	503.7	551.3
San Francisco-Oakland-Hayward, CA	10,961	11,936	13,788	14,790	14,928	476.9	516.5	589.9	632.0	637.9
San Jose-Sunnyvale-Santa Clara, CA	2,565	2,717	3,109	3,373	3,526	257.8	272.1	307.9	333.4	348.5
Seattle-Tacoma-Bellevue, WA	5,951	6,799	7,375	8,200	8,995	318.8	358.0	381.1	415.5	455.8
St. Louis, MO-IL	4,762	5,091	5,450	5,801	5,951	349.4	373.9	400.2	426.5	437.5
Tampa-St. Petersburg-Clearwater, FL	4,195	4,632	4,768	5,166	5,691	291.3	315.5	318.2	338.7	373.1
Virginia Beach-Norfolk-Newport News, VA-NC	3,595	4,406	4,593	4,959	5,622	423.0	518.4	541.2	583.3	661.3
Washington-Arlington-Alexandria, DC-VA-MD-WV	6,359†	7,595	12,856	13,275	14,415†	213.5†	253.6	423.0	434.4	471.7†
SELECTED MSAs TOTAL	287,163	319,807	358,395	379,724	401,622	331.8	367.0	406.7	428.8	453.5

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: Cases reported with unknown sex are not included in this table. County was misclassified in the 2017 District of Columbia STD morbidity data resulting in inaccurate county-level case counts and rates.

Table 9. Chlamydia — Reported Cases and Rates of Reported Cases in Counties and Independent Cities* Ranked by Number of Reported Cases, United States, 2019

Rank*	County/Independent City	Cases	Rate per 100,000 Population	Cumulative Percentage
1	Los Angeles County, CA	69,712	689.8	4
2	Cook County, IL	45,414	876.6	6
3	Maricopa County, AZ	28,375	643.3	8
4	Harris County, TX	23,693	504.3	9
5	Kings County, NY	23,105	894.6	11
6	San Diego County, CA	22,920	685.5	12
7	Philadelphia County, PA	20,354	1,284.9	13
8	Dallas County, TX	19,946	756.2	14
9	Bronx County, NY	18,281	1,276.5	15
10	New York County, NY	17,818	1,094.0	16
11	Wayne County, MI	15,380	876.9	17
12	Queens County, NY	14,810	649.9	18
13	Miami-Dade County, FL	14,680	531.6	18
14	Orange County, CA	14,265	447.7	19
15	Clark County, NV	14,044	629.3	20
16	San Bernardino County, CA	13,776	634.4	21
17	Riverside County, CA	12,258	500.2	21
18	Broward County, FL	12,167	623.5	22
19	Cuyahoga County, OH	11,751	944.7	23
20	Milwaukee County, WI	11,703	1,234.2	23
21	King County, WA	11,639	521.2	24
22	Sacramento County, CA	11,076	718.8	25
23	Orange County, FL	10,365	750.7	25
24	Marion County, IN	10,318	1,080.8	26
25	Franklin County, OH	10,302	786.2	26
26	Shelby County, TN	10,095	1,078.8	27

27	Mecklenburg County, NC	9,737	890.1	28
28	Alameda County, CA	9,645	578.7	28
29	San Francisco County, CA	9,505	1,076.1	29
30	Washington, D.C.	9,327	1,327.8	29
31	Hillsborough County, FL	9,078	631.8	30
32	Tarrant County, TX	8,885	426.2	30
33	Baltimore (City), MD	8,602	1,427.7	31
34	Bexar County, TX	8,531	429.5	31
35	Hennepin County, MN	8,381	665.5	32
36	Prince George's County, MD	8,262	908.6	32
37	Santa Clara County, CA	8,143	420.3	32
38	Fulton County, GA	8,057	767.3	33
39	Denver County, CO	7,935	1,107.5	33
40	Duval County, FL	7,895	830.9	34
41	Travis County, TX	7,681	615.1	34
42	Suffolk County, MA	7,286	902.6	35
43	Fresno County, CA	7,225	726.6	35
44	Hamilton County, OH	7,126	872.6	35
45	Kern County, CA	6,876	766.8	36
46	Pima County, AZ	6,677	642.6	36
47	Essex County, NJ	6,631	829.1	36
48	St. Louis County, MO	6,599	661.9	37
49	Jackson County, MO	6,480	925.3	37
50	Honolulu County, HI	6,399	652.9	38
51	Wake County, NC	6,369	583.1	38
52	Pierce County, WA	6,344	711.8	38
53	Palm Beach County, FL	6,304	424.2	39
54	Allegheny County, PA	6,301	517.1	39
55	Oklahoma County, OK	6,121	772.3	39

56	Contra Costa County, CA	6,018	523.2	40
57	Jefferson County, AL	5,918	897.6	40
58	Davidson County, TN	5,843	843.6	40
59	Middlesex County, MA	5,790	358.6	41
60	Monroe County, NY	5,787	779.4	41
61	Dekalb County, GA	5,638	745.2	41
62	Jefferson County, KY	5,608	727.8	42
63	Erie County, NY	5,496	597.6	42
64	Multnomah County, OR	5,494	676.7	42
65	Bernalillo County, NM	5,372	791.5	42
66	Suffolk County, NY	5,370	362.6	43
67	Guilford County, NC	5,274	988.3	43
68	Salt Lake County, UT	5,210	452.0	43
69	Nassau County, NY	4,960	365.2	44
70	Richland County, SC	4,930	1,189.2	44

* The top 70 counties and independent cities ranked in descending order by number of cases reported in 2019 then by rate are displayed.

NOTE: Relative rankings of counties may be impacted by completeness of the variable used to identify county. In 2019, the variable used to identify county was complete for $\leq 95\%$ of cases in Georgia, South Dakota, Utah, and West Virginia. See Technical Notes for more information.

Table 10. Chlamydia — Reported Cases and Rates of Reported Cases by Age Group and Sex, United States, 2015-2019

Year	Age Group	Cases				Rates per 100,000 Population*		
		Total	Male	Female	Unknown Sex	Total	Male	Female
2015	0-4	518	196	322	0	2.6	1.9	3.3
	5-9	148	18	130	0	0.7	0.2	1.3
	10-14	10,642	1,216	9,394	32	51.6	11.6	93.0
	15-19	391,396	82,775	307,937	684	1854.2	766.6	2986.5
	20-24	589,963	172,313	416,772	878	2594.5	1476.8	3764.4
	25-29	280,429	104,679	175,291	459	1248.5	917.5	1586.0
	30-34	123,866	52,019	71,653	194	571.5	477.7	664.3
	35-39	59,905	27,180	32,621	104	294.0	267.2	319.8
	40-44	30,379	15,210	15,118	51	150.3	151.6	148.4
	45-54	28,833	17,011	11,764	58	66.8	79.9	53.7
	55-64	7,756	4,901	2,840	15	19.0	24.9	13.4
	65+	1,596	1,043	546	7	3.3	4.9	2.0
	Unknown Age	1,227	420	755	52			
	TOTAL	1,526,658	478,981	1,045,143	2,534	475.0	302.7	640.4
2016	0-4	597	225	368	4	3.0	2.2	3.8
	5-9	188	25	161	2	0.9	0.2	1.6
	10-14	10,571	1,341	9,206	24	51.3	12.7	91.2
	15-19	407,230	89,899	316,639	692	1927.3	832.3	3065.8

	20-24	601,173	181,857	418,388	928	2686.1	1582.6	3842.0
	25-29	298,176	114,484	183,222	470	1302.6	984.3	1627.3
	30-34	133,062	58,583	74,226	253	610.8	534.1	686.1
	35-39	66,669	31,671	34,872	126	320.9	305.2	335.4
	40-44	32,548	16,784	15,705	59	165.2	171.7	158.3
	45-54	32,316	19,569	12,683	64	75.5	92.7	58.5
	55-64	9,321	5,942	3,354	25	22.5	29.7	15.6
	65+	1,772	1,161	597	14	3.6	5.3	2.2
	Unknown Age	4,731	1,329	3,298	104			
	TOTAL	1,598,354	522,870	1,072,719	2,765	494.7	328.7	653.9
2017	0-4	514	188	323	3	2.6	1.8	3.3
	5-9	167	9	158	0	0.8	0.1	1.6
	10-14	10,726	1,252	9,454	20	51.6	11.8	92.9
	15-19	437,904	99,864	337,290	750	2072.3	924.6	3264.8
	20-24	631,207	195,971	434,050	1,186	2853.7	1726.7	4030.4
	25-29	321,857	127,007	194,267	583	1377.2	1067.1	1694.0
	30-34	144,451	65,690	78,502	259	657.4	592.4	721.3
	35-39	74,202	36,427	37,621	154	349.5	343.1	354.4
	40-44	36,332	19,310	16,940	82	185.0	198.0	171.3
	45-54	36,229	22,431	13,713	85	85.5	107.3	63.9
	55-64	11,356	7,490	3,840	26	27.0	37.0	17.7

	65+	2,178	1,461	698	19	4.3	6.5	2.5
	Unknown Age	1,446	544	795	107			
	TOTAL	1,708,569	577,644	1,127,651	3,274	524.6	360.1	682.1
2018	0-4	496	186	300	10	2.5	1.8	3.1
	5-9	144	19	125	0	0.7	0.2	1.3
	10-14	10,905	1,438	9,450	17	52.2	13.5	92.5
	15-19	446,008	103,582	341,635	791	2114.1	961.3	3309.7
	20-24	641,269	202,528	437,732	1,009	2931.7	1808.0	4101.7
	25-29	333,561	135,059	197,966	536	1415.7	1123.7	1715.0
	30-34	154,132	72,222	81,645	265	696.3	645.3	746.0
	35-39	78,094	39,320	38,635	139	362.2	364.4	358.6
	40-44	38,657	21,111	17,462	84	196.1	215.5	176.1
	45-54	38,323	24,067	14,173	83	92.1	117.2	67.2
	55-64	12,536	8,474	4,029	33	29.7	41.5	18.4
	65+	2,331	1,676	640	15	4.4	7.2	2.2
	Unknown Age	2,212	765	1,271	176			
	TOTAL	1,758,668	610,447	1,145,063	3,158	537.5	378.9	689.6
2019	0-4	523	201	320	2	2.6	2.0	3.3
	5-9	182	32	146	4	0.9	0.3	1.5
	10-14	11,561	1,432	10,094	35	55.4	13.4	98.8
	15-19	453,927	108,724	344,130	1,073	2151.6	1009.0	3333.8

	20-24	649,450	209,635	438,567	1,248	2969.1	1871.5	4109.5
	25-29	340,542	140,281	199,581	680	1445.3	1167.2	1729.0
	30-34	163,671	78,579	84,726	366	739.4	702.1	774.2
	35-39	84,687	43,605	40,897	185	392.7	404.1	379.6
	40-44	43,005	23,715	19,185	105	218.1	242.1	193.5
	45-54	40,480	25,150	15,256	74	97.2	122.4	72.3
	55-64	13,984	9,567	4,378	39	33.1	46.9	20.0
	65+	2,783	2,036	736	11	5.3	8.7	2.5
	Unknown Age	3,908	1,380	2,454	74			
	TOTAL	1,808,703	644,337	1,160,470	3,896	552.8	399.9	698.9

* No population data are available for unknown sex and age; therefore, rates are not calculated.

NOTE: Cases in the 0–4 age group may include cases due to perinatal transmission.

Table 11a. Chlamydia — Reported Cases by Race/Hispanic Ethnicity, Age Group, and Sex, United States, 2019

Age Group	American Indians/ Alaska Natives			Asians			Blacks			Native Hawaiians/ Other Pacific Islanders		
	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female
0-4	1	0	1	6	1	5	116	49	67	1	0	1
5-9	1	0	1	1	0	0	48	6	42	1	0	1
10-14	157	8	149	45	1	44	4,231	688	3,537	16	3	13
15-19	4,185	841	3,344	3,405	543	2,856	143,248	42,469	100,668	900	165	734
20-24	5,591	1,375	4,215	7,901	2,273	5,620	180,100	66,469	113,492	1,571	358	1,211
25-29	3,780	1,053	2,727	5,383	2,592	2,782	96,494	42,196	54,233	893	270	620
30-34	2,327	722	1,605	3,031	1,634	1,396	41,979	21,969	19,978	437	146	289
35-39	1,218	422	794	1,777	993	782	18,656	10,786	7,855	232	95	137
40-44	546	172	374	1,032	615	414	8,712	5,560	3,141	128	70	57
45-54	437	174	262	1,055	637	417	7,336	5,027	2,303	97	55	42
55-64	94	46	48	324	184	140	2,691	1,842	843	17	12	5
65+	17	14	3	51	37	14	446	344	102	3	3	0
Unknown Age	17	7	10	42	5	36	352	183	156	4	1	3
TOTAL	18,371	4,834	13,533	24,053	9,515	14,506	504,409	197,588	306,417	4,300	1,178	3,113

Age Group	Whites			Multirace			Hispanics			Other/Unknown		
	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female
0-4	97	44	53	9	4	5	63	20	43	230	83	145
5-9	32	5	26	0	0	0	32	1	31	67	20	45
10-14	1,960	99	1,859	116	5	111	1,429	161	1,268	3,607	467	3,113
15-19	95,550	16,259	79,198	4,245	796	3,446	53,753	10,969	42,734	148,641	36,682	111,150
20-24	152,419	43,923	108,368	5,698	1,729	3,967	81,511	23,171	58,232	214,659	70,337	143,462
25-29	75,682	30,376	45,244	2,992	1,342	1,646	45,972	17,540	28,375	109,346	44,912	63,954
30-34	38,494	18,445	19,997	1,546	926	617	23,108	10,589	12,480	52,749	24,148	28,364
35-39	21,146	10,946	10,181	864	608	254	12,452	6,082	6,340	28,342	13,673	14,554
40-44	10,569	5,983	4,580	416	313	103	6,517	3,439	3,062	15,085	7,563	7,454
45-54	11,249	7,814	3,424	413	351	62	5,320	3,208	2,101	14,573	7,884	6,645
55-64	4,464	3,633	827	123	107	16	1,364	900	463	4,907	2,843	2,036
65+	904	748	156	12	10	2	180	115	65	1,170	765	394
Unknown Age	1,725	568	1,148	4	2	2	207	52	153	1,557	562	946
TOTAL	414,291	138,843	275,061	16,438	6,193	10,231	231,908	76,247	155,347	594,933	209,939	382,262

* Total includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 10 for age-specific cases and rates and Tables 3–5 for total and sex-specific cases and rates. Cases in the 0–4 age group may include cases due to perinatal transmission.

Table 11B. Chlamydia — Rates of Reported Cases* by Race/Hispanic Ethnicity, Age Group, and Sex, United States, 2019

Age Group	American Indians/ Alaska Natives			Asians			Blacks			Native Hawaiians/ Other Pacific Islanders		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0-4	0.6	0.0	1.3	0.6	0.2	1.0	4.3	3.5	5.0	2.5	0.0	5.0
5-9	0.6	0.0	1.2	0.1	0.0	0.0	1.7	0.4	3.1	2.5	0.0	5.0
10-14	88.4	8.9	169.9	4.2	0.2	8.4	148.7	47.7	251.8	38.2	14.1	62.9
15-19	2,343.1	924.4	3,816.0	310.3	98.7	521.7	4,894.0	2,861.7	6,976.4	2,196.8	785.0	3,679.0
20-24	3,035.9	1,470.0	4,651.1	611.1	348.0	878.4	5,758.5	4,193.1	7,358.4	3,583.9	1,590.7	5,677.7
25-29	1,888.8	1,030.3	2,784.8	335.3	326.6	342.8	2,775.1	2,415.8	3,134.1	1,740.3	1,019.2	2,497.9
30-34	1,364.8	841.3	1,895.5	185.5	207.2	165.1	1,439.8	1,543.4	1,338.9	862.4	560.9	1,172.9
35-39	777.1	541.5	1,007.5	113.8	135.4	94.4	674.2	816.7	543.0	487.2	388.3	591.8
40-44	387.9	247.8	524.2	71.8	91.9	53.9	349.8	474.3	238.3	324.7	348.2	295.1
45-54	148.8	121.9	173.5	41.0	53.2	30.3	141.6	207.1	83.6	135.3	154.4	116.5
55-64	31.9	33.2	30.7	15.6	19.5	12.3	55.0	82.2	31.8	27.8	40.4	15.9
65+	5.9	10.9	1.9	2.2	3.6	1.0	9.3	17.8	3.6	5.3	11.3	0.0
Unknown Age												
TOTAL	760.0	406.3	1,102.3	128.4	106.7	147.9	1,233.2	1,010.2	1,435.7	733.4	399.3	1,068.5

Age Group	Whites			Multirace			Hispanics		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0-4	1.0	0.9	1.1	0.9	0.8	1.1	1.2	0.8	1.7
5-9	0.3	0.1	0.5	0.0	0.0	0.0	0.6	0.0	1.2
10-14	18.5	1.8	35.9	13.5	1.1	26.3	27.1	6.0	49.0
15-19	857.5	284.3	1,460.1	577.2	213.6	949.9	1,080.4	432.2	1,753.3
20-24	1,299.4	729.0	1,899.6	868.9	521.4	1,223.7	1,684.4	930.4	2,479.2
25-29	591.6	465.1	722.4	537.5	488.8	583.5	942.6	689.3	1,216.3
30-34	310.6	294.1	326.7	367.1	462.0	279.5	507.7	441.9	578.9
35-39	173.5	178.3	168.4	235.7	351.5	131.2	278.0	261.8	294.1
40-44	94.4	106.2	82.2	140.2	224.6	65.4	158.6	164.2	152.0
45-54	43.3	60.3	26.3	81.2	146.6	23.1	75.7	90.6	60.3
55-64	15.1	25.1	5.5	28.6	52.6	7.1	27.9	37.8	18.4
65+	2.3	4.1	0.7	3.0	5.5	0.9	4.1	6.0	2.6
Unknown Age									
TOTAL	209.7	142.5	274.7	231.0	176.3	284.0	387.3	252.2	524.2

* Per 100,000.

† Total includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 10 for age-specific cases and rates and Tables 3–5 for total and sex-specific cases and rates. Cases in the 0–4 age group may include cases due to perinatal transmission. No population data exist for unknown sex, unknown age, or unknown race; therefore rates are not calculated.

Table 12A. Chlamydia — Reported Cases and Rates of Reported Cases Among Females Aged 15-24 Years by Age, United States, 2015-2019

Ages	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
15	19,643	19,704	20,247	19,518	20,352	945.9	958.9	1,004.4	961.7	1,002.8
16	37,786	39,066	40,681	40,001	40,135	1,847.7	1,874.5	1,968.3	1,976.3	1,983.0
17	60,149	61,406	65,496	66,329	65,210	2,935.4	2,988.7	3,120.8	3,194.3	3,140.4
18	89,481	93,174	98,907	101,783	102,336	4,339.6	4,521.3	4,774.1	4,824.0	4,850.2
19	100,878	103,289	111,959	114,004	116,097	4,854.1	4,980.6	5,387.4	5,474.9	5,575.4
20	99,861	100,524	107,397	110,939	111,609	4,703.6	4,812.4	5,140.2	5,315.2	5,347.3
21	95,927	96,723	100,160	102,127	103,394	4,427.2	4,532.8	4,759.7	4,865.7	4,926.1
22	84,740	84,813	86,678	86,274	86,633	3,855.7	3,892.5	4,030.4	4,078.8	4,095.8
23	73,686	73,054	75,046	73,729	73,497	3,254.1	3,304.7	3,416.6	3,409.6	3,398.9
24	62,558	63,274	64,769	64,663	63,434	2,697.2	2,777.9	2,906.1	2,928.1	2,872.4
Total	724,709	735,027	771,340	779,367	782,697	3,389.3	3,464.1	3,655.5	3,712.3	3,728.1

NOTE: Cases reported with unknown sex are not included in this table.

Table 12B. Chlamydia — Reported Cases and Rates of Reported Cases Among Males Aged 15-24 Years by Age, United States, 2015-2019

Ages	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
15	3,773	4,074	4,144	4,088	4,459	173.6	190.2	197.4	193.6	211.2
16	9,286	9,997	10,782	10,573	11,240	434.1	458.3	500.1	501.9	533.5
17	16,244	17,690	19,665	19,972	20,956	757.2	822.6	894.7	922.3	967.7
18	23,232	25,214	28,502	30,184	31,552	1,077.5	1,168.1	1,313.8	1,365.9	1,427.8
19	30,240	32,924	36,771	38,765	40,517	1,384.4	1,517.5	1,688.0	1,777.2	1,857.5
20	34,896	37,391	41,038	43,337	45,850	1,557.6	1,701.6	1,876.1	1,981.9	2,096.9
21	36,611	38,743	42,212	43,800	45,646	1,598.7	1,719.6	1,906.6	1,996.7	2,080.9
22	35,981	37,628	40,515	41,619	43,437	1,543.1	1,634.5	1,784.7	1,875.1	1,957.0
23	33,768	35,462	37,373	38,096	38,735	1,414.2	1,514.0	1,611.7	1,673.6	1,701.6
24	31,057	32,633	34,833	35,676	35,967	1,284.4	1,361.8	1,476.7	1,534.2	1,546.7
Total	255,088	271,756	295,835	306,110	318,359	1,135.5	1,219.0	1,335.6	1,392.9	1,448.6

NOTE: Cases reported with unknown sex are not included in this table.

Table 13. Gonorrhea — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2019

Rank*	State	Cases	Rate per 100,000 Population
1	Mississippi	12,068	404.1
2	Alaska	2,213	300.1
3	Alabama	14,492	296.5
4	South Carolina	14,160	278.5
5	Louisiana	12,800	274.7
6	Oklahoma	10,491	266.1
7	Missouri	15,585	254.4
8	North Carolina	26,377	254.0
9	South Dakota	2,170	246.0
10	Tennessee	16,026	236.7
11	New Mexico	4,886	233.2
12	Illinois	29,272	229.7
13	Arkansas	6,907	229.2
14	Ohio	26,065	223.0
15	Nevada	6,519	214.8
16	Arizona	15,180	211.7
17	New York	40,901	209.3
18	California	80,301	203.0
19	Georgia	21,257	202.1
20	Maryland	11,598	191.9
21	North Dakota	1,447	190.4
	US TOTAL†	616,392	188.4
22	Michigan	18,150	181.6
23	Indiana	11,926	178.2
24	Florida	36,804	172.8
25	Kansas	4,948	169.9

26	Iowa	5,309	168.2
27	Colorado	9,572	168.1
28	Delaware	1,617	167.2
29	Kentucky	7,379	165.1
30	Virginia	13,840	162.5
31	Washington	11,736	155.7
32	Texas	44,230	154.1
33	Nebraska	2,967	153.8
34	Wisconsin	8,846	152.2
35	Montana	1,595	150.1
36	Oregon	6,130	146.3
37	Rhode Island	1,516	143.4
38	Minnesota	8,013	142.8
39	Pennsylvania	16,059	125.4
40	Connecticut	4,418	123.7
41	New Jersey	9,622	108.0
42	Massachusetts	7,396	107.2
43	Hawaii	1,494	105.2
44	West Virginia	1,771	98.1
45	Utah	2,886	91.3
46	Idaho	1,491	85.0
47	Wyoming	448	77.5
48	Maine	547	40.9
49	New Hampshire	410	30.2
50	Vermont	175	27.9

* States were ranked by rate, then case count, then in alphabetical order, with rates shown rounded to the nearest tenth.

† Total includes cases reported by the District of Columbia with 4,382 cases and a rate of 623.8, but excludes territories.

Table 14. Gonorrhea — Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	7,196	8,408	11,948	12,742	14,492	148.1	172.9	245.1	260.7	296.5
Alaska	1,113	1,454	2,189	2,247	2,213	150.7	196.0	295.9	304.7	300.1
Arizona	8,245	10,330	12,502	12,870	15,180	120.8	149.0	178.2	179.5	211.7
Arkansas	4,780	5,732	6,710	7,300	6,907	160.5	191.8	223.3	242.2	229.2
California	54,135	64,551	75,348	79,192	80,301	138.3	164.5	190.6	200.2	203.0
Colorado	4,387	5,975	8,478	8,894	9,572	80.4	107.8	151.2	156.2	168.1
Connecticut	2,088	2,731	3,913	4,959	4,418	58.1	76.4	109.1	138.8	123.7
Delaware	1,310	1,702	1,784	1,691	1,617	138.5	178.8	185.5	174.8	167.2
District of Columbia	2,742	3,226	4,563	4,240	4,382	407.9	473.6	657.5	603.6	623.8
Florida	24,125	28,162	31,683	32,644	36,804	119.0	136.6	151.0	153.3	172.8
Georgia	15,982	20,553	22,667	20,867	21,257	156.5	199.3	217.3	198.4	202.1
Hawaii	1,239	1,467	1,358	1,495	1,494	86.5	102.7	95.1	105.2	105.2
Idaho	472	635	987	1,134	1,491	28.5	37.7	57.5	64.6	85.0
Illinois	17,130	21,199	23,859	25,422	29,272	133.2	165.6	186.4	199.5	229.7
Indiana	7,843	9,451	11,835	12,193	11,926	118.5	142.5	177.5	182.2	178.2
Iowa	2,247	2,600	3,758	4,839	5,309	71.9	82.9	119.5	153.3	168.2
Kansas	2,536	3,353	4,545	5,256	4,948	87.1	115.3	156.0	180.5	169.9

Kentucky	4,678	5,812	7,417	7,470	7,379	105.7	131.0	166.5	167.2	165.1
Louisiana	10,282	10,782	12,017	12,043	12,800	220.1	230.3	256.5	258.4	274.7
Maine	417	451	620	710	547	31.4	33.9	46.4	53.0	40.9
Maryland	6,858	9,523	10,978	10,305	11,598	114.2	158.3	181.4	170.5	191.9
Massachusetts	3,817	4,980	7,737	8,076	7,396	56.2	73.1	112.8	117.0	107.2
Michigan	10,330	12,450	15,742	16,688	18,150	104.1	125.4	158.0	166.9	181.6
Minnesota	4,097	5,104	6,519	7,542	8,013	74.6	92.5	116.9	134.4	142.8
Mississippi	5,775	7,157	9,258	9,749	12,068	193.0	239.5	310.2	326.4	404.1
Missouri	8,942	11,479	13,086	15,090	15,585	147.0	188.4	214.0	246.3	254.4
Montana	844	867	782	1,181	1,595	81.7	83.2	74.4	111.2	150.1
Nebraska	1,703	2,156	2,653	2,696	2,967	89.8	113.1	138.2	139.7	153.8
Nevada	3,630	4,380	5,520	6,475	6,519	125.6	149.0	184.1	213.4	214.8
New Hampshire	245	456	513	594	410	18.4	34.2	38.2	43.8	30.2
New Jersey	7,228	8,162	9,439	9,067	9,622	80.7	91.3	104.8	101.8	108.0
New Mexico	2,489	3,516	4,489	5,268	4,886	119.4	169.0	215.0	251.4	233.2
New York	25,561	29,000	34,099	37,262	40,901	129.1	146.9	171.8	190.7	209.3
North Carolina	19,809	19,687	22,871	23,725	26,377	197.2	194.0	222.6	228.5	254.0
North Dakota	684	1,000	966	1,369	1,447	90.4	131.9	127.9	180.1	190.4
Ohio	16,564	20,487	23,967	25,146	26,065	142.6	176.4	205.6	215.1	223.0
Oklahoma	6,542	7,574	9,081	8,998	10,491	167.3	193.0	231.0	228.2	266.1
Oregon	3,232	4,353	5,022	5,913	6,130	80.2	106.3	121.2	141.1	146.3

Pennsylvania	12,791	14,603	15,244	15,887	16,059	99.9	114.2	119.0	124.0	125.4
Rhode Island	580	716	1,087	1,336	1,516	54.9	67.8	102.6	126.4	143.4
South Carolina	8,206	9,194	12,623	13,801	14,160	167.6	185.3	251.2	271.5	278.5
South Dakota	1,048	1,269	1,290	1,689	2,170	122.1	146.6	148.3	191.4	246.0
Tennessee	8,386	10,179	12,426	14,627	16,026	127.1	153.0	185.0	216.1	236.7
Texas	39,717	42,472	47,409	47,231	44,230	144.6	152.4	167.5	164.6	154.1
Utah	1,562	2,100	2,543	2,895	2,886	52.1	68.8	82.0	91.6	91.3
Vermont	155	126	203	268	175	24.8	20.2	32.5	42.8	27.9
Virginia	8,099	11,084	12,596	11,776	13,840	96.6	131.8	148.7	138.3	162.5
Washington	7,171	8,174	9,915	11,207	11,736	100.0	112.2	133.9	148.7	155.7
West Virginia	769	919	1,296	1,143	1,771	41.7	50.2	71.4	63.3	98.1
Wisconsin	5,260	6,498	7,661	7,882	8,846	91.1	112.4	132.2	135.6	152.2
Wyoming	175	275	412	311	448	29.9	47.0	71.1	53.8	77.5
US TOTAL	395,216	468,514	555,608	583,405	616,392	123.0	145.0	170.6	178.3	188.4
Northeast	52,882	61,225	72,855	78,159	81,044	94.0	108.9	129.0	139.3	144.4
Midwest	78,384	97,046	115,881	125,812	134,698	115.4	142.8	170.0	184.2	197.2
South	175,256	202,166	237,327	240,352	256,199	144.6	165.3	191.9	192.7	205.4
West	88,694	108,077	129,545	139,082	144,451	116.6	141.0	167.3	178.3	185.2
American Samoa	NR	NR	NR	13	9	—	—	—	25.6	17.7
Guam	147	133	202	261	305	90.9	79.7	120.7	155.6	181.8
Northern Mariana Islands	NR	NR	NR	34	21	—	—	—	65.4	40.4

Puerto Rico	620	744	588	557	499	17.8	21.8	17.5	16.9	15.1
Virgin Islands	52	35	15	NR	47	50.5	32.5	14.0	—	43.9
TERRITORIES	819	912	805	865	881	21.9	24.7	22.2	24.3	24.0
TOTAL	396,035	469,426	556,413	584,270	617,273	121.8	143.6	168.9	176.7	186.6

NR = No report.

NOTE: See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 15. Gonorrhea Among Females – Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	3,629	4,088	5,693	6,134	6,878	144.8	163.0	226.4	243.1	272.5
Alaska	567	738	1,090	1,057	1,131	162.3	208.6	308.8	299.5	320.5
Arizona	3,505	4,315	5,219	5,332	6,229	102.0	123.7	147.9	147.9	172.7
Arkansas	2,510	2,964	3,525	3,788	3,546	165.6	195.0	230.7	247.0	231.2
California	18,404	20,914	24,599	26,425	27,291	93.4	105.9	123.7	132.8	137.2
Colorado	1,832	2,323	3,465	3,589	3,890	67.5	84.3	124.4	126.9	137.6
Connecticut	851	1,165	1,660	1,938	1,932	46.3	63.6	90.4	105.9	105.6
Delaware	641	799	757	728	745	131.3	162.6	152.5	145.8	149.2
District of Columbia	874	857	1,287	1,211	1,283	247.2	239.4	352.8	328.1	347.6
Florida	10,078	11,488	12,769	12,936	13,525	97.2	109.0	119.0	118.8	124.2
Georgia	7,322	9,156	9,873	8,718	8,375	139.9	173.1	184.4	161.3	155.0
Hawaii	446	551	476	531	539	63.2	77.5	66.9	74.8	76.0
Idaho	197	237	357	509	650	23.8	28.2	41.7	58.2	74.3
Illinois	7,698	8,920	9,750	10,064	11,825	117.6	137.0	149.8	155.3	182.5
Indiana	3,984	4,811	5,931	6,083	5,794	118.6	143.0	175.5	179.4	170.8
Iowa	1,122	1,267	1,887	2,476	2,716	71.4	80.4	119.4	156.2	171.3
Kansas	1,262	1,695	2,269	2,615	2,465	86.6	116.1	155.3	179.0	168.7
Kentucky	2,242	2,716	3,478	3,643	3,489	99.8	120.7	153.9	160.7	153.9

Louisiana	5,535	5,493	5,978	5,904	6,088	231.9	229.6	249.6	247.5	255.2
Maine	143	134	225	250	203	21.1	19.7	33.0	36.6	29.7
Maryland	3,090	3,944	4,629	4,227	4,568	99.8	127.1	148.5	135.8	146.7
Massachusetts	1,027	1,390	2,495	2,431	2,217	29.4	39.6	70.7	68.4	62.4
Michigan	5,191	6,201	7,604	7,981	8,657	102.9	122.9	150.3	157.3	170.6
Minnesota	1,675	2,214	2,939	3,345	3,678	60.7	79.9	105.0	118.8	130.6
Mississippi	3,131	3,665	4,563	4,888	6,220	203.2	238.0	296.6	317.7	404.2
Missouri	4,187	5,228	5,997	6,803	7,032	135.1	168.6	192.7	218.1	225.5
Montana	462	493	427	638	847	89.9	95.2	81.9	121.0	160.6
Nebraska	870	1,055	1,285	1,302	1,503	91.5	110.3	133.6	134.8	155.6
Nevada	1,402	1,611	1,972	2,477	2,432	97.3	109.9	132.0	163.7	160.8
New Hampshire	65	132	179	184	135	9.7	19.6	26.4	26.9	19.7
New Jersey	3,110	3,338	3,731	3,446	3,680	67.8	72.9	80.9	75.6	80.8
New Mexico	1,087	1,542	2,073	2,343	2,179	103.4	146.8	196.7	221.4	205.9
New York	8,593	8,709	9,649	10,202	11,341	84.4	85.7	94.5	101.5	112.8
North Carolina	10,064	9,527	11,013	11,480	12,430	195.4	182.7	208.9	215.3	233.1
North Dakota	375	516	528	708	730	101.9	139.8	143.4	191.0	196.9
Ohio	8,466	10,130	11,736	12,146	12,386	142.8	171.0	197.4	203.8	207.9
Oklahoma	3,580	4,052	4,721	4,556	5,211	181.3	204.7	238.0	228.9	261.9
Oregon	1,158	1,519	1,920	2,244	2,288	56.9	73.5	91.9	106.2	108.3
Pennsylvania	5,889	6,135	5,947	6,050	6,359	90.1	94.1	91.0	92.6	97.3

Rhode Island	172	221	357	457	563	31.6	40.7	65.5	84.2	103.7
South Carolina	4,401	4,709	6,470	7,016	6,847	174.8	184.4	250.1	267.7	261.3
South Dakota	621	757	722	974	1,224	145.6	176.4	167.6	223.0	280.3
Tennessee	3,809	4,681	5,667	6,681	7,588	112.6	137.3	164.7	192.7	218.9
Texas	17,843	18,620	20,963	19,982	18,177	129.0	132.7	147.2	138.4	125.9
Utah	507	717	865	942	1,014	34.1	47.3	56.2	60.0	64.6
Vermont	85	32	87	140	65	26.8	10.1	27.6	44.2	20.5
Virginia	4,007	5,056	5,734	5,208	6,019	94.1	118.3	133.2	120.4	139.1
Washington	2,797	2,943	3,488	3,922	4,183	78.0	80.7	94.2	104.2	111.1
West Virginia	365	422	618	542	836	39.1	45.6	67.4	59.5	91.7
Wisconsin	2,557	3,189	3,696	3,670	4,146	88.1	109.8	126.9	125.6	141.9
Wyoming	86	120	224	158	210	29.9	41.9	78.9	55.8	74.2
US TOTAL	173,514	197,499	232,587	241,074	253,359	106.3	120.4	140.7	145.2	152.6
Northeast	19,935	21,256	24,330	25,098	26,495	69.1	73.8	84.1	87.3	92.2
Midwest	38,008	45,983	54,344	58,167	62,156	110.4	133.6	157.4	168.2	179.7
South	83,121	92,237	107,738	107,642	111,825	134.5	147.9	170.9	169.2	175.8
West	32,450	38,023	46,175	50,167	52,883	85.1	98.9	119.0	128.3	135.3
American Samoa	NR	NR	NR	4	2	—	—	—	15.7	7.9
Guam	67	59	97	143	148	84.0	72.8	119.4	175.6	181.7
Northern Mariana Islands	NR	NR	NR	16	13	—	—	—	65.7	53.4
Puerto Rico	259	313	230	238	201	14.3	17.5	13.1	13.7	11.6

Virgin Islands	28	14	5	NR	24	50.8	24.9	8.9	—	42.9
TERRITORIES	354	386	332	401	388	18.1	20.1	17.5	21.5	20.2
TOTAL	173,868	197,885	232,919	241,475	253,747	105.3	119.2	139.3	143.8	151.1

NR = No report.

NOTE: Cases reported with unknown sex are not included in this table. See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 16. Gonorrhea Among Males – Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	3,519	4,265	6,214	6,560	7,577	149.5	181.1	263.3	277.5	320.5
Alaska	546	716	1,099	1,189	1,081	140.4	184.5	284.1	309.2	281.1
Arizona	4,724	6,011	7,256	7,509	8,942	139.3	174.6	208.0	210.6	250.8
Arkansas	2,270	2,768	3,184	3,511	3,359	155.2	188.6	215.7	237.2	226.9
California	35,644	43,259	50,577	52,553	52,676	183.3	221.9	257.4	267.3	267.9
Colorado	2,555	3,652	5,013	5,305	5,682	93.1	131.1	177.6	185.0	198.1
Connecticut	1,237	1,564	2,246	3,003	2,483	70.6	89.6	128.2	172.3	142.4
Delaware	669	903	1,027	958	871	146.1	196.0	220.6	204.7	186.1
District of Columbia	1,817	2,298	3,254	2,989	3,055	570.3	710.9	988.5	896.8	916.6
Florida	14,039	16,661	18,904	19,704	23,267	141.8	165.4	184.3	189.2	223.5
Georgia	8,631	11,378	12,741	12,075	12,585	173.3	226.6	251.0	236.1	246.0
Hawaii	793	914	882	959	946	109.3	127.4	123.2	134.9	133.1
Idaho	275	396	629	622	841	33.2	46.9	73.1	70.8	95.7
Illinois	9,335	12,255	14,057	15,351	17,351	147.8	194.8	223.4	245.2	277.1
Indiana	3,854	4,636	5,899	6,101	6,124	118.2	141.8	179.5	184.9	185.6
Iowa	1,122	1,332	1,870	2,363	2,592	72.3	85.4	119.5	150.4	165.0
Kansas	1,274	1,658	2,276	2,641	2,483	87.6	114.5	156.8	182.1	171.2
Kentucky	2,430	3,006	3,906	3,762	3,843	111.5	137.5	178.0	170.9	174.6

Louisiana	4,747	5,289	6,039	6,139	6,711	207.9	231.0	263.8	269.9	295.0
Maine	274	316	392	459	344	42.1	48.4	59.9	70.0	52.5
Maryland	3,755	5,573	6,346	6,074	7,029	129.0	191.2	216.3	207.4	240.0
Massachusetts	2,768	3,575	5,206	5,578	5,135	84.0	108.1	156.3	166.5	153.3
Michigan	5,129	6,245	8,121	8,700	9,491	105.1	127.8	165.6	176.8	192.8
Minnesota	2,420	2,881	3,568	4,187	4,311	88.6	104.9	128.5	149.8	154.3
Mississippi	2,638	3,486	4,681	4,846	5,831	181.7	240.6	323.7	334.7	402.8
Missouri	4,755	6,251	7,088	8,287	8,553	159.3	208.9	236.1	275.5	284.4
Montana	381	374	355	543	748	73.4	71.3	67.1	101.5	139.9
Nebraska	833	1,097	1,366	1,393	1,462	88.1	115.4	142.6	144.6	151.8
Nevada	2,218	2,763	3,539	3,985	4,082	152.9	187.4	235.3	261.9	268.3
New Hampshire	180	324	334	410	275	27.4	49.0	50.2	61.0	40.9
New Jersey	4,108	4,810	5,699	5,617	5,923	94.0	110.1	129.6	129.1	136.1
New Mexico	1,401	1,971	2,412	2,925	2,704	135.6	191.2	233.2	282.0	260.7
New York	16,893	20,224	24,383	27,025	29,548	175.8	210.9	253.0	284.8	311.4
North Carolina	9,744	10,160	11,857	12,245	13,947	199.2	206.0	237.1	242.4	276.1
North Dakota	309	484	438	661	717	79.5	124.4	113.1	169.8	184.2
Ohio	8,098	10,357	12,231	13,000	13,679	142.4	182.0	214.1	226.8	238.7
Oklahoma	2,962	3,521	4,360	4,442	5,280	152.9	181.1	223.9	227.4	270.3
Oregon	2,073	2,834	3,095	3,663	3,824	104.0	139.8	150.8	176.3	184.1
Pennsylvania	6,892	8,449	9,285	9,821	9,686	110.0	134.9	148.1	156.5	154.4

Rhode Island	408	495	729	879	953	79.7	96.5	141.6	170.9	185.3
South Carolina	3,781	4,436	6,122	6,744	7,257	158.9	184.2	251.1	273.8	294.6
South Dakota	427	512	568	715	946	98.8	117.4	129.4	160.5	212.3
Tennessee	4,577	5,497	6,758	7,946	8,438	142.3	169.5	206.3	240.6	255.5
Texas	21,792	23,779	26,344	27,117	25,770	159.8	171.9	187.3	190.2	180.7
Utah	1,055	1,383	1,672	1,953	1,872	70.0	90.0	107.1	122.7	117.6
Vermont	70	94	116	126	110	22.7	30.5	37.6	40.7	35.6
Virginia	4,085	5,996	6,779	6,525	7,790	99.0	144.9	162.7	155.7	185.9
Washington	4,374	5,231	6,425	7,279	7,547	122.0	143.7	173.5	193.1	200.2
West Virginia	404	497	678	601	933	44.3	54.9	75.4	67.2	104.3
Wisconsin	2,697	3,302	3,961	4,208	4,694	94.1	114.9	137.4	145.5	162.3
Wyoming	88	155	188	153	238	29.4	51.8	63.6	51.9	80.8
US TOTAL	221,070	270,033	322,169	341,401	361,586	139.7	169.7	200.8	211.9	224.4
Northeast	32,830	39,851	48,390	52,918	54,457	119.7	145.4	175.8	193.4	199.0
Midwest	40,253	51,010	61,443	67,607	72,403	120.2	152.1	182.5	200.4	214.7
South	91,860	109,513	129,194	132,238	143,543	154.6	182.7	213.1	216.3	234.8
West	56,127	69,659	83,142	88,638	91,183	148.1	182.3	215.4	227.9	234.4
American Samoa	NR	NR	NR	9	7	—	—	—	35.4	27.5
Guam	80	74	105	118	157	97.6	86.2	122.0	136.7	181.9
Northern Mariana Islands	NR	NR	NR	18	8	—	—	—	65.1	28.9
Puerto Rico	359	431	356	318	298	21.7	26.5	22.4	20.4	19.1

Virgin Islands	24	21	10	NR	23	50.2	40.8	19.5	—	45.0
TERRITORIES	463	526	471	463	493	25.9	29.9	27.2	27.2	28.1
TOTAL	221,533	270,559	322,640	341,864	362,079	138.4	168.2	199.0	210.0	222.3

NR = No report.

NOTE: Cases reported with unknown sex are not included in this table. See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 17. Gonorrhea — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	6,471†	11,670	12,373	10,383†	10,501†	113.3†	201.6	210.3	174.5†	176.5†
Austin-Round Rock, TX	3,199	3,670	4,414	4,336	3,613	159.9	178.5	208.6	200.0	166.6
Baltimore-Columbia-Towson, MD	4,179	5,854	6,892	5,998	6,784	149.4	209.2	245.4	214.0	242.0
Birmingham-Hoover, AL	2,088	2,025 ‡	3,486	3,360	3,698	182.3	176.5 ‡	303.2	291.7	321.1
Boston-Cambridge-Newton, MA-NH	2,487†	3,002†	4,385†	5,362	5,216	52.1†	62.6†	90.7†	110.0	107.0
Buffalo-Cheektowaga-Niagara Falls, NY	1,982	2,180	2,448	2,553	2,289	174.6	192.4	215.3	225.9	202.5
Charlotte-Concord-Gastonia, NC-SC	4,673	4,749	5,411	5,762	5,964	192.6	191.9	214.3	224.3	232.1
Chicago-Naperville-Elgin, IL-IN-WI	13,529	16,634	18,558	19,578	21,965	141.6	174.9	194.7	206.1	231.2
Cincinnati, OH-KY-IN	3,713	4,096	4,716	4,985†	4,176	172.1	189.2	216.4	227.6†	190.7
Cleveland-Elyria, OH	3,428	4,205	5,843	5,400	6,344	166.3	204.6	283.8	262.5	308.4
Columbus, OH	3,676	4,821	5,197	5,657	5,797	181.8	236.1	250.0	268.5	275.2
Dallas-Fort Worth-Arlington, TX	11,334	11,092	12,846	13,245	13,942	159.6	153.3	173.6	175.7	184.9
Denver-Aurora-Lakewood, CO	2,838	3,848	5,408	5,270	6,359	100.8	134.9	187.2	179.7	216.9
Detroit-Warren-Dearborn, MI	5,494	6,816	8,668	8,817	9,773	127.7	158.6	201.0	203.8	225.9
Hartford-West Hartford-East Hartford, CT	726†	963†	1,831	1,983†	1,602	59.9†	79.8†	151.3	164.4†	132.8
Houston-The Woodlands-Sugar Land, TX	9,290	10,378	10,789	10,831	10,335	139.6	153.2	156.5	154.8	147.7
Indianapolis-Carmel-Anderson, IN	3,716	4,808	5,430	4,902	4,901	186.8	239.9	267.7	239.3	239.2
Jacksonville, FL	2,740	3,168	3,721	4,054	4,653	189.0	214.3	247.2	264.2	303.2

Kansas City, MO-KS	2,943	4,009	5,274	5,657	5,485	141.0	190.5	247.7	263.9	255.9
Las Vegas-Henderson-Paradise, NV	2,975	3,653	4,430	5,294	5,448	140.7	169.5	201.0	237.2	244.1
Los Angeles-Long Beach-Anaheim, CA	19,867	25,438	29,669	31,206	30,265	148.9	191.1	222.2	234.8	227.7
Louisville-Jefferson County, KY-IN	2,187	2,957	3,413	2,663†	2,929	171.1	230.4	263.8	205.3†	225.8
Memphis, TN-MS-AR	3,143	3,746	4,653	5,458	5,405	233.8	279.0	345.1	404.1	400.2
Miami-Fort Lauderdale-West Palm Beach, FL	6,905	7,984	8,848	9,618	10,891	114.8	131.6	143.7	155.2	175.7
Milwaukee-Waukesha-West Allis, WI	3,719	4,454	4,910	4,748	5,265	236.0	283.2	311.5	301.2	334.0
Minneapolis-St. Paul-Bloomington, MN-WI	3,289	4,123	5,260	5,834	6,234	93.3	116.1	146.1	160.8	171.8
Nashville-Davidson-Murfreesboro-Franklin, TN	2,200	2,695	2,706	3,102	3,935	120.2	144.5	142.2	160.6	203.8
New Orleans-Metairie, LA	2,929	3,414	3,638	3,584	3,646	231.9	269.1	285.2	282.1	287.0
New York-Newark-Jersey City, NY-NJ-PA	23,721	26,186	32,018	34,772	38,147	117.5	129.9	157.6	174.0	190.9
Oklahoma City, OK	2,403	2,953	3,418	3,596	4,108	176.9	215.0	247.0	257.5	294.2
Orlando-Kissimmee-Sanford, FL	3,073	3,393	4,290	4,307	4,724	128.7	139.0	170.9	167.4	183.6
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	9,724	11,394	12,096	12,123	12,210	160.2	187.7	198.4	198.9	200.3
Phoenix-Mesa-Scottsdale, AZ	6,495	8,086	9,433	9,448	11,317	142.0	173.5	199.1	194.5	233.0
Pittsburgh, PA	2,422	2,601	2,370	2,629	2,420	102.9	111.0	101.6	113.1	104.1
Portland-Vancouver-Hillsboro, OR-WA	2,386	3,177	3,444	4,238	4,288	99.9	131.0	140.4	171.0	173.0
Providence-Warwick, RI-MA	834†	1,108†	1,561†	1,956	2,007	51.7†	68.6†	96.3†	120.6	123.8
Raleigh, NC	2,018	1,915	2,491	2,554	2,684	158.5	147.0	186.6	187.4	197.0
Richmond, VA	2,200	3,198	3,200	2,977	3,648	173.0	249.5	247.3	227.9	279.3
Riverside-San Bernardino-Ontario, CA	4,904	5,958	7,329	7,977	7,958	109.2	131.6	160.0	172.6	172.2

Sacramento-Roseville-Arden-Arcade, CA	3,317	3,402	4,057	4,402	4,934	145.9	148.1	174.5	187.7	210.4
Salt Lake City, UT	1,078	1,462	1,693	1,933	1,758†	92.1	123.3	140.7	158.1	143.8†
San Antonio-New Braunfels, TX	4,160	4,779	4,891	4,304	3,481	174.5	196.7	197.7	170.9	138.2
San Diego-Carlsbad, CA	3,691	4,989	5,973	6,184	6,366	111.9	150.4	179.0	185.0	190.4
San Francisco-Oakland-Hayward, CA	9,330	10,669	12,169	12,642	12,598	200.4	228.0	257.4	267.3	266.4
San Jose-Sunnyvale-Santa Clara, CA	1,857	1,976	2,528	2,230	2,556	93.9	99.9	126.5	111.5	127.9
Seattle-Tacoma-Bellevue, WA	4,766	5,149	6,667	7,190	7,532	127.7	135.5	172.4	182.5	191.2
St. Louis, MO-IL	5,257	6,558	6,699	7,260	7,856	187.0	233.6	238.6	258.8	280.0
Tampa-St. Petersburg-Clearwater, FL	3,916	4,408	4,661	4,352	4,986	131.6	145.4	150.8	138.5	158.7
Virginia Beach-Norfolk-Newport News, VA-NC	3,300	4,320	4,785	4,505	5,241	191.3	250.2	277.4	260.6	303.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	3,008	4,335	9,682	9,313	10,009†	49.3	70.7	155.7	149.0	160.1†
SELECTED MSAs TOTAL	239,580	288,468	340,672	350,532	368,243	135.6	162.1	189.4	194.0	203.8

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: County was misclassified in the 2017 District of Columbia STD morbidity data resulting in inaccurate county-level case counts and rates.

Table 18. Gonorrhea Among Females – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	2,578†	4,696	4,723	3,683†	3,392†	87.5†	157.0	155.4	119.8†	110.3†
Austin-Round Rock, TX	1,039	1,162	1,522	1,326	1,084	103.9	113.1	144.2	122.7	100.3
Baltimore-Columbia-Towson, MD	1,964	2,492	3,059	2,538	2,652	135.6	171.9	210.4	174.8	182.7
Birmingham-Hoover, AL	999	943 ‡	1,644	1,494	1,671	167.9	158.4 ‡	275.4	249.5	279.1
Boston-Cambridge-Newton, MA-NH	601†	720†	1,242†	1,255	1,305	24.5†	29.2†	50.0†	50.1	52.1
Buffalo-Cheektowaga-Niagara Falls, NY	959	985	1,157	1,138	935	164.0	168.9	197.5	195.3	160.5
Charlotte-Concord-Gastonia, NC-SC	2,419	2,296	2,554	2,632	2,603	193.8	180.1	196.4	198.8	196.7
Chicago-Naperville-Elgin, IL-IN-WI	5,696	6,481	6,997	6,943	8,002	116.8	133.5	143.8	143.3	165.1
Cincinnati, OH-KY-IN	2,020	2,183	2,481	2,576†	2,067	183.4	197.7	223.3	230.9†	185.2
Cleveland-Elyria, OH	1,745	2,134	3,043	2,719	3,126	163.6	200.7	285.9	255.7	294.0
Columbus, OH	1,638	2,105	2,165	2,311	2,309	159.5	203.0	205.1	216.1	216.0
Dallas-Fort Worth-Arlington, TX	4,963	4,577	5,504	5,343	5,516	137.4	124.5	146.5	139.6	144.1
Denver-Aurora-Lakewood, CO	1,096	1,403	2,083	1,920	2,436	77.7	98.1	144.2	131.0	166.2
Detroit-Warren-Dearborn, MI	2,592	3,190	4,008	3,867	4,333	117.2	144.5	181.0	174.3	195.2
Hartford-West Hartford-East Hartford, CT	310†	412†	796	776†	692	50.0†	66.7†	128.5	125.7†	112.1
Houston-The Woodlands-Sugar Land, TX	4,113	4,422	4,422	4,439	3,996	122.8	129.7	127.5	125.9	113.4
Indianapolis-Carmel-Anderson, IN	1,791	2,264	2,533	2,345	2,122	176.1	220.9	244.3	224.1	202.8
Jacksonville, FL	1,237	1,402	1,643	1,784	1,944	166.5	184.9	213.0	226.8	247.2

Kansas City, MO-KS	1,409	1,875	2,448	2,479	2,415	132.6	174.9	225.9	227.2	221.3
Las Vegas-Henderson-Paradise, NV	1,129	1,341	1,518	1,958	2,006	106.7	124.1	137.4	175.0	179.3
Los Angeles-Long Beach-Anaheim, CA	5,778	7,083	8,808	9,187	8,918	85.4	104.9	130.1	136.4	132.4
Louisville-Jefferson County, KY-IN	1,012	1,278	1,493	1,198†	1,266	154.8	194.8	225.8	180.5†	190.8
Memphis, TN-MS-AR	1,469	1,818	2,304	2,552	2,688	209.8	259.7	327.8	362.1	381.4
Miami-Fort Lauderdale-West Palm Beach, FL	2,252	2,606	2,699	2,816	2,861	72.7	83.4	85.2	88.4	89.8
Milwaukee-Waukesha-West Allis, WI	1,850	2,208	2,346	2,195	2,422	228.8	274.0	290.5	271.8	299.9
Minneapolis-St. Paul-Bloomington, MN-WI	1,229	1,676	2,256	2,412	2,681	69.0	93.5	124.3	131.8	146.5
Nashville-Davidson-Murfreesboro-Franklin, TN	888	1,129	1,036	1,236	1,597	94.7	118.1	106.4	125.2	161.8
New Orleans-Metairie, LA	1,423	1,527	1,512	1,414	1,449	218.1	233.1	229.1	214.9	220.2
New York-Newark-Jersey City, NY-NJ-PA	7,349	7,134	8,210	8,565	9,706	70.6	68.6	78.3	83.1	94.2
Oklahoma City, OK	1,267	1,558	1,771	1,757	2,025	183.8	223.8	252.6	248.3	286.1
Orlando-Kissimmee-Sanford, FL	1,254	1,326	1,569	1,633	1,632	102.7	106.2	122.3	124.1	124.0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	4,277	4,640	4,544	4,413	4,676	136.4	148.0	144.3	140.2	148.6
Phoenix-Mesa-Scottsdale, AZ	2,708	3,259	3,807	3,752	4,427	117.6	138.9	159.8	153.6	181.2
Pittsburgh, PA	1,239	1,153	948	1,035	892	102.5	95.9	79.2	86.8	74.8
Portland-Vancouver-Hillsboro, OR-WA	764	1,005	1,208	1,478	1,366	63.2	82.0	97.5	118.1	109.1
Providence-Warwick, RI-MA	260†	368†	559†	687	749	31.3†	44.3†	67.0†	82.4	89.8
Raleigh, NC	857	785	1,101	1,126	1,077	131.4	117.4	161.0	161.2	154.2
Richmond, VA	1,141	1,473	1,432	1,319	1,538	173.6	222.2	214.0	195.3	227.7
Riverside-San Bernardino-Ontario, CA	2,208	2,515	3,101	3,255	3,405	97.9	110.5	134.8	140.3	146.8

Sacramento-Roseville-Arden-Arcade, CA	1,538	1,463	1,613	1,891	2,087	132.5	124.7	135.8	157.8	174.2
Salt Lake City, UT	325	480	549	578	600†	55.8	81.3	91.7	95.0	98.6†
San Antonio-New Braunfels, TX	1,785	1,981	2,228	1,804	1,452	147.8	161.1	178.1	141.7	114.1
San Diego-Carlsbad, CA	1,018	1,479	1,593	2,091	2,130	62.1	89.7	96.0	125.9	128.2
San Francisco-Oakland-Hayward, CA	2,101	2,183	2,646	2,719	2,794	89.1	92.2	110.7	113.8	116.9
San Jose-Sunnyvale-Santa Clara, CA	642	614	772	663	714	65.4	62.6	78.1	67.1	72.3
Seattle-Tacoma-Bellevue, WA	1,662	1,556	2,011	2,137	2,318	89.0	81.9	104.1	108.7	117.9
St. Louis, MO-IL	2,436	2,911	2,969	3,173	3,439	168.1	201.4	205.4	219.5	237.9
Tampa-St. Petersburg-Clearwater, FL	1,676	1,815	1,955	1,786	1,852	109.2	116.0	122.7	110.4	114.5
Virginia Beach-Norfolk-Newport News, VA-NC	1,701	2,118	2,340	2,082	2,409	194.4	241.5	267.0	237.0	274.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	1,064	1,489	3,031	2,931	3,170†	34.1	47.5	95.4	91.8	99.3†
SELECTED MSAs TOTAL	95,471	109,713	127,953	127,411	132,946	105.9	120.9	139.5	138.3	144.4

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: Cases reported with unknown sex are not included in this table.

Table 19. Gonorrhea Among Males – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	3,885†	6,960	7,622	6,658†	6,943†	140.5†	248.6	267.9	231.6†	241.5†
Austin-Round Rock, TX	2,144	2,499	2,882	2,994	2,403	214.2	242.9	271.7	275.4	221.0
Baltimore-Columbia-Towson, MD	2,202	3,359	3,833	3,457	4,131	163.2	249.0	283.1	255.8	305.7
Birmingham-Hoover, AL	1,075	1,068 ‡	1,827	1,841	2,009	195.2	193.4 ‡	330.4	332.9	363.3
Boston-Cambridge-Newton, MA-NH	1,881†	2,274†	3,120†	4,075	3,882	81.1†	97.6†	132.7†	171.9	163.8
Buffalo-Cheektowaga-Niagara Falls, NY	1,023	1,195	1,291	1,415	1,354	185.8	217.5	234.3	258.5	247.3
Charlotte-Concord-Gastonia, NC-SC	2,251	2,451	2,856	3,127	3,361	191.0	204.4	233.2	251.0	269.8
Chicago-Naperville-Elgin, IL-IN-WI	7,780	10,133	11,514	12,632	13,911	166.5	217.6	246.6	271.5	299.0
Cincinnati, OH-KY-IN	1,693	1,913	2,233	2,409†	2,107	160.2	180.3	209.0	224.2†	196.1
Cleveland-Elyria, OH	1,683	2,071	2,800	2,681	3,218	169.3	208.7	281.6	269.8	323.9
Columbus, OH	2,038	2,716	3,032	3,346	3,488	204.9	270.3	296.4	322.6	336.2
Dallas-Fort Worth-Arlington, TX	6,357	6,498	7,331	7,885	8,400	182.0	182.8	201.3	212.5	226.3
Denver-Aurora-Lakewood, CO	1,742	2,445	3,325	3,350	3,923	124.1	171.8	230.3	228.4	267.4
Detroit-Warren-Dearborn, MI	2,894	3,622	4,648	4,947	5,440	138.5	173.3	221.4	234.8	258.2
Hartford-West Hartford-East Hartford, CT	416†	551†	1,033	1,203†	909	70.4†	93.5†	174.8	204.3†	154.3
Houston-The Woodlands-Sugar Land, TX	5,167	5,930	6,343	6,370	6,308	156.2	176.3	185.3	183.5	181.7
Indianapolis-Carmel-Anderson, IN	1,920	2,542	2,892	2,551	2,775	197.5	259.5	291.6	254.6	276.9
Jacksonville, FL	1,501	1,764	2,076	2,270	2,704	212.5	245.0	283.0	303.4	361.4

Kansas City, MO-KS	1,534	2,134	2,826	3,178	3,070	149.7	206.6	270.3	302.0	291.7
Las Vegas-Henderson-Paradise, NV	1,837	2,306	2,905	3,330	3,439	173.9	214.4	264.2	299.2	309.0
Los Angeles-Long Beach-Anaheim, CA	14,066	18,060	20,803	21,963	21,276	213.9	275.3	315.9	335.1	324.6
Louisville-Jefferson County, KY-IN	1,170	1,670	1,910	1,444†	1,631	187.3	266.2	301.9	227.9†	257.4
Memphis, TN-MS-AR	1,674	1,926	2,347	2,905	2,716	260.0	299.6	363.7	449.8	420.5
Miami-Fort Lauderdale-West Palm Beach, FL	4,651	5,374	6,146	6,801	8,028	159.6	182.6	205.4	225.8	266.5
Milwaukee-Waukesha-West Allis, WI	1,864	2,241	2,560	2,551	2,840	242.9	292.4	333.1	331.9	369.5
Minneapolis-St. Paul-Bloomington, MN-WI	2,058	2,439	2,993	3,414	3,531	118.0	138.6	167.7	189.7	196.2
Nashville-Davidson-Murfreesboro-Franklin, TN	1,312	1,566	1,670	1,866	2,338	147.0	172.3	179.6	197.7	247.7
New Orleans-Metairie, LA	1,506	1,887	2,126	2,170	2,197	246.7	307.5	345.2	354.4	358.8
New York-Newark-Jersey City, NY-NJ-PA	16,290	18,976	23,737	26,170	28,413	166.8	194.6	241.4	270.6	293.7
Oklahoma City, OK	1,136	1,394	1,647	1,839	2,083	169.7	205.9	241.2	267.0	302.4
Orlando-Kissimmee-Sanford, FL	1,818	2,067	2,720	2,674	3,089	155.9	173.2	221.7	212.7	245.7
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5,439	6,736	7,540	7,695	7,519	185.4	229.4	255.8	260.9	255.0
Phoenix-Mesa-Scottsdale, AZ	3,780	4,824	5,602	5,669	6,884	166.4	208.3	237.8	234.8	285.1
Pittsburgh, PA	1,182	1,448	1,422	1,592	1,528	103.3	127.0	125.2	140.6	134.9
Portland-Vancouver-Hillsboro, OR-WA	1,621	2,172	2,236	2,754	2,907	137.3	181.1	184.2	224.5	236.9
Providence-Warwick, RI-MA	572†	740†	1,001†	1,266	1,256	73.2†	94.4†	127.2†	160.8	159.5
Raleigh, NC	1,161	1,130	1,390	1,428	1,607	186.9	178.1	213.4	215.0	241.9
Richmond, VA	1,058	1,712	1,743	1,648	2,098	172.3	276.7	278.8	261.2	332.6
Riverside-San Bernardino-Ontario, CA	2,692	3,437	4,207	4,708	4,523	120.5	152.6	184.5	204.5	196.5

Sacramento-Roseville-Arden-Arcade, CA	1,771	1,934	2,433	2,490	2,815	159.1	172.3	213.9	217.1	245.4
Salt Lake City, UT	753	982	1,144	1,355	1,158†	128.1	164.8	189.3	220.7	188.6†
San Antonio-New Braunfels, TX	2,375	2,798	2,663	2,494	2,006	201.9	233.2	217.7	200.3	161.1
San Diego-Carlsbad, CA	2,668	3,498	4,365	4,079	4,212	160.8	209.7	260.0	242.4	250.3
San Francisco-Oakland-Hayward, CA	7,201	8,441	9,482	9,840	9,701	313.3	365.3	405.7	420.5	414.5
San Jose-Sunnyvale-Santa Clara, CA	1,212	1,361	1,756	1,565	1,825	121.8	136.3	173.9	154.7	180.4
Seattle-Tacoma-Bellevue, WA	3,104	3,593	4,654	5,049	5,208	166.3	189.2	240.5	255.9	263.9
St. Louis, MO-IL	2,802	3,646	3,726	4,085	4,398	205.6	267.8	273.6	300.3	323.4
Tampa-St. Petersburg-Clearwater, FL	2,240	2,592	2,704	2,566	3,134	155.6	176.6	180.5	168.2	205.5
Virginia Beach-Norfolk-Newport News, VA-NC	1,595	2,195	2,423	2,408	2,819	187.7	258.3	285.5	283.3	331.6
Washington-Arlington-Alexandria, DC-VA-MD-WV	1,943	2,838	6,613	6,338	6,791†	65.2	94.8	217.6	207.4	222.2†
SELECTED MSAs TOTAL	143,737	178,108	212,152	222,545	234,306	166.1	204.4	240.7	251.3	264.6

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: Cases reported with unknown sex are not included in this table.

Table 20. Gonorrhea — Reported Cases and Rates of Reported Cases in Counties and Independent Cities* Ranked by Number of Reported Cases, United States, 2019

Rank*	County/Independent City	Cases	Rate per 100,000 Population	Cumulative Percentage
1	Los Angeles County, CA	26,195	259.2	4
2	Cook County, IL	18,181	351.0	7
3	Maricopa County, AZ	10,670	241.9	9
4	New York County, NY	9,220	566.1	10
5	Kings County, NY	8,962	347.0	12
6	Harris County, TX	8,317	177.0	13
7	Dallas County, TX	8,253	312.9	15
8	Wayne County, MI	7,170	408.8	16
9	Philadelphia County, PA	7,043	444.6	17
10	San Diego County, CA	6,366	190.4	18
11	Bronx County, NY	5,913	412.9	19
12	San Francisco County, CA	5,593	633.2	20
13	Clark County, NV	5,448	244.1	21
14	Cuyahoga County, OH	5,346	429.8	22
15	Milwaukee County, WI	5,083	536.1	22
16	Miami-Dade County, FL	4,971	180.0	23
17	Franklin County, OH	4,957	378.3	24
18	King County, WA	4,640	207.8	25
19	Broward County, FL	4,436	227.3	25
20	Washington, D.C.	4,382	623.8	26
21	Queens County, NY	4,299	188.6	27
22	Sacramento County, CA	4,270	277.1	28
23	Shelby County, TN	4,187	447.4	28
24	Orange County, CA	4,070	127.7	29
25	Marion County, IN	4,040	423.2	30
26	San Bernardino County, CA	4,006	184.5	30

27	Baltimore (City), MD	3,982	660.9	31
28	Duval County, FL	3,972	418.0	31
29	Riverside County, CA	3,952	161.3	32
30	Alameda County, CA	3,669	220.1	33
31	Hennepin County, MN	3,578	284.1	33
32	Mecklenburg County, NC	3,349	306.2	34
33	Tarrant County, TX	3,271	156.9	34
34	Jackson County, MO	3,265	466.2	35
35	Fulton County, GA	3,263	310.7	35
36	Orange County, FL	3,248	235.3	36
37	Denver County, CO	3,234	451.4	36
38	Jefferson County, AL	3,108	471.4	37
39	Bexar County, TX	3,035	152.8	37
40	Oklahoma County, OK	3,033	382.7	38
41	St. Louis County, MO	2,997	300.6	38
42	Hillsborough County, FL	2,808	195.4	39
43	Hamilton County, OH	2,762	338.2	39
44	Travis County, TX	2,739	219.3	40
45	Multnomah County, OR	2,631	324.1	40
46	Santa Clara County, CA	2,504	129.2	41
47	Jefferson County, KY	2,442	316.9	41
48	St. Louis (city), MO	2,441	806.0	41
49	Suffolk County, MA	2,417	299.4	42
50	Fresno County, CA	2,397	241.0	42
51	Tulsa County, OK	2,348	362.1	43
52	Davidson County, TN	2,333	336.9	43
53	Monroe County, NY	2,302	310.0	43
54	Guilford County, NC	2,297	430.4	44
55	Dekalb County, GA	2,266	299.5	44

56	Pima County, AZ	2,211	212.8	44
57	Contra Costa County, CA	2,207	191.9	45
58	Prince George's County, MD	2,196	241.5	45
59	Wake County, NC	2,172	198.8	45
60	Pierce County, WA	2,135	239.5	46
61	Kern County, CA	2,102	234.4	46
62	Bernalillo County, NM	2,101	309.6	47
63	Orleans Parish, LA	2,092	535.0	47
64	Essex County, NJ	2,041	255.2	47
65	Montgomery County, OH	2,007	377.0	48
66	Erie County, NY	1,950	212.0	48
67	Allegheny County, PA	1,914	157.1	48
68	Richland County, SC	1,907	460.0	48
69	Lucas County, OH	1,800	418.7	49
70	Hinds County, MS	1,774	748.3	49

* The top 70 counties and independent cities ranked in descending order by number of cases reported in 2019 then by rate are displayed.

NOTE: Relative rankings of counties may be impacted by completeness of the variable used to identify county. In 2019, the variable used to identify county was complete for $\leq 95\%$ of cases in Georgia, South Dakota, Utah, and West Virginia. See Technical Notes for more information.

Table 21. Gonorrhea — Reported Cases and Rates of Reported Cases by Age Group and Sex, United States, 2015-2019

Year	Age Group	Cases				Rates per 100,000 Population*		
		Total	Male	Female	Unknown Sex	Total	Male	Female
2015	0-4	148	47	98	3	0.7	0.5	1.0
	5-9	78	11	66	1	0.4	0.1	0.7
	10-14	2,312	385	1,923	4	11.2	3.7	19.0
	15-19	72,001	26,401	45,477	123	341.1	244.5	441.1
	20-24	124,592	63,289	61,105	198	547.9	542.4	551.9
	25-29	82,867	50,089	32,662	116	368.9	439.0	295.5
	30-34	45,681	29,751	15,867	63	210.7	273.2	147.1
	35-39	26,137	18,198	7,897	42	128.3	178.9	77.4
	40-44	15,042	11,116	3,898	28	74.4	110.8	38.3
	45-54	18,779	15,379	3,375	25	43.5	72.2	15.4
	55-64	6,035	5,175	849	11	14.8	26.2	4.0
	65+	1,191	1,032	158	1	2.5	4.9	0.6
	Unknown Age	353	197	139	17			
	TOTAL	395,216	221,070	173,514	632	123.0	139.7	106.3
2016	0-4	187	72	113	2	0.9	0.7	1.2
	5-9	98	16	81	1	0.5	0.2	0.8
	10-14	2,436	498	1,929	9	11.8	4.7	19.1
	15-19	80,172	30,316	49,710	146	379.4	280.7	481.3

	20-24	138,130	71,967	65,930	233	617.2	626.3	605.4
	25-29	101,283	62,189	38,881	213	442.5	534.7	345.3
	30-34	57,646	38,193	19,306	147	264.6	348.2	178.5
	35-39	34,058	23,744	10,230	84	163.9	228.8	98.4
	40-44	19,104	14,116	4,935	53	97.0	144.4	49.7
	45-54	24,142	19,762	4,330	50	56.4	93.6	20.0
	55-64	8,138	6,947	1,178	13	19.6	34.7	5.5
	65+	1,599	1,403	191	5	3.2	6.4	0.7
	Unknown Age	1,521	810	685	26			
	TOTAL	468,514	270,033	197,499	982	145.0	169.7	120.4
2017	0-4	203	56	144	3	1.0	0.5	1.5
	5-9	110	19	90	1	0.5	0.2	0.9
	10-14	2,725	507	2,212	6	13.1	4.8	21.7
	15-19	92,608	34,918	57,573	117	438.2	323.3	557.3
	20-24	155,862	81,036	74,578	248	704.7	714.0	692.5
	25-29	121,880	75,123	46,577	180	521.5	631.2	406.1
	30-34	71,603	47,342	24,157	104	325.9	426.9	222.0
	35-39	43,792	30,277	13,448	67	206.3	285.2	126.7
	40-44	24,108	17,753	6,331	24	122.7	182.0	64.0
	45-54	29,428	23,803	5,580	45	69.4	113.9	26.0
	55-64	10,867	9,311	1,538	18	25.9	46.0	7.1

	65+	2,063	1,818	233	12	4.1	8.1	0.8
	Unknown Age	359	206	126	27			
	TOTAL	555,608	322,169	232,587	852	170.6	200.8	140.7
2018	0-4	224	77	142	5	1.1	0.8	1.5
	5-9	111	13	98	0	0.5	0.1	1.0
	10-14	2,683	509	2,168	6	12.8	4.8	21.2
	15-19	91,373	34,614	56,628	131	433.1	321.2	548.6
	20-24	157,708	81,813	75,663	232	721.0	730.4	709.0
	25-29	129,385	80,216	48,991	178	549.1	667.4	424.4
	30-34	80,507	53,362	27,026	119	363.7	476.8	246.9
	35-39	48,399	33,556	14,769	74	224.4	311.0	137.1
	40-44	26,953	19,552	7,353	48	136.7	199.6	74.1
	45-54	31,270	25,092	6,132	46	75.1	122.2	29.1
	55-64	12,091	10,399	1,675	17	28.6	51.0	7.7
	65+	2,332	2,036	283	13	4.4	8.7	1.0
	Unknown Age	369	162	146	61			
	TOTAL	583,405	341,401	241,074	930	178.3	211.9	145.2
2019	0-4	218	72	137	9	1.1	0.7	1.4
	5-9	106	20	84	2	0.5	0.2	0.9
	10-14	2,646	522	2,113	11	12.7	4.9	20.7
	15-19	93,379	35,402	57,758	219	442.6	328.6	559.5

	20-24	162,298	83,278	78,700	320	742.0	743.5	737.4
	25-29	135,711	84,207	51,260	244	576.0	700.6	444.1
	30-34	87,990	58,749	29,045	196	397.5	524.9	265.4
	35-39	53,587	36,866	16,614	107	248.5	341.7	154.2
	40-44	30,362	21,871	8,417	74	154.0	223.2	84.9
	45-54	33,316	26,356	6,884	76	80.0	128.3	32.6
	55-64	13,630	11,683	1,916	31	32.2	57.3	8.8
	65+	2,703	2,350	336	17	5.2	10.1	1.2
	Unknown Age	446	210	95	141			
	TOTAL	616,392	361,586	253,359	1,447	188.4	224.4	152.6

* No population data are available for unknown sex and age; therefore, rates are not calculated.

NOTE: Cases in the 0–4 age group may include cases due to perinatal transmission.

Table 22A. Gonorrhea — Reported Cases by Race/Hispanic Ethnicity, Age Group, and Sex, United States, 2019

Age Group	American Indians/ Alaska Natives			Asians			Blacks			Native Hawaiians/ Other Pacific Islanders		
	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female
0-4	3	1	2	0	0	0	61	25	36	1	0	1
5-9	3	1	2	0	0	0	35	6	29	0	0	0
10-14	31	5	26	16	2	14	1,286	284	998	4	0	4
15-19	1,000	276	723	493	187	301	44,084	18,159	25,892	141	37	104
20-24	1,871	670	1,200	1,558	970	581	71,115	37,793	33,253	308	146	161
25-29	2,044	761	1,280	1,798	1,401	391	53,785	34,263	19,482	278	152	122
30-34	1,587	659	928	1,318	1,092	223	29,321	20,778	8,505	166	96	69
35-39	1,019	434	585	831	688	143	15,642	11,700	3,929	118	78	40
40-44	508	218	290	444	368	75	8,601	6,743	1,840	64	45	19
45-54	413	210	203	492	417	72	8,955	7,583	1,358	55	40	15
55-64	99	64	35	166	134	32	3,964	3,560	400	26	19	7
65+	20	17	3	27	23	4	729	668	61	3	2	1
Unknown Age	2	1	1	8	6	2	72	44	22	2	2	0
TOTAL	8,600	3,317	5,278	7,151	5,288	1,838	237,650	141,606	95,805	1,166	617	543

Age Group	Whites			Multirace			Hispanics			Other/Unknown		
	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female
0-4	50	18	30	1	0	1	27	4	23	75	24	44
5-9	20	2	18	0	0	0	9	2	7	39	9	28
10-14	334	39	295	34	4	30	233	40	193	708	148	553
15-19	14,986	3,856	11,114	1,192	312	879	8,945	3,334	5,597	22,538	9,241	13,148
20-24	31,336	13,503	17,793	2,194	995	1,197	18,311	10,080	8,203	35,605	19,121	16,312
25-29	31,428	17,595	13,790	1,952	1,206	743	16,533	11,120	5,384	27,893	17,709	10,068
30-34	24,618	14,751	9,831	1,333	1,017	314	11,415	8,245	3,144	18,232	12,111	6,031
35-39	16,507	10,223	6,265	835	667	165	6,687	4,950	1,721	11,948	8,126	3,766
40-44	9,543	6,373	3,156	429	350	79	3,851	2,918	920	6,922	4,856	2,038
45-54	11,238	8,656	2,564	464	414	50	3,651	2,962	677	8,048	6,074	1,945
55-64	4,828	4,182	640	156	147	9	995	829	162	3,396	2,748	631
65+	973	861	111	24	21	3	149	123	26	778	635	127
Unknown Age	70	43	24	1	1	0	44	31	12	247	82	34
TOTAL	145,931	80,102	65,631	8,615	5,134	3,470	70,850	44,638	26,069	136,429	80,884	54,725

* Total includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 21 for age-specific cases and rates and Tables 14–16 for total and sex-specific cases and rates. Cases in the 0–4 age group may include cases due to perinatal transmission.

Table 22B. Gonorrhea — Rates of Reported Cases* by Race/Hispanic Ethnicity, Age Group, and Sex, United States, 2019

Age Group	American Indians/ Alaska Natives			Asians			Blacks			Native Hawaiians/ Other Pacific Islanders		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	1.8	1.2	2.5	0.0	0.0	0.0	2.2	1.8	2.7	2.5	0.0	5.0
5-9	1.8	1.2	2.4	0.0	0.0	0.0	1.3	0.4	2.1	0.0	0.0	0.0
10-14	17.5	5.6	29.7	1.5	0.4	2.7	45.2	19.7	71.0	9.5	0.0	19.4
15-19	559.9	303.4	825.1	44.9	34.0	55.0	1,506.1	1,223.6	1,794.3	344.2	176.0	521.3
20-24	1,016.0	716.3	1,324.2	120.5	148.5	90.8	2,273.8	2,384.1	2,156.0	702.6	648.7	754.8
25-29	1,021.3	744.6	1,307.1	112.0	176.5	48.2	1,546.8	1,961.6	1,125.9	541.8	573.8	491.5
30-34	930.8	767.9	1,096.0	80.7	138.5	26.4	1,005.7	1,459.7	570.0	327.6	368.8	280.0
35-39	650.1	556.9	742.3	53.2	93.8	17.3	565.3	885.9	271.6	247.8	318.8	172.8
40-44	360.9	314.0	406.5	30.9	55.0	9.8	345.4	575.2	139.6	162.4	223.8	98.4
45-54	140.6	147.1	134.4	19.1	34.8	5.2	172.8	312.4	49.3	76.7	112.3	41.6
55-64	33.6	46.2	22.4	8.0	14.2	2.8	81.0	159.0	15.1	42.5	64.0	22.3
65+	7.0	13.2	1.9	1.1	2.3	0.3	15.3	34.7	2.1	5.3	7.5	3.3
Unknown Age												
TOTAL	355.8	278.8	429.9	38.2	59.3	18.7	581.0	724.0	448.9	198.9	209.2	186.4

Age Group	Whites			Multirace			Hispanics		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
0-4	0.5	0.4	0.6	0.1	0.0	0.2	0.5	0.2	0.9
5-9	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.1	0.3
10-14	3.1	0.7	5.7	4.0	0.9	7.1	4.4	1.5	7.5
15-19	134.5	67.4	204.9	162.1	83.7	242.3	179.8	131.4	229.6
20-24	267.1	224.1	311.9	334.6	300.1	369.2	378.4	404.8	349.2
25-29	245.6	269.4	220.2	350.7	439.3	263.4	339.0	437.0	230.8
30-34	198.7	235.2	160.6	316.5	507.4	142.3	250.8	344.1	145.8
35-39	135.5	166.6	103.6	227.8	385.6	85.2	149.3	213.1	79.8
40-44	85.2	113.1	56.7	144.5	251.1	50.2	93.7	139.3	45.7
45-54	43.3	66.8	19.7	91.3	172.9	18.6	52.0	83.7	19.4
55-64	16.3	28.9	4.2	36.3	72.3	4.0	20.3	34.8	6.5
65+	2.4	4.8	0.5	5.9	11.6	1.3	3.4	6.4	1.0
Unknown Age									
TOTAL	73.9	82.2	65.5	121.1	146.2	96.3	118.3	147.6	88.0

* Per 100,000.

† **Total** includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 21 for age-specific cases and rates and Tables 14–16 for total and sex-specific cases and rates. Cases in the 0–4 age group may include cases due to perinatal transmission. No population data exist for unknown sex, unknown age, or unknown race; therefore rates are not calculated.

Table 23A. Gonorrhea — Reported Cases and Rates of Reported Cases Among Females Aged 15-24 Years by Age, United States, 2015-2019

Ages	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
15	3,477	3,678	3,976	3,750	3,821	167.4	179.0	197.2	184.8	188.3
16	6,090	6,573	7,600	6,921	6,938	297.8	315.4	367.7	341.9	342.8
17	9,117	9,855	11,479	11,047	10,961	444.9	479.7	547.0	532.0	527.9
18	12,769	14,304	16,429	16,679	17,134	619.3	694.1	793.0	790.5	812.1
19	14,024	15,300	18,089	18,231	18,904	674.8	737.8	870.4	875.5	907.8
20	13,835	14,657	16,950	17,477	18,407	651.7	701.7	811.3	837.3	881.9
21	13,331	14,149	15,968	16,556	17,693	615.2	663.1	758.8	788.8	843.0
22	12,597	13,540	14,933	14,912	15,344	573.2	621.4	694.4	705.0	725.4
23	11,271	12,245	14,046	13,670	13,989	497.7	553.9	639.5	632.2	646.9
24	10,071	11,339	12,681	13,048	13,267	434.2	497.8	569.0	590.8	600.8
Total	106,582	115,640	132,151	132,291	136,458	498.5	545.0	626.3	630.1	650.0

NOTE: Cases reported with unknown sex are not included in this table.

Table 23B. Gonorrhea — Reported Cases and Rates of Reported Cases Among Males Aged 15-24 Years by Age, United States, 2015-2019

Ages	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
15	1,222	1,294	1,335	1,333	1,376	56.2	60.4	63.6	63.1	65.2
16	2,645	3,078	3,374	3,189	3,282	123.6	141.1	156.5	151.4	155.8
17	4,825	5,504	6,301	6,185	6,051	224.9	256.0	286.7	285.6	279.4
18	7,778	8,945	10,482	10,356	10,778	360.8	414.4	483.2	468.6	487.7
19	9,931	11,495	13,426	13,551	13,915	454.6	529.8	616.3	621.2	637.9
20	11,394	12,949	15,085	15,280	15,610	508.6	589.3	689.6	698.8	713.9
21	12,668	14,178	15,985	16,089	16,483	553.2	629.3	722.0	733.4	751.4
22	13,171	14,754	16,484	16,421	16,973	564.9	640.9	726.1	739.8	764.7
23	13,085	15,060	16,663	16,968	17,042	548.0	643.0	718.6	745.4	748.7
24	12,971	15,026	16,819	17,055	17,170	536.4	627.0	713.0	733.4	738.4
Total	89,690	102,283	115,954	116,427	118,680	399.2	458.8	523.5	529.8	540.0

NOTE: Cases reported with unknown sex are not included in this table.

Table 24. All Stages of Syphilis* — Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	657	905	1,202	1,285	1,634	13.5	18.6	24.7	26.3	33.4
Alaska	24	24	28	113	242	3.3	3.2	3.8	15.3	32.8
Arizona	1,496	1,906	2,424	3,249	4,022	21.9	27.5	34.5	45.3	56.1
Arkansas	500	567	726	964	1,106	16.8	19.0	24.2	32.0	36.7
California	14,449	17,603	21,804	25,253	28,812	36.9	44.8	55.1	63.8	72.8
Colorado	553	739	817	1,085	1,434	10.1	13.3	14.6	19.0	25.2
Connecticut	220	217	283	264	482	6.1	6.1	7.9	7.4	13.5
Delaware	110	149	194	129	216	11.6	15.7	20.2	13.3	22.3
District of Columbia	322	568	845	764	1,085	47.9	83.4	121.8	108.8	154.5
Florida	7,134	8,334	8,957	10,701	12,121	35.2	40.4	42.7	50.2	56.9
Georgia	4,156	4,112	4,310	4,928	5,679	40.7	39.9	41.3	46.8	54.0
Hawaii	163	215	165	210	252	11.4	15.1	11.6	14.8	17.7
Idaho	102	127	151	134	149	6.2	7.5	8.8	7.6	8.5
Illinois	3,290	4,039	3,838	4,472	4,511	25.6	31.6	30.0	35.1	35.4
Indiana	699	778	788	985	993	10.6	11.7	11.8	14.7	14.8
Iowa	232	276	290	286	359	7.4	8.8	9.2	9.1	11.4
Kansas	240	304	339	495	565	8.2	10.5	11.6	17.0	19.4
Kentucky	433	572	722	881	1,096	9.8	12.9	16.2	19.7	24.5

Louisiana	2,466	2,598	2,854	2,744	2,744	52.8	55.5	60.9	58.9	58.9
Maine	38	64	132	147	136	2.9	4.8	9.9	11.0	10.2
Maryland	1,870	1,842	2,059	2,536	2,778	31.1	30.6	34.0	42.0	46.0
Massachusetts	1,263	1,446	1,474	1,305	1,844	18.6	21.2	21.5	18.9	26.7
Michigan	1,089	1,092	1,267	1,692	1,905	11.0	11.0	12.7	16.9	19.1
Minnesota	653	853	934	918	1,127	11.9	15.5	16.7	16.4	20.1
Mississippi	760	925	937	1,454	2,006	25.4	30.9	31.4	48.7	67.2
Missouri	778	955	1,337	1,914	2,188	12.8	15.7	21.9	31.2	35.7
Montana	20	24	85	104	140	1.9	2.3	8.1	9.8	13.2
Nebraska	81	121	118	219	291	4.3	6.3	6.1	11.4	15.1
Nevada	915	1,313	1,684	2,000	2,356	31.7	44.7	56.2	65.9	77.6
New Hampshire	84	100	109	137	135	6.3	7.5	8.1	10.1	10.0
New Jersey	1,306	1,620	1,867	1,777	2,085	14.6	18.1	20.7	19.9	23.4
New Mexico	332	470	510	812	1,294	15.9	22.6	24.4	38.8	61.8
New York	7,795	9,456	9,877	10,183	10,500	39.4	47.9	49.8	52.1	53.7
North Carolina	2,741	2,655	2,949	2,989	3,369	27.3	26.2	28.7	28.8	32.4
North Dakota	42	61	78	84	97	5.5	8.0	10.3	11.1	12.8
Ohio	1,348	1,600	1,900	1,909	2,005	11.6	13.8	16.3	16.3	17.2
Oklahoma	521	696	953	1,137	1,750	13.3	17.7	24.2	28.8	44.4
Oregon	783	810	848	1,042	1,245	19.4	19.8	20.5	24.9	29.7
Pennsylvania	1,788	2,037	2,235	2,414	2,764	14.0	15.9	17.5	18.8	21.6

Rhode Island	163	234	221	284	423	15.4	22.2	20.9	26.9	40.0
South Carolina	834	974	1,096	1,152	1,306	17.0	19.6	21.8	22.7	25.7
South Dakota	71	57	75	74	86	8.3	6.6	8.6	8.4	9.7
Tennessee	1,241	1,448	1,453	1,726	2,226	18.8	21.8	21.6	25.5	32.9
Texas	8,250	9,564	12,127	12,973	12,657	30.0	34.3	42.8	45.2	44.1
Utah	169	259	299	423	431	5.6	8.5	9.6	13.4	13.6
Vermont	15	37	26	29	24	2.4	5.9	4.2	4.6	3.8
Virginia	1,023	1,304	1,758	2,039	2,071	12.2	15.5	20.8	23.9	24.3
Washington	1,109	1,414	1,751	1,911	2,184	15.5	19.4	23.6	25.4	29.0
West Virginia	109	151	124	185	277	5.9	8.2	6.8	10.2	15.3
Wisconsin	262	423	551	509	569	4.5	7.3	9.5	8.8	9.8
Wyoming	10	17	19	42	42	1.7	2.9	3.3	7.3	7.3
US TOTAL	74,709	88,055	101,590	115,062	129,813	23.2	27.3	31.2	35.2	39.7
Northeast	12,672	15,211	16,224	16,540	18,393	22.5	27.1	28.7	29.5	32.8
Midwest	8,785	10,559	11,515	13,557	14,696	12.9	15.5	16.9	19.8	21.5
South	33,127	37,364	43,266	48,587	54,121	27.3	30.5	35.0	38.9	43.4
West	20,125	24,921	30,585	36,378	42,603	26.5	32.5	39.5	46.6	54.6
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	22	13	21	30	31	13.6	7.8	12.5	17.9	18.5
Northern Mariana Islands	NR	NR	NR	2	2	—	—	—	3.8	3.8
Puerto Rico	1,267	1,185	1,055	1,089	949	36.5	34.7	31.5	33.1	28.8

Virgin Islands	25	2	0	NR	45	24.3	1.9	0.0	—	42.1
TERRITORIES	1,314	1,200	1,076	1,121	1,027	35.1	32.6	29.7	31.4	28.0
TOTAL	76,023	89,255	102,666	116,183	130,840	23.4	27.3	31.2	35.1	39.5

* See Technical Notes for definition and more information on interpreting case counts and rates in US territories.

NR = No report.

Table 25. All Stages of Syphilis* — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)† in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	3,106	3,219	3,281	3,559	4,203	54.4	55.6	55.8	59.8	70.6
Austin-Round Rock, TX	623	825	1,012	985	1,037	31.1	40.1	47.8	45.4	47.8
Baltimore-Columbia-Towson, MD	1,015	1,031	1,084	1,392	1,468	36.3	36.8	38.6	49.7	52.4
Birmingham-Hoover, AL	197	248 §	314	344	472	17.2	21.6 §	27.3	29.9	41.0
Boston-Cambridge-Newton, MA-NH	827‡	1,000‡	1,068	973	1,319	17.3‡	20.9‡	22.1	20.0	27.1
Buffalo-Cheektowaga-Niagara Falls, NY	182	146	176	162	181	16.0	12.9	15.5	14.3	16.0
Charlotte-Concord-Gastonia, NC-SC	732	851	876	843	944	30.2	34.4	34.7	32.8	36.7
Chicago-Naperville-Elgin, IL-IN-WI	3,060	3,805	3,536	4,097	4,026	32.0	40.0	37.1	43.1	42.4
Cincinnati, OH-KY-IN	319	269	326	430	407	14.8	12.4	15.0	19.6	18.6
Cleveland-Elyria, OH	229	378	430	359	422	11.1	18.4	20.9	17.5	20.5
Columbus, OH	518	578	700	564	617	25.6	28.3	33.7	26.8	29.3
Dallas-Fort Worth-Arlington, TX	2,261	2,661	3,849	3,939	3,684	31.8	36.8	52.0	52.2	48.9
Denver-Aurora-Lakewood, CO	426	552	618	794	995	15.1	19.3	21.4	27.1	33.9
Detroit-Warren-Dearborn, MI	790	751	803	1,156	1,287	18.4	17.5	18.6	26.7	29.7
Hartford-West Hartford-East Hartford, CT	84	55	66	77	160	6.9	4.6	5.5	6.4	13.3
Houston-The Woodlands-Sugar Land, TX	2,568	2,817	3,244	3,644	3,300	38.6	41.6	47.1	52.1	47.2
Indianapolis-Carmel-Anderson, IN	408	415	457	521	513	20.5	20.7	22.5	25.4	25.0
Jacksonville, FL	436	445	647	686	764	30.1	30.1	43.0	44.7	49.8

Kansas City, MO-KS	365	434	470	795	956	17.5	20.6	22.1	37.1	44.6
Las Vegas-Henderson-Paradise, NV	826	1,194	1,504	1,700	1,908	39.1	55.4	68.2	76.2	85.5
Los Angeles-Long Beach-Anaheim, CA	5,813	7,098	8,705	9,782	10,805	43.6	53.3	65.2	73.6	81.3
Louisville-Jefferson County, KY-IN	270	381	421	508	553	21.1	29.7	32.5	39.2	42.6
Memphis, TN-MS-AR	575	762	661	787	1,050	42.8	56.7	49.0	58.3	77.7
Miami-Fort Lauderdale-West Palm Beach, FL	3,640	4,102	4,279	5,107	5,750	60.5	67.6	69.5	82.4	92.8
Milwaukee-Waukesha-West Allis, WI	148	228	295	242	299	9.4	14.5	18.7	15.4	19.0
Minneapolis-St. Paul-Bloomington, MN-WI	592	742	791	719	828	16.8	20.9	22.0	19.8	22.8
Nashville-Davidson-Murfreesboro-Franklin, TN	359	383	363	577	688	19.6	20.5	19.1	29.9	35.6
New Orleans-Metairie, LA	765	849	854	914	770	60.6	66.9	66.9	71.9	60.6
New York-Newark-Jersey City, NY-NJ-PA	8,172	10,116	10,577	10,752	11,021	40.5	50.2	52.0	53.8	55.2
Oklahoma City, OK	264	406	534	539	711	19.4	29.6	38.6	38.6	50.9
Orlando-Kissimmee-Sanford, FL	917	1,183	1,196	1,391	1,582	38.4	48.5	47.7	54.1	61.5
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1,393	1,647	1,820	1,775	2,078	22.9	27.1	29.9	29.1	34.1
Phoenix-Mesa-Scottsdale, AZ	1,126	1,502	1,882	2,504	2,846	24.6	32.2	39.7	51.5	58.6
Pittsburgh, PA	273	236	192	244	282	11.6	10.1	8.2	10.5	12.1
Portland-Vancouver-Hillsboro, OR-WA	604	665	654	801	936	25.3	27.4	26.7	32.3	37.8
Providence-Warwick, RI-MA	233‡	288‡	295	341	545	14.4‡	17.8‡	18.2	21.0	33.6
Raleigh, NC	410	384	438	450	550	32.2	29.5	32.8	33.0	40.4
Richmond, VA	207	305	394	480	498	16.3	23.8	30.4	36.7	38.1
Riverside-San Bernardino-Ontario, CA	1,165	1,554	1,960	2,587	3,521	26.0	34.3	42.8	56.0	76.2

Sacramento-Roseville-Arden-Arcade, CA	609	611	807	1,091	1,295	26.8	26.6	34.7	46.5	55.2
Salt Lake City, UT	122	188	203	270	240‡	10.4	15.8	16.9	22.1	19.6‡
San Antonio-New Braunfels, TX	988	1,126	1,445	1,486	1,444	41.4	46.3	58.4	59.0	57.3
San Diego-Carlsbad, CA	1,209	1,419	1,722	1,801	1,962	36.6	42.8	51.6	53.9	58.7
San Francisco-Oakland-Hayward, CA	2,355	2,427	2,947	3,104	3,527	50.6	51.9	62.3	65.6	74.6
San Jose-Sunnyvale-Santa Clara, CA	360	504	661	872	1,133	18.2	25.5	33.1	43.6	56.7
Seattle-Tacoma-Bellevue, WA	759	968	1,185	1,237	1,369	20.3	25.5	30.6	31.4	34.8
St. Louis, MO-IL	417	528	782	878	960	14.8	18.8	27.9	31.3	34.2
Tampa-St. Petersburg-Clearwater, FL	958	1,129	1,062	1,258	1,540	32.2	37.2	34.4	40.0	49.0
Virginia Beach-Norfolk-Newport News, VA-NC	375	516	566	658	645	21.7	29.9	32.8	38.1	37.3
Washington-Arlington-Alexandria, DC-VA-MD-WV	1,058‡	1,107	2,295	2,438	2,865	17.4‡	18.1	36.9	39.0	45.8
SELECTED MSAs TOTAL	55,108	65,028	74,447	82,613	90,956	31.2	36.5	41.4	45.7	50.3

* See Technical Notes for definition.

† MSAs were selected on the basis of the largest population in the 2010 US Census.

‡ The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

§ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: County was misclassified in the 2017 District of Columbia STD morbidity data resulting in inaccurate county-level case counts and rates.

Table 26. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2019

Rank*	State	Cases	Rate per 100,000 Population
1	Nevada	808	26.6
2	New Mexico	511	24.4
3	Mississippi	690	23.1
4	California	8,266	20.9
5	Oklahoma	791	20.1
6	Arizona	1,290	18.0
7	Alaska	129	17.5
8	Georgia	1,750	16.6
9	Louisiana	700	15.0
10	Florida	3,189	15.0
11	New York	2,865	14.7
12	Maryland	868	14.4
13	Arkansas	404	13.4
14	Missouri	817	13.3
15	Alabama	618	12.6
	US TOTAL†	38,992	11.9
16	Oregon	454	10.8
17	Washington	816	10.8
18	North Carolina	1,122	10.8
19	Illinois	1,374	10.8
20	South Carolina	516	10.1
21	Tennessee	676	10.0
22	Kentucky	438	9.8
23	Delaware	94	9.7
24	Rhode Island	101	9.6
25	Massachusetts	610	8.8

26	Colorado	486	8.5
27	Hawaii	120	8.4
28	Texas	2,357	8.2
29	Pennsylvania	991	7.7
30	Virginia	659	7.7
31	New Jersey	631	7.1
32	Nebraska	136	7.0
33	Minnesota	385	6.9
34	Michigan	678	6.8
35	Kansas	190	6.5
36	Ohio	749	6.4
37	Montana	67	6.3
38	North Dakota	45	5.9
39	Connecticut	210	5.9
40	South Dakota	48	5.4
41	Indiana	336	5.0
42	West Virginia	79	4.4
43	Utah	138	4.4
44	Iowa	132	4.2
45	Maine	55	4.1
46	New Hampshire	47	3.5
47	Wisconsin	179	3.1
48	Idaho	47	2.7
49	Wyoming	11	1.9
50	Vermont	11	1.8

* States were ranked by rate, then case count, then in alphabetical order, with rates shown rounded to the nearest tenth.

† Total includes cases reported by the District of Columbia with 308 cases and a rate of 43.8, but excludes territories.

Table 27. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	280	376	424	477	618	5.8	7.7	8.7	9.8	12.6
Alaska	8	8	13	55	129	1.1	1.1	1.8	7.5	17.5
Arizona	589	721	943	1,047	1,290	8.6	10.4	13.4	14.6	18.0
Arkansas	134	150	234	288	404	4.5	5.0	7.8	9.6	13.4
California	4,908	5,891	6,708	7,607	8,266	12.5	15.0	17.0	19.2	20.9
Colorado	245	250	292	337	486	4.5	4.5	5.2	5.9	8.5
Connecticut	92	110	110	91	210	2.6	3.1	3.1	2.5	5.9
Delaware	41	58	57	30	94	4.3	6.1	5.9	3.1	9.7
District of Columbia	95	161	274	279	308	14.1	23.6	39.5	39.7	43.8
Florida	2,083	2,406	2,390	2,880	3,189	10.3	11.7	11.4	13.5	15.0
Georgia	1,413	1,350	1,489	1,607	1,750	13.8	13.1	14.3	15.3	16.6
Hawaii	91	112	94	92	120	6.4	7.8	6.6	6.5	8.4
Idaho	57	50	64	46	47	3.4	3.0	3.7	2.6	2.7
Illinois	1,085	1,260	1,225	1,408	1,374	8.4	9.8	9.6	11.1	10.8
Indiana	285	326	319	367	336	4.3	4.9	4.8	5.5	5.0
Iowa	75	89	101	86	132	2.4	2.8	3.2	2.7	4.2
Kansas	87	124	133	152	190	3.0	4.3	4.6	5.2	6.5
Kentucky	145	219	262	366	438	3.3	4.9	5.9	8.2	9.8

Louisiana	696	750	679	669	700	14.9	16.0	14.5	14.4	15.0
Maine	28	42	65	74	55	2.1	3.2	4.9	5.5	4.1
Maryland	509	509	573	737	868	8.5	8.5	9.5	12.2	14.4
Massachusetts	418	489	538	552	610	6.2	7.2	7.8	8.0	8.8
Michigan	403	365	480	649	678	4.1	3.7	4.8	6.5	6.8
Minnesota	246	306	292	292	385	4.5	5.5	5.2	5.2	6.9
Mississippi	219	326	310	464	690	7.3	10.9	10.4	15.5	23.1
Missouri	307	400	507	806	817	5.0	6.6	8.3	13.2	13.3
Montana	13	14	48	45	67	1.3	1.3	4.6	4.2	6.3
Nebraska	45	67	43	119	136	2.4	3.5	2.2	6.2	7.0
Nevada	335	444	587	682	808	11.6	15.1	19.6	22.5	26.6
New Hampshire	40	40	43	64	47	3.0	3.0	3.2	4.7	3.5
New Jersey	372	472	499	570	631	4.2	5.3	5.5	6.4	7.1
New Mexico	118	189	193	304	511	5.7	9.1	9.2	14.5	24.4
New York	2,006	2,455	2,355	2,654	2,865	10.1	12.4	11.9	13.6	14.7
North Carolina	1,196	1,082	1,138	1,098	1,122	11.9	10.7	11.1	10.6	10.8
North Dakota	11	33	44	41	45	1.5	4.4	5.8	5.4	5.9
Ohio	560	716	832	740	749	4.8	6.2	7.1	6.3	6.4
Oklahoma	209	264	373	531	791	5.3	6.7	9.5	13.5	20.1
Oregon	345	327	352	424	454	8.6	8.0	8.5	10.1	10.8
Pennsylvania	655	755	793	797	991	5.1	5.9	6.2	6.2	7.7

Rhode Island	77	90	71	96	101	7.3	8.5	6.7	9.1	9.6
South Carolina	294	316	361	384	516	6.0	6.4	7.2	7.6	10.1
South Dakota	39	26	33	41	48	4.5	3.0	3.8	4.6	5.4
Tennessee	349	390	488	553	676	5.3	5.9	7.3	8.2	10.0
Texas	1,680	1,955	2,233	2,538	2,357	6.1	7.0	7.9	8.8	8.2
Utah	65	92	117	169	138	2.2	3.0	3.8	5.3	4.4
Vermont	9	23	13	11	11	1.4	3.7	2.1	1.8	1.8
Virginia	334	459	536	702	659	4.0	5.5	6.3	8.2	7.7
Washington	445	565	677	802	816	6.2	7.8	9.1	10.6	10.8
West Virginia	52	53	62	65	79	2.8	2.9	3.4	3.6	4.4
Wisconsin	79	132	173	152	179	1.4	2.3	3.0	2.6	3.1
Wyoming	5	7	4	23	11	0.9	1.2	0.7	4.0	1.9
US TOTAL	23,872	27,814	30,644	35,063	38,992	7.4	8.6	9.4	10.7	11.9
Northeast	3,697	4,476	4,487	4,909	5,521	6.6	8.0	7.9	8.7	9.8
Midwest	3,222	3,844	4,182	4,853	5,069	4.7	5.7	6.1	7.1	7.4
South	9,729	10,824	11,883	13,668	15,259	8.0	8.8	9.6	11.0	12.2
West	7,224	8,670	10,092	11,633	13,143	9.5	11.3	13.0	14.9	16.9
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	2	2	13	18	5	1.2	1.2	7.8	10.7	3.0
Northern Mariana Islands	NR	NR	NR	1	1	—	—	—	1.9	1.9
Puerto Rico	531	493	411	365	329	15.3	14.5	12.3	11.1	10.0

Virgin Islands	8	0	0	NR	NR	7.8	0.0	0.0	—	—
TERRITORIES	541	495	424	384	335	14.5	13.4	11.7	10.8	9.4
TOTAL	24,413	28,309	31,068	35,447	39,327	7.5	8.7	9.4	10.7	11.9

NR = No report.

NOTE: See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 28. Primary and Secondary Syphilis Among Females – Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	37	80	70	88	126	1.5	3.2	2.8	3.5	5.0
Alaska	1	0	1	4	50	0.3	0.0	0.3	1.1	14.2
Arizona	47	80	158	177	240	1.4	2.3	4.5	4.9	6.7
Arkansas	26	37	64	68	121	1.7	2.4	4.2	4.4	7.9
California	476	744	902	1,255	1,494	2.4	3.8	4.5	6.3	7.5
Colorado	6	16	18	25	62	0.2	0.6	0.6	0.9	2.2
Connecticut	15	12	13	5	20	0.8	0.7	0.7	0.3	1.1
Delaware	2	3	6	7	17	0.4	0.6	1.2	1.4	3.4
District of Columbia	6	5	7	12	21	1.7	1.4	1.9	3.3	5.7
Florida	210	266	321	356	460	2.0	2.5	3.0	3.3	4.2
Georgia	94	113	139	184	195	1.8	2.1	2.6	3.4	3.6
Hawaii	1	10	6	7	23	0.1	1.4	0.8	1.0	3.2
Idaho	9	6	15	5	9	1.1	0.7	1.8	0.6	1.0
Illinois	84	95	85	120	161	1.3	1.5	1.3	1.9	2.5
Indiana	28	36	27	26	54	0.8	1.1	0.8	0.8	1.6
Iowa	5	6	9	11	35	0.3	0.4	0.6	0.7	2.2
Kansas	17	12	16	24	33	1.2	0.8	1.1	1.6	2.3
Kentucky	23	21	41	70	101	1.0	0.9	1.8	3.1	4.5

Louisiana	189	192	186	166	163	7.9	8.0	7.8	7.0	6.8
Maine	6	3	9	7	6	0.9	0.4	1.3	1.0	0.9
Maryland	58	54	47	81	121	1.9	1.7	1.5	2.6	3.9
Massachusetts	25	24	26	41	59	0.7	0.7	0.7	1.2	1.7
Michigan	34	31	34	69	95	0.7	0.6	0.7	1.4	1.9
Minnesota	39	37	38	44	70	1.4	1.3	1.4	1.6	2.5
Mississippi	32	58	88	152	258	2.1	3.8	5.7	9.9	16.8
Missouri	54	66	93	161	178	1.7	2.1	3.0	5.2	5.7
Montana	1	1	9	10	20	0.2	0.2	1.7	1.9	3.8
Nebraska	3	5	7	14	22	0.3	0.5	0.7	1.4	2.3
Nevada	23	50	75	119	159	1.6	3.4	5.0	7.9	10.5
New Hampshire	3	4	4	3	4	0.4	0.6	0.6	0.4	0.6
New Jersey	26	24	34	58	73	0.6	0.5	0.7	1.3	1.6
New Mexico	11	27	19	46	135	1.0	2.6	1.8	4.3	12.8
New York	59	115	121	171	231	0.6	1.1	1.2	1.7	2.3
North Carolina	112	109	127	160	186	2.2	2.1	2.4	3.0	3.5
North Dakota	0	3	5	10	14	0.0	0.8	1.4	2.7	3.8
Ohio	68	94	112	92	114	1.1	1.6	1.9	1.5	1.9
Oklahoma	21	41	67	144	244	1.1	2.1	3.4	7.2	12.3
Oregon	35	35	52	92	105	1.7	1.7	2.5	4.4	5.0
Pennsylvania	52	62	76	99	133	0.8	1.0	1.2	1.5	2.0

Rhode Island	4	3	7	12	7	0.7	0.6	1.3	2.2	1.3
South Carolina	37	52	56	67	104	1.5	2.0	2.2	2.6	4.0
South Dakota	7	6	4	11	15	1.6	1.4	0.9	2.5	3.4
Tennessee	23	56	47	67	105	0.7	1.6	1.4	1.9	3.0
Texas	230	230	313	424	416	1.7	1.6	2.2	2.9	2.9
Utah	2	6	4	10	12	0.1	0.4	0.3	0.6	0.8
Vermont	0	3	1	2	1	0.0	0.9	0.3	0.6	0.3
Virginia	17	47	60	77	66	0.4	1.1	1.4	1.8	1.5
Washington	30	51	70	100	117	0.8	1.4	1.9	2.7	3.1
West Virginia	9	10	21	19	20	1.0	1.1	2.3	2.1	2.2
Wisconsin	0	7	12	18	17	0.0	0.2	0.4	0.6	0.6
Wyoming	1	1	0	5	1	0.3	0.3	0.0	1.8	0.4
US TOTAL	2,298	3,049	3,722	4,995	6,493	1.4	1.9	2.3	3.0	3.9
Northeast	190	250	291	398	534	0.7	0.9	1.0	1.4	1.9
Midwest	339	398	442	600	808	1.0	1.2	1.3	1.7	2.3
South	1,126	1,374	1,660	2,142	2,724	1.8	2.2	2.6	3.4	4.3
West	643	1,027	1,329	1,855	2,427	1.7	2.7	3.4	4.7	6.2
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	0	0	2	0	0	0.0	0.0	2.5	0.0	0.0
Northern Mariana Islands	NR	NR	NR	0	0	—	—	—	0.0	0.0
Puerto Rico	70	86	66	52	52	3.9	4.8	3.8	3.0	3.0

Virgin Islands	4	0	0	NR	NR	7.3	0.0	0.0	—	—
TERRITORIES	74	86	68	52	52	3.8	4.5	3.6	2.8	2.8
TOTAL	2,372	3,135	3,790	5,047	6,545	1.4	1.9	2.3	3.0	3.9

NR = No report.

NOTE: Cases reported with unknown sex are not included in this table. See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 29. Primary and Secondary Syphilis Among Males – Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	243	296	354	389	492	10.3	12.6	15.0	16.5	20.8
Alaska	7	8	12	51	79	1.8	2.1	3.1	13.3	20.5
Arizona	542	641	785	870	1,050	16.0	18.6	22.5	24.4	29.5
Arkansas	108	113	170	220	283	7.4	7.7	11.5	14.9	19.1
California	4,430	5,143	5,804	6,349	6,735	22.8	26.4	29.5	32.3	34.3
Colorado	239	234	274	312	424	8.7	8.4	9.7	10.9	14.8
Connecticut	77	98	97	84	189	4.4	5.6	5.5	4.8	10.8
Delaware	39	55	51	23	77	8.5	11.9	11.0	4.9	16.5
District of Columbia	83	152	264	264	283	26.1	47.0	80.2	79.2	84.9
Florida	1,873	2,140	2,069	2,524	2,729	18.9	21.3	20.2	24.2	26.2
Georgia	1,319	1,237	1,350	1,421	1,555	26.5	24.6	26.6	27.8	30.4
Hawaii	90	102	88	85	95	12.4	14.2	12.3	12.0	13.4
Idaho	48	44	49	41	38	5.8	5.2	5.7	4.7	4.3
Illinois	1,001	1,165	1,140	1,287	1,213	15.9	18.5	18.1	20.6	19.4
Indiana	257	290	292	341	282	7.9	8.9	8.9	10.3	8.5
Iowa	70	83	92	75	97	4.5	5.3	5.9	4.8	6.2
Kansas	70	112	117	128	157	4.8	7.7	8.1	8.8	10.8
Kentucky	122	198	221	296	337	5.6	9.1	10.1	13.4	15.3

Louisiana	507	558	493	503	537	22.2	24.4	21.5	22.1	23.6
Maine	22	39	54	67	49	3.4	6.0	8.3	10.2	7.5
Maryland	451	455	526	656	747	15.5	15.6	17.9	22.4	25.5
Massachusetts	391	464	512	499	547	11.9	14.0	15.4	14.9	16.3
Michigan	369	334	446	580	583	7.6	6.8	9.1	11.8	11.8
Minnesota	207	267	252	248	311	7.6	9.7	9.1	8.9	11.1
Mississippi	187	268	222	312	432	12.9	18.5	15.4	21.6	29.8
Missouri	253	334	414	645	639	8.5	11.2	13.8	21.4	21.2
Montana	12	13	39	35	47	2.3	2.5	7.4	6.5	8.8
Nebraska	42	62	36	105	114	4.4	6.5	3.8	10.9	11.8
Nevada	312	394	512	563	649	21.5	26.7	34.0	37.0	42.7
New Hampshire	37	36	39	61	43	5.6	5.4	5.9	9.1	6.4
New Jersey	346	448	465	511	557	7.9	10.3	10.6	11.7	12.8
New Mexico	107	162	174	258	376	10.4	15.7	16.8	24.9	36.2
New York	1,933	2,319	2,214	2,483	2,634	20.1	24.2	23.0	26.2	27.8
North Carolina	1,084	973	1,011	937	936	22.2	19.7	20.2	18.6	18.5
North Dakota	11	30	39	31	31	2.8	7.7	10.1	8.0	8.0
Ohio	492	622	720	648	635	8.7	10.9	12.6	11.3	11.1
Oklahoma	188	223	306	387	547	9.7	11.5	15.7	19.8	28.0
Oregon	310	292	298	332	349	15.6	14.4	14.5	16.0	16.8
Pennsylvania	602	693	717	698	857	9.6	11.1	11.4	11.1	13.7

Rhode Island	73	87	64	84	94	14.3	17.0	12.4	16.3	18.3
South Carolina	257	264	305	317	408	10.8	11.0	12.5	12.9	16.6
South Dakota	32	20	29	30	33	7.4	4.6	6.6	6.7	7.4
Tennessee	326	334	441	486	571	10.1	10.3	13.5	14.7	17.3
Texas	1,450	1,725	1,920	2,114	1,917	10.6	12.5	13.7	14.8	13.4
Utah	63	86	113	159	126	4.2	5.6	7.2	10.0	7.9
Vermont	9	20	12	9	10	2.9	6.5	3.9	2.9	3.2
Virginia	316	403	471	617	579	7.7	9.7	11.3	14.7	13.8
Washington	414	514	606	701	698	11.5	14.1	16.4	18.6	18.5
West Virginia	43	43	41	46	59	4.7	4.7	4.6	5.1	6.6
Wisconsin	79	125	161	134	162	2.8	4.4	5.6	4.6	5.6
Wyoming	4	6	4	18	10	1.3	2.0	1.4	6.1	3.4
US TOTAL	21,547	24,724	26,885	30,034	32,402	13.6	15.5	16.8	18.6	20.1
Northeast	3,490	4,204	4,174	4,496	4,980	12.7	15.3	15.2	16.4	18.2
Midwest	2,883	3,444	3,738	4,252	4,257	8.6	10.3	11.1	12.6	12.6
South	8,596	9,437	10,215	11,512	12,489	14.5	15.7	16.9	18.8	20.4
West	6,578	7,639	8,758	9,774	10,676	17.4	20.0	22.7	25.1	27.4
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	2	2	11	18	5	2.4	2.3	12.8	20.9	5.8
Northern Mariana Islands	NR	NR	NR	1	1	—	—	—	3.6	3.6
Puerto Rico	461	407	345	311	277	27.8	25.1	21.7	19.9	17.7

Virgin Islands	4	0	0	NR	NR	8.4	0.0	0.0	—	—
TERRITORIES	467	409	356	330	283	26.1	23.2	20.6	19.4	16.6
TOTAL	22,014	25,133	27,241	30,364	32,685	13.8	15.6	16.8	18.6	20.1

NR = No report.

NOTE: Cases reported with unknown sex are not included in this table. See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 30. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	1,097	1,018	1,095	1,094	1,220	19.2	17.6	18.6	18.4	20.5
Austin-Round Rock, TX	203	317	359	294	272	10.1	15.4	17.0	13.6	12.5
Baltimore-Columbia-Towson, MD	343	332	342	446	493	12.3	11.9	12.2	15.9	17.6
Birmingham-Hoover, AL	74	109 ‡	122	124	147	6.5	9.5 ‡	10.6	10.8	12.8
Boston-Cambridge-Newton, MA-NH	271†	320†	373	390	411	5.7†	6.7†	7.7	8.0	8.4
Buffalo-Cheektowaga-Niagara Falls, NY	92	63	60	53	75	8.1	5.6	5.3	4.7	6.6
Charlotte-Concord-Gastonia, NC-SC	333	378	355	333	330	13.7	15.3	14.1	13.0	12.8
Chicago-Naperville-Elgin, IL-IN-WI	1,047	1,202	1,140	1,280	1,190	11.0	12.6	12.0	13.5	12.5
Cincinnati, OH-KY-IN	93	81	103	158	148	4.3	3.7	4.7	7.2	6.8
Cleveland-Elyria, OH	72	156	180	116	109	3.5	7.6	8.7	5.6	5.3
Columbus, OH	274	316	353	241	242	13.6	15.5	17.0	11.4	11.5
Dallas-Fort Worth-Arlington, TX	476	542	699	739	590	6.7	7.5	9.4	9.8	7.8
Denver-Aurora-Lakewood, CO	192	187	216	241	322	6.8	6.6	7.5	8.2	11.0
Detroit-Warren-Dearborn, MI	284	253	291	466	484	6.6	5.9	6.7	10.8	11.2
Hartford-West Hartford-East Hartford, CT	44	32	32	30	63†	3.6	2.7	2.6	2.5	5.2†
Houston-The Woodlands-Sugar Land, TX	439	411	386	647	631	6.6	6.1	5.6	9.2	9.0
Indianapolis-Carmel-Anderson, IN	172	158	186	173	173	8.6	7.9	9.2	8.4	8.4
Jacksonville, FL	91	118	194	219	256	6.3	8.0	12.9	14.3	16.7

Kansas City, MO-KS	191	201	214	355	400	9.1	9.6	10.1	16.6	18.7
Las Vegas-Henderson-Paradise, NV	305	398	519	554	628	14.4	18.5	23.5	24.8	28.1
Los Angeles-Long Beach-Anaheim, CA	1,832	2,123	2,365	2,800	3,086	13.7	15.9	17.7	21.1	23.2
Louisville-Jefferson County, KY-IN	87	149	150	219	216	6.8	11.6	11.6	16.9	16.6
Memphis, TN-MS-AR	121	173	153	201	251	9.0	12.9	11.3	14.9	18.6
Miami-Fort Lauderdale-West Palm Beach, FL	884	925	919	1,079	1,128	14.7	15.2	14.9	17.4	18.2
Milwaukee-Waukesha-West Allis, WI	39	50	79	64	105	2.5	3.2	5.0	4.1	6.7
Minneapolis-St. Paul-Bloomington, MN-WI	228	261	248	238	276	6.5	7.3	6.9	6.6	7.6
Nashville-Davidson-Murfreesboro-Franklin, TN	116	115	160	227	268	6.3	6.2	8.4	11.8	13.9
New Orleans-Metairie, LA	218	235	210	236	185	17.3	18.5	16.5	18.6	14.6
New York-Newark-Jersey City, NY-NJ-PA	2,037	2,551	2,461	2,693	2,794	10.1	12.7	12.1	13.5	14.0
Oklahoma City, OK	113	162	219	252	332	8.3	11.8	15.8	18.0	23.8
Orlando-Kissimmee-Sanford, FL	299	384	318	366	407	12.5	15.7	12.7	14.2	15.8
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	458	639	636	594	756	7.5	10.5	10.4	9.7	12.4
Phoenix-Mesa-Scottsdale, AZ	452	574	775	819	979	9.9	12.3	16.4	16.9	20.2
Pittsburgh, PA	150	100	71	91	101	6.4	4.3	3.0	3.9	4.3
Portland-Vancouver-Hillsboro, OR-WA	261	263	255	300	338	10.9	10.8	10.4	12.1	13.6
Providence-Warwick, RI-MA	111†	115†	98	127	144	6.9†	7.1†	6.0	7.8	8.9
Raleigh, NC	168	137	136	173	172	13.2	10.5	10.2	12.7	12.6
Richmond, VA	73	104	124	210	179	5.7	8.1	9.6	16.1	13.7
Riverside-San Bernardino-Ontario, CA	341	445	495	622	883	7.6	9.8	10.8	13.5	19.1

Sacramento-Roseville-Arden-Arcade, CA	265	272	343	474	513	11.7	11.8	14.8	20.2	21.9
Salt Lake City, UT	49	69	87	119	86†	4.2	5.8	7.2	9.7	7.0†
San Antonio-New Braunfels, TX	237	243	329	284	269	9.9	10.0	13.3	11.3	10.7
San Diego-Carlsbad, CA	493	524	585	555	547	14.9	15.8	17.5	16.6	16.4
San Francisco-Oakland-Hayward, CA	830	872	1,030	1,035	1,136	17.8	18.6	21.8	21.9	24.0
San Jose-Sunnyvale-Santa Clara, CA	134	222	217	296	393	6.8	11.2	10.9	14.8	19.7
Seattle-Tacoma-Bellevue, WA	311	397	440	501	476	8.3	10.5	11.4	12.7	12.1
St. Louis, MO-IL	112	215	278	345	338	4.0	7.7	9.9	12.3	12.0
Tampa-St. Petersburg-Clearwater, FL	393	436	364	457	529	13.2	14.4	11.8	14.5	16.8
Virginia Beach-Norfolk-Newport News, VA-NC	117	206	170	209	215	6.8	11.9	9.9	12.1	12.4
Washington-Arlington-Alexandria, DC-VA-MD-WV	230	273	640	720	797	3.8	4.5	10.3	11.5	12.8
SELECTED MSAs TOTAL	17,252	19,826	21,574	24,259	26,083	9.8	11.1	12.0	13.4	14.4

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

Table 31. Primary and Secondary Syphilis Among Females – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	61	61	78	97	102	2.1	2.0	2.6	3.2	3.3
Austin-Round Rock, TX	16	17	29	29	25	1.6	1.7	2.7	2.7	2.3
Baltimore-Columbia-Towson, MD	49	46	39	54	66	3.4	3.2	2.7	3.7	4.5
Birmingham-Hoover, AL	8	25 ‡	21	23	22	1.3	4.2 ‡	3.5	3.8	3.7
Boston-Cambridge-Newton, MA-NH	13†	9†	13	24	33	0.5†	0.4†	0.5	1.0	1.3
Buffalo-Cheektowaga-Niagara Falls, NY	0	1	6	4	8	0.0	0.2	1.0	0.7	1.4
Charlotte-Concord-Gastonia, NC-SC	16	25	31	43	50	1.3	2.0	2.4	3.2	3.8
Chicago-Naperville-Elgin, IL-IN-WI	86	88	79	103	141	1.8	1.8	1.6	2.1	2.9
Cincinnati, OH-KY-IN	21	11	11	18	29	1.9	1.0	1.0	1.6	2.6
Cleveland-Elyria, OH	1	12	23	10	18	0.1	1.1	2.2	0.9	1.7
Columbus, OH	27	48	45	33	31	2.6	4.6	4.3	3.1	2.9
Dallas-Fort Worth-Arlington, TX	56	62	75	101	97	1.6	1.7	2.0	2.6	2.5
Denver-Aurora-Lakewood, CO	6	11	15	19	32	0.4	0.8	1.0	1.3	2.2
Detroit-Warren-Dearborn, MI	26	26	20	46	69	1.2	1.2	0.9	2.1	3.1
Hartford-West Hartford-East Hartford, CT	9	2	8	2	8†	1.5	0.3	1.3	0.3	1.3†
Houston-The Woodlands-Sugar Land, TX	58	49	63	97	100	1.7	1.4	1.8	2.8	2.8
Indianapolis-Carmel-Anderson, IN	12	15	12	9	23	1.2	1.5	1.2	0.9	2.2
Jacksonville, FL	8	26	50	41	69	1.1	3.4	6.5	5.2	8.8

Kansas City, MO-KS	41	39	43	59	84	3.9	3.6	4.0	5.4	7.7
Las Vegas-Henderson-Paradise, NV	17	40	55	93	106	1.6	3.7	5.0	8.3	9.5
Los Angeles-Long Beach-Anaheim, CA	108	144	177	273	292	1.6	2.1	2.6	4.1	4.3
Louisville-Jefferson County, KY-IN	10	12	16	21	43	1.5	1.8	2.4	3.2	6.5
Memphis, TN-MS-AR	13	25	21	40	63	1.9	3.6	3.0	5.7	8.9
Miami-Fort Lauderdale-West Palm Beach, FL	75	66	71	102	120	2.4	2.1	2.2	3.2	3.8
Milwaukee-Waukesha-West Allis, WI	0	1	5	7	12	0.0	0.1	0.6	0.9	1.5
Minneapolis-St. Paul-Bloomington, MN-WI	37	31	24	16	31	2.1	1.7	1.3	0.9	1.7
Nashville-Davidson-Murfreesboro-Franklin, TN	4	12	10	21	24	0.4	1.3	1.0	2.1	2.4
New Orleans-Metairie, LA	29	25	36	25	23	4.4	3.8	5.5	3.8	3.5
New York-Newark-Jersey City, NY-NJ-PA	69	123	119	152	190	0.7	1.2	1.1	1.5	1.8
Oklahoma City, OK	14	27	39	70	92	2.0	3.9	5.6	9.9	13.0
Orlando-Kissimmee-Sanford, FL	14	21	24	17	30	1.1	1.7	1.9	1.3	2.3
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	43	49	63	79	106	1.4	1.6	2.0	2.5	3.4
Phoenix-Mesa-Scottsdale, AZ	39	56	128	131	172	1.7	2.4	5.4	5.4	7.0
Pittsburgh, PA	11	11	6	4	5	0.9	0.9	0.5	0.3	0.4
Portland-Vancouver-Hillsboro, OR-WA	19	20	31	37	68	1.6	1.6	2.5	3.0	5.4
Providence-Warwick, RI-MA	8†	6†	8	14	12	1.0†	0.7†	1.0	1.7	1.4
Raleigh, NC	13	10	17	29	32	2.0	1.5	2.5	4.2	4.6
Richmond, VA	4	15	18	29	28	0.6	2.3	2.7	4.3	4.1
Riverside-San Bernardino-Ontario, CA	17	47	67	118	176	0.8	2.1	2.9	5.1	7.6

Sacramento-Roseville-Arden-Arcade, CA	26	34	43	127	126	2.2	2.9	3.6	10.6	10.5
Salt Lake City, UT	1	5	0	3	4†	0.2	0.8	0.0	0.5	0.7†
San Antonio-New Braunfels, TX	43	43	54	49	60	3.6	3.5	4.3	3.8	4.7
San Diego-Carlsbad, CA	17	20	31	41	55	1.0	1.2	1.9	2.5	3.3
San Francisco-Oakland-Hayward, CA	46	50	58	85	167	2.0	2.1	2.4	3.6	7.0
San Jose-Sunnyvale-Santa Clara, CA	10	32	29	80	112	1.0	3.3	2.9	8.1	11.3
Seattle-Tacoma-Bellevue, WA	6	15	5	25	40	0.3	0.8	0.3	1.3	2.0
St. Louis, MO-IL	14	24	34	50	59	1.0	1.7	2.4	3.5	4.1
Tampa-St. Petersburg-Clearwater, FL	44	48	42	37	55	2.9	3.1	2.6	2.3	3.4
Virginia Beach-Norfolk-Newport News, VA-NC	5	22	24	18	19	0.6	2.5	2.7	2.0	2.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	10	8	19	41	60	0.3	0.3	0.6	1.3	1.9
SELECTED MSAs TOTAL	1,280	1,615	1,935	2,646	3,389	1.4	1.8	2.1	2.9	3.7

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: Cases reported with unknown sex are not included in this table.

Table 32. Primary and Secondary Syphilis Among Males – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	1,036	957	1,017	995	1,118	37.5	34.2	35.7	34.6	38.9
Austin-Round Rock, TX	187	300	330	265	245	18.7	29.2	31.1	24.4	22.5
Baltimore-Columbia-Towson, MD	294	286	303	392	427	21.8	21.2	22.4	29.0	31.6
Birmingham-Hoover, AL	66	84 ‡	101	101	125	12.0	15.2 ‡	18.3	18.3	22.6
Boston-Cambridge-Newton, MA-NH	257†	311†	360	357	374	11.1†	13.4†	15.3	15.1	15.8
Buffalo-Cheektowaga-Niagara Falls, NY	92	62	54	49	67	16.7	11.3	9.8	9.0	12.2
Charlotte-Concord-Gastonia, NC-SC	317	353	324	290	280	26.9	29.4	26.5	23.3	22.5
Chicago-Naperville-Elgin, IL-IN-WI	961	1,114	1,061	1,176	1,049	20.6	23.9	22.7	25.3	22.5
Cincinnati, OH-KY-IN	72	70	92	140	119	6.8	6.6	8.6	13.0	11.1
Cleveland-Elyria, OH	71	144	157	106	91	7.1	14.5	15.8	10.7	9.2
Columbus, OH	247	268	308	208	211	24.8	26.7	30.1	20.1	20.3
Dallas-Fort Worth-Arlington, TX	420	480	624	638	487	12.0	13.5	17.1	17.2	13.1
Denver-Aurora-Lakewood, CO	186	176	201	222	290	13.3	12.4	13.9	15.1	19.8
Detroit-Warren-Dearborn, MI	258	227	271	420	415	12.3	10.9	12.9	19.9	19.7
Hartford-West Hartford-East Hartford, CT	35	30	24	27	54†	5.9	5.1	4.1	4.6	9.2†
Houston-The Woodlands-Sugar Land, TX	381	362	323	550	527	11.5	10.8	9.4	15.8	15.2
Indianapolis-Carmel-Anderson, IN	160	143	174	164	150	16.5	14.6	17.5	16.4	15.0
Jacksonville, FL	83	92	144	178	187	11.7	12.8	19.6	23.8	25.0

Kansas City, MO-KS	150	162	171	296	316	14.6	15.7	16.4	28.1	30.0
Las Vegas-Henderson-Paradise, NV	288	358	464	461	522	27.3	33.3	42.2	41.4	46.9
Los Angeles-Long Beach-Anaheim, CA	1,724	1,978	2,188	2,527	2,786	26.2	30.2	33.2	38.6	42.5
Louisville-Jefferson County, KY-IN	77	137	134	198	173	12.3	21.8	21.2	31.2	27.3
Memphis, TN-MS-AR	108	148	132	161	188	16.8	23.0	20.5	24.9	29.1
Miami-Fort Lauderdale-West Palm Beach, FL	809	859	848	977	1,008	27.8	29.2	28.3	32.4	33.5
Milwaukee-Waukesha-West Allis, WI	39	49	74	57	93	5.1	6.4	9.6	7.4	12.1
Minneapolis-St. Paul-Bloomington, MN-WI	191	228	222	222	242	10.9	13.0	12.4	12.3	13.4
Nashville-Davidson-Murfreesboro-Franklin, TN	112	103	150	206	244	12.5	11.3	16.1	21.8	25.8
New Orleans-Metairie, LA	189	210	174	211	162	31.0	34.2	28.3	34.5	26.5
New York-Newark-Jersey City, NY-NJ-PA	1,954	2,407	2,322	2,540	2,604	20.0	24.7	23.6	26.3	26.9
Oklahoma City, OK	99	135	180	182	240	14.8	19.9	26.4	26.4	34.8
Orlando-Kissimmee-Sanford, FL	285	363	294	349	377	24.4	30.4	24.0	27.8	30.0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	415	590	573	515	649	14.1	20.1	19.4	17.5	22.0
Phoenix-Mesa-Scottsdale, AZ	413	518	647	688	807	18.2	22.4	27.5	28.5	33.4
Pittsburgh, PA	139	89	65	87	96	12.1	7.8	5.7	7.7	8.5
Portland-Vancouver-Hillsboro, OR-WA	242	243	224	263	270	20.5	20.3	18.5	21.4	22.0
Providence-Warwick, RI-MA	103†	109†	90	113	132	13.2†	13.9†	11.4	14.3	16.8
Raleigh, NC	155	127	119	144	140	24.9	20.0	18.3	21.7	21.1
Richmond, VA	69	87	103	176	142	11.2	14.1	16.5	27.9	22.5
Riverside-San Bernardino-Ontario, CA	324	398	428	504	702	14.5	17.7	18.8	21.9	30.5

Sacramento-Roseville-Arden-Arcade, CA	239	238	300	346	384	21.5	21.2	26.4	30.2	33.5
Salt Lake City, UT	48	64	87	116	82†	8.2	10.7	14.4	18.9	13.4†
San Antonio-New Braunfels, TX	194	200	275	235	207	16.5	16.7	22.5	18.9	16.6
San Diego-Carlsbad, CA	476	504	554	514	488	28.7	30.2	33.0	30.6	29.0
San Francisco-Oakland-Hayward, CA	783	820	970	948	964	34.1	35.5	41.5	40.5	41.2
San Jose-Sunnyvale-Santa Clara, CA	124	190	188	216	276	12.5	19.0	18.6	21.3	27.3
Seattle-Tacoma-Bellevue, WA	305	382	434	475	435	16.3	20.1	22.4	24.1	22.0
St. Louis, MO-IL	98	191	244	295	279	7.2	14.0	17.9	21.7	20.5
Tampa-St. Petersburg-Clearwater, FL	349	388	322	420	474	24.2	26.4	21.5	27.5	31.1
Virginia Beach-Norfolk-Newport News, VA-NC	112	178	144	190	193	13.2	20.9	17.0	22.4	22.7
Washington-Arlington-Alexandria, DC-VA-MD-WV	219	264	618	674	732	7.4	8.8	20.3	22.1	24.0
SELECTED MSAs TOTAL	15,955	18,176	19,606	21,584	22,623	18.4	20.9	22.2	24.4	25.5

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

NOTE: Cases reported with unknown sex are not included in this table.

Table 33. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases in Counties and Independent Cities* Ranked by Number of Reported Cases, United States, 2019

Rank*	County/Independent City	Cases	Rate per 100,000 Population	Cumulative Percentage
1	Los Angeles County, CA	2,550	25.2	7
2	Cook County, IL	1,007	19.4	9
3	Maricopa County, AZ	947	21.5	12
4	New York County, NY	683	41.9	13
5	Clark County, NV	628	28.1	15
6	Miami-Dade County, FL	581	21.0	16
7	San Francisco County, CA	579	65.5	18
8	San Diego County, CA	547	16.4	19
9	Fulton County, GA	546	52.0	21
10	Harris County, TX	542	11.5	22
11	Orange County, CA	536	16.8	23
12	Kings County, NY	493	19.1	25
13	San Bernardino County, CA	478	22.0	26
14	Philadelphia County, PA	470	29.7	27
15	Sacramento County, CA	433	28.1	28
16	Bronx County, NY	427	29.8	29
17	Broward County, FL	426	21.8	30
18	Riverside County, CA	405	16.5	31
19	Santa Clara County, CA	392	20.2	32
20	Queens County, NY	349	15.3	33
21	King County, WA	338	15.1	34
22	Wayne County, MI	337	19.2	35
23	Dallas County, TX	324	12.3	36
24	Baltimore (City), MD	312	51.8	37
25	Dekalb County, GA	309	40.8	38

26	Orange County, FL	309	22.4	38
27	Washington, D.C.	308	43.8	39
28	Alameda County, CA	290	17.4	40
29	Bernalillo County, NM	267	39.3	41
30	Jackson County, MO	264	37.7	41
31	Oklahoma County, OK	264	33.3	42
32	Kern County, CA	264	29.4	43
33	Hillsborough County, FL	262	18.2	43
34	Bexar County, TX	244	12.3	44
35	Mecklenburg County, NC	238	21.8	44
36	Tulsa County, OK	236	36.4	45
37	Duval County, FL	228	24.0	46
38	Pinellas County, FL	219	22.5	46
39	Multnomah County, OR	217	26.7	47
40	Travis County, TX	217	17.4	47
41	Franklin County, OH	213	16.3	48
42	Tarrant County, TX	210	10.1	48
43	San Joaquin County, CA	209	27.8	49
44	Monroe County, NY	207	27.9	50
45	Shelby County, TN	193	20.6	50
46	Denver County, CO	188	26.2	50
47	Fresno County, CA	188	18.9	51
48	Davidson County, TN	185	26.7	51
49	Jefferson County, KY	181	23.5	52
50	Pima County, AZ	176	16.9	52
51	Prince George's County, MD	169	18.6	53
52	Hennepin County, MN	167	13.3	53
53	Washoe County, NV	162	34.8	54
54	Pulaski County, AR	160	40.7	54

55	Contra Costa County, CA	159	13.8	54
56	Suffolk County, MA	156	19.3	55
57	Wake County, NC	154	14.1	55
58	Marion County, IN	151	15.8	56
59	Stanislaus County, CA	149	27.1	56
60	St. Louis County, MO	136	13.6	56
61	Middlesex County, MA	135	8.4	57
62	Nueces County, TX	134	37.0	57
63	Jefferson County, AL	128	19.4	57
64	St. Louis (city), MO	125	41.3	58
65	Spokane County, WA	125	24.3	58
66	Palm Beach County, FL	121	8.1	58
67	Orleans Parish, LA	111	28.4	59
68	East Baton Rouge Parish, LA	109	24.7	59
69	Hamilton County, OH	108	13.2	59
70	Essex County, NJ	105	13.1	59

* The top 70 counties and independent cities ranked in descending order by number of cases reported in 2019 then by rate are displayed.

NOTE: Relative rankings of counties may be impacted by completeness of the variable used to identify county. See Technical Notes for more information.

Table 34. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by Age Group and Sex, United States, 2015-2019

Year	Age Group	Cases				Rates per 100,000 Population*		
		Total	Male	Female	Unknown Sex	Total	Male	Female
2015	0-4	2	0	1	1	0.0	0.0	0.0
	5-9	1	0	1	0	0.0	0.0	0.0
	10-14	9	1	8	0	0.0	0.0	0.1
	15-19	1,148	865	283	0	5.4	8.0	2.7
	20-24	4,766	4,186	573	7	21.0	35.9	5.2
	25-29	5,168	4,671	491	6	23.0	40.9	4.4
	30-34	3,549	3,234	311	4	16.4	29.7	2.9
	35-39	2,482	2,249	229	4	12.2	22.1	2.2
	40-44	1,897	1,744	152	1	9.4	17.4	1.5
	45-54	3,488	3,294	190	4	8.1	15.5	0.9
	55-64	1,153	1,099	54	0	2.8	5.6	0.3
	65+	207	202	5	0	0.4	1.0	0.0
	Unknown Age	2	2	0	0			
	TOTAL	23,872	21,547	2,298	27	7.4	13.6	1.4
2016	0-4	2	0	2	0	0.0	0.0	0.0
	5-9	2	1	1	0	0.0	0.0	0.0
	10-14	15	6	9	0	0.1	0.1	0.1

	15-19	1,298	957	340	1	6.1	8.9	3.3
	20-24	5,172	4,418	744	10	23.1	38.4	6.8
	25-29	6,177	5,538	624	15	27.0	47.6	5.5
	30-34	4,278	3,806	464	8	19.6	34.7	4.3
	35-39	3,043	2,729	311	3	14.6	26.3	3.0
	40-44	2,140	1,944	193	3	10.9	19.9	1.9
	45-54	3,953	3,691	261	1	9.2	17.5	1.2
	55-64	1,418	1,338	80	0	3.4	6.7	0.4
	65+	279	269	10	0	0.6	1.2	0.0
	Unknown Age	37	27	10	0			
	TOTAL	27,814	24,724	3,049	41	8.6	15.5	1.9
2017	0-4	5	0	5	0	0.0	0.0	0.1
	5-9	1	0	1	0	0.0	0.0	0.0
	10-14	20	6	14	0	0.1	0.1	0.1
	15-19	1,421	1,092	327	2	6.7	10.1	3.2
	20-24	5,580	4,728	848	4	25.2	41.7	7.9
	25-29	6,838	6,033	795	10	29.3	50.7	6.9
	30-34	4,870	4,313	549	8	22.2	38.9	5.0
	35-39	3,580	3,145	431	4	16.9	29.6	4.1
	40-44	2,290	2,005	282	3	11.7	20.6	2.9
	45-54	4,091	3,753	334	4	9.7	18.0	1.6

	55-64	1,586	1,468	117	1	3.8	7.2	0.5
	65+	349	329	19	1	0.7	1.5	0.1
	Unknown Age	13	13	0	0			
	TOTAL	30,644	26,885	3,722	37	9.4	16.8	2.3
2018	0-4	2	1	1	0	0.0	0.0	0.0
	5-9	0	0	0	0	0.0	0.0	0.0
	10-14	20	9	11	0	0.1	0.1	0.1
	15-19	1,618	1,175	442	1	7.7	10.9	4.3
	20-24	6,140	5,061	1,076	3	28.1	45.2	10.1
	25-29	7,712	6,625	1,077	10	32.7	55.1	9.3
	30-34	5,907	5,084	816	7	26.7	45.4	7.5
	35-39	4,200	3,574	621	5	19.5	33.1	5.8
	40-44	2,690	2,328	358	4	13.6	23.8	3.6
	45-54	4,398	3,973	423	2	10.6	19.3	2.0
	55-64	1,929	1,782	145	2	4.6	8.7	0.7
	65+	437	412	25	0	0.8	1.8	0.1
	Unknown Age	10	10	0	0			
	TOTAL	35,063	30,034	4,995	34	10.7	18.6	3.0
2019	0-4	5	4	1	0	0.0	0.0	0.0
	5-9	2	1	1	0	0.0	0.0	0.0
	10-14	22	9	13	0	0.1	0.1	0.1

15-19	1,708	1,202	502	4	8.1	11.2	4.9
20-24	6,325	5,064	1,234	27	28.9	45.2	11.6
25-29	8,308	6,924	1,361	23	35.3	57.6	11.8
30-34	6,829	5,725	1,085	19	30.9	51.2	9.9
35-39	4,837	3,987	839	11	22.4	37.0	7.8
40-44	3,276	2,689	579	8	16.6	27.4	5.8
45-54	4,749	4,099	646	4	11.4	20.0	3.1
55-64	2,412	2,210	201	1	5.7	10.8	0.9
65+	515	485	30	0	1.0	2.1	0.1
Unknown Age	4	3	1	0			
TOTAL	38,992	32,402	6,493	97	11.9	20.1	3.9

* No population data are available for unknown sex and age; therefore, rates are not calculated.

Table 35A. Primary and Secondary Syphilis — Reported Cases by Race/Hispanic Ethnicity, Age Group, and Sex, United States, 2019

Age Group	American Indians/ Alaska Natives			Asians			Blacks			Native Hawaiians/ Other Pacific Islanders		
	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female
0-4	0	0	0	0	0	0	2	1	1	0	0	0
5-9	0	0	0	0	0	0	1	0	1	0	0	0
10-14	0	0	0	0	0	0	12	4	8	0	0	0
15-19	29	16	13	28	21	6	734	489	245	5	3	2
20-24	91	58	33	138	130	6	2,517	1,985	525	24	19	5
25-29	107	69	37	216	208	8	3,106	2,596	499	30	24	5
30-34	108	56	52	141	130	11	2,294	2,006	279	19	17	2
35-39	65	42	23	108	98	9	1,383	1,148	230	23	18	5
40-44	48	29	19	69	62	7	826	688	134	11	7	4
45-54	47	38	9	128	114	13	1,098	927	171	9	7	2
55-64	16	13	3	26	24	2	569	500	69	14	11	3
65+	2	2	0	7	7	0	130	114	16	0	0	0
Unknown Age	0	0	0	0	0	0	1	1	0	0	0	0
TOTAL	513	323	189	861	794	62	12,673	10,459	2,178	135	106	28

Age Group	Whites			Multirace			Hispanics			Other/Unknown		
	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female	Total*	Male	Female
0-4	2	2	0	0	0	0	0	0	0	1	1	0
5-9	0	0	0	0	0	0	1	1	0	0	0	0
10-14	3	1	2	0	0	0	3	1	2	4	3	1
15-19	318	212	106	39	30	9	432	339	91	123	92	30
20-24	1,486	1,150	332	112	77	35	1,512	1,283	216	445	362	82
25-29	2,291	1,846	442	173	146	27	1,802	1,554	244	583	481	99
30-34	2,126	1,680	443	153	133	20	1,492	1,296	190	496	407	88
35-39	1,735	1,386	349	104	93	10	1,068	911	155	351	291	58
40-44	1,307	1,060	247	59	46	13	696	589	103	260	208	52
45-54	2,164	1,865	299	87	84	3	874	775	98	342	289	51
55-64	1,296	1,213	83	26	24	2	306	282	24	159	143	15
65+	275	267	8	4	4	0	40	37	3	57	54	3
Unknown Age	2	1	1	0	0	0	0	0	0	1	1	0
TOTAL	13,005	10,683	2,312	757	637	119	8,226	7,068	1,126	2,822	2,332	479

* Total includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 34 for age-specific cases and rates and Tables 27–29 for total and sex-specific cases and rates. Primary and secondary syphilis reported among children aged 0–4 may represent the misclassification of congenitally-acquired syphilis. Cases reported as congenitally-acquired syphilis (congenital syphilis) can be found in Table 40.

Table 35B. Primary and Secondary Syphilis — Rates of Reported Cases* by Race/Hispanic Ethnicity, Age Group, and Sex, United States, 2019

Age Group	American Indians/ Alaska Natives			Asians			Blacks			Native Hawaiians/ Other Pacific Islanders		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
5-9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
10-14	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.6	0.0	0.0	0.0
15-19	16.2	17.6	14.8	2.6	3.8	1.1	25.1	33.0	17.0	12.2	14.3	10.0
20-24	49.4	62.0	36.4	10.7	19.9	0.9	80.5	125.2	34.0	54.8	84.4	23.4
25-29	53.5	67.5	37.8	13.5	26.2	1.0	89.3	148.6	28.8	58.5	90.6	20.1
30-34	63.3	65.2	61.4	8.6	16.5	1.3	78.7	140.9	18.7	37.5	65.3	8.1
35-39	41.5	53.9	29.2	6.9	13.4	1.1	50.0	86.9	15.9	48.3	73.6	21.6
40-44	34.1	41.8	26.6	4.8	9.3	0.9	33.2	58.7	10.2	27.9	34.8	20.7
45-54	16.0	26.6	6.0	5.0	9.5	0.9	21.2	38.2	6.2	12.6	19.6	5.5
55-64	5.4	9.4	1.9	1.3	2.5	0.2	11.6	22.3	2.6	22.9	37.1	9.5
65+	0.7	1.6	0.0	0.3	0.7	0.0	2.7	5.9	0.6	0.0	0.0	0.0
Unknown Age												
TOTAL	21.2	27.1	15.4	4.6	8.9	0.6	31.0	53.5	10.2	23.0	35.9	9.6

* Per 100,000.

† Total includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 34 for age-specific cases and rates and Tables 27–29 for total and sex-specific cases and rates. Primary and secondary syphilis reported among children aged 0–4 may represent the misclassification of congenitally-acquired syphilis. Cases reported as congenitally-acquired syphilis (congenital syphilis) can be found in Table 40. No population data exist for unknown sex, unknown age, or other/unknown race; therefore rates are not calculated.

Age Group	Whites			Multirace			Hispanics		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10-14	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
15-19	2.9	3.7	2.0	5.3	8.1	2.5	8.7	13.4	3.7
20-24	12.7	19.1	5.8	17.1	23.2	10.8	31.2	51.5	9.2
25-29	17.9	28.3	7.1	31.1	53.2	9.6	36.9	61.1	10.5
30-34	17.2	26.8	7.2	36.3	66.3	9.1	32.8	54.1	8.8
35-39	14.2	22.6	5.8	28.4	53.8	5.2	23.8	39.2	7.2
40-44	11.7	18.8	4.4	19.9	33.0	8.3	16.9	28.1	5.1
45-54	8.3	14.4	2.3	17.1	35.1	1.1	12.4	21.9	2.8
55-64	4.4	8.4	0.5	6.1	11.8	0.9	6.3	11.9	1.0
65+	0.7	1.5	0.0	1.0	2.2	0.0	0.9	1.9	0.1
Unknown Age									
TOTAL	6.6	11.0	2.3	10.6	18.1	3.3	13.7	23.4	3.8

* Per 100,000.

† Total includes cases reported with unknown sex.

NOTE: These tables should be used only for race/Hispanic ethnicity comparisons. See Table 34 for age-specific cases and rates and Tables 27–29 for total and sex-specific cases and rates. Primary and secondary syphilis reported among children aged 0–4 may represent the misclassification of congenitally-acquired syphilis. Cases reported as congenitally-acquired syphilis (congenital syphilis) can be found in Table 40. No population data exist for unknown sex, unknown age, or other/unknown race; therefore rates are not calculated.

Table 36. Early Non-Primary Non-Secondary Syphilis — Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States and Territories, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	177	293	425	447	540	3.6	6.0	8.7	9.1	11.0
Alaska	13	13	9	41	78	1.8	1.8	1.2	5.6	10.6
Arizona	361	488	620	898	1,179	5.3	7.0	8.8	12.5	16.4
Arkansas	216	280	328	364	267	7.3	9.4	10.9	12.1	8.9
California	4,435	5,289	7,028	7,708	8,284	11.3	13.5	17.8	19.5	20.9
Colorado	212	274	281	362	453	3.9	4.9	5.0	6.4	8.0
Connecticut	97	84	145	77	159	2.7	2.3	4.0	2.2	4.5
Delaware	47	57	49	36	65	5.0	6.0	5.1	3.7	6.7
District of Columbia	200	355	341	336	414	29.8	52.1	49.1	47.8	58.9
Florida	2,288	2,634	3,033	3,939	4,142	11.3	12.8	14.5	18.5	19.4
Georgia	1,477	1,263	1,218	1,517	1,733	14.5	12.2	11.7	14.4	16.5
Hawaii	56	89	58	87	95	3.9	6.2	4.1	6.1	6.7
Idaho	24	33	41	33	40	1.5	2.0	2.4	1.9	2.3
Illinois	889	1,138	1,192	1,464	1,345	6.9	8.9	9.3	11.5	10.6
Indiana	220	247	250	359	326	3.3	3.7	3.7	5.4	4.9
Iowa	69	59	91	85	100	2.2	1.9	2.9	2.7	3.2
Kansas	153	178	202	291	282	5.3	6.1	6.9	10.0	9.7
Kentucky	164	189	236	294	395	3.7	4.3	5.3	6.6	8.8

Louisiana	439	568	623	576	576	9.4	12.1	13.3	12.4	12.4
Maine	10	6	36	43	53	0.8	0.5	2.7	3.2	4.0
Maryland	594	598	683	857	991	9.9	9.9	11.3	14.2	16.4
Massachusetts	355	538	549	620	625	5.2	7.9	8.0	9.0	9.1
Michigan	282	290	330	407	558	2.8	2.9	3.3	4.1	5.6
Minnesota	185	251	313	286	367	3.4	4.5	5.6	5.1	6.5
Mississippi	405	490	555	937	1,222	13.5	16.4	18.6	31.4	40.9
Missouri	247	276	423	546	647	4.1	4.5	6.9	8.9	10.6
Montana	5	6	23	25	25	0.5	0.6	2.2	2.4	2.4
Nebraska	5	19	26	37	46	0.3	1.0	1.4	1.9	2.4
Nevada	439	510	498	512	522	15.2	17.3	16.6	16.9	17.2
New Hampshire	16	33	37	41	49	1.2	2.5	2.8	3.0	3.6
New Jersey	714	755	865	788	827	8.0	8.4	9.6	8.8	9.3
New Mexico	71	118	120	161	203	3.4	5.7	5.7	7.7	9.7
New York	2,802	3,504	3,914	4,097	4,376	14.2	17.7	19.7	21.0	22.4
North Carolina	753	799	771	797	989	7.5	7.9	7.5	7.7	9.5
North Dakota	17	12	12	13	10	2.2	1.6	1.6	1.7	1.3
Ohio	326	389	454	481	519	2.8	3.3	3.9	4.1	4.4
Oklahoma	222	339	478	342	339	5.7	8.6	12.2	8.7	8.6
Oregon	214	250	205	299	357	5.3	6.1	4.9	7.1	8.5
Pennsylvania	770	982	1,100	1,192	1,138	6.0	7.7	8.6	9.3	8.9

Rhode Island	38	63	71	71	109	3.6	6.0	6.7	6.7	10.3
South Carolina	496	613	687	732	681	10.1	12.4	13.7	14.4	13.4
South Dakota	11	14	19	9	8	1.3	1.6	2.2	1.0	0.9
Tennessee	312	337	412	472	639	4.7	5.1	6.1	7.0	9.4
Texas	2,471	2,872	3,680	4,245	4,065	9.0	10.3	13.0	14.8	14.2
Utah	31	61	85	101	120	1.0	2.0	2.7	3.2	3.8
Vermont	6	14	13	18	11	1.0	2.2	2.1	2.9	1.8
Virginia	410	602	659	668	679	4.9	7.2	7.8	7.8	8.0
Washington	293	446	588	599	721	4.1	6.1	7.9	7.9	9.6
West Virginia	40	51	34	55	83	2.2	2.8	1.9	3.0	4.6
Wisconsin	95	150	199	163	193	1.6	2.6	3.4	2.8	3.3
Wyoming	1	5	4	11	10	0.2	0.9	0.7	1.9	1.7
US TOTAL	24,173	28,924	34,013	38,539	41,655	7.5	9.0	10.4	11.8	12.7
Northeast	4,808	5,979	6,730	6,947	7,347	8.5	10.6	11.9	12.4	13.1
Midwest	2,499	3,023	3,511	4,141	4,401	3.7	4.4	5.1	6.1	6.4
South	10,711	12,340	14,212	16,614	17,820	8.8	10.1	11.5	13.3	14.3
West	6,155	7,582	9,560	10,837	12,087	8.1	9.9	12.3	13.9	15.5
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	2	1	3	3	5	1.2	0.6	1.8	1.8	3.0
Northern Mariana Islands	NR	NR	NR	0	0	—	—	—	0.0	0.0
Puerto Rico	565	570	527	577	458	16.3	16.7	15.7	17.5	13.9

Virgin Islands	7	2	0	NR	NR	6.8	1.9	0.0	—	—
TERRITORIES	574	573	530	580	463	15.4	15.5	14.6	16.3	13.0
TOTAL	24,747	29,497	34,543	39,119	42,118	7.6	9.0	10.5	11.8	12.7

NR = No report.

NOTE: See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 37. Early Non-Primary Non-Secondary Syphilis — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	1,067	1,053	1,027	1,197	1,413	18.7	18.2	17.5	20.1	23.7
Austin-Round Rock, TX	242	291	424	388	389	12.1	14.2	20.0	17.9	17.9
Baltimore-Columbia-Towson, MD	344	358	337	454	503	12.3	12.8	12.0	16.2	17.9
Birmingham-Hoover, AL	60	79 ‡	124	135	197	5.2	6.9 ‡	10.8	11.7	17.1
Boston-Cambridge-Newton, MA-NH	235†	408†	429	479	461	4.9†	8.5†	8.9	9.8	9.5
Buffalo-Cheektowaga-Niagara Falls, NY	37	29	32	44	45	3.3	2.6	2.8	3.9	4.0
Charlotte-Concord-Gastonia, NC-SC	206	264	259	258	294	8.5	10.7	10.3	10.0	11.4
Chicago-Naperville-Elgin, IL-IN-WI	814	1,058	1,091	1,369	1,216	8.5	11.1	11.4	14.4	12.8
Cincinnati, OH-KY-IN	92	74	83	117	117	4.3	3.4	3.8	5.3	5.3
Cleveland-Elyria, OH	37	63	73	58	74	1.8	3.1	3.5	2.8	3.6
Columbus, OH	130	149	183	167	196	6.4	7.3	8.8	7.9	9.3
Dallas-Fort Worth-Arlington, TX	932	1,038	1,256	1,334	1,188	13.1	14.4	17.0	17.7	15.8
Denver-Aurora-Lakewood, CO	175	212	213	283	335	6.2	7.4	7.4	9.7	11.4
Detroit-Warren-Dearborn, MI	206	194	196	265	365	4.8	4.5	4.5	6.1	8.4
Hartford-West Hartford-East Hartford, CT	31	20	31	20	60	2.6	1.7	2.6	1.7	5.0
Houston-The Woodlands-Sugar Land, TX	522	585	740	1,026	1,130	7.8	8.6	10.7	14.7	16.1
Indianapolis-Carmel-Anderson, IN	143	165	161	223	189	7.2	8.2	7.9	10.9	9.2
Jacksonville, FL	162	137	191	202	215	11.2	9.3	12.7	13.2	14.0

Kansas City, MO-KS	133	140	158	247	316	6.4	6.7	7.4	11.5	14.7
Las Vegas-Henderson-Paradise, NV	413	470	451	447	388	19.5	21.8	20.5	20.0	17.4
Los Angeles-Long Beach-Anaheim, CA	2,052	2,403	3,119	3,565	3,907	15.4	18.1	23.4	26.8	29.4
Louisville-Jefferson County, KY-IN	90	118	143	166	201	7.0	9.2	11.1	12.8	15.5
Memphis, TN-MS-AR	195	246	244	256	381	14.5	18.3	18.1	19.0	28.2
Miami-Fort Lauderdale-West Palm Beach, FL	1,220	1,282	1,569	2,071	2,264	20.3	21.1	25.5	33.4	36.5
Milwaukee-Waukesha-West Allis, WI	66	108	130	93	125	4.2	6.9	8.2	5.9	7.9
Minneapolis-St. Paul-Bloomington, MN-WI	170	226	280	214	271	4.8	6.4	7.8	5.9	7.5
Nashville-Davidson-Murfreesboro-Franklin, TN	82	72	102	179	165	4.5	3.9	5.4	9.3	8.5
New Orleans-Metairie, LA	171	242	244	271	242	13.5	19.1	19.1	21.3	19.0
New York-Newark-Jersey City, NY-NJ-PA	3,210	4,008	4,405	4,522	4,751	15.9	19.9	21.7	22.6	23.8
Oklahoma City, OK	114	195	270	179	143	8.4	14.2	19.5	12.8	10.2
Orlando-Kissimmee-Sanford, FL	266	377	359	490	448	11.1	15.4	14.3	19.0	17.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	616	736	835	796	824	10.1	12.1	13.7	13.1	13.5
Phoenix-Mesa-Scottsdale, AZ	268	381	440	697	816	5.9	8.2	9.3	14.3	16.8
Pittsburgh, PA	111	125	109	129	150	4.7	5.3	4.7	5.5	6.5
Portland-Vancouver-Hillsboro, OR-WA	170	226	187	266	302	7.1	9.3	7.6	10.7	12.2
Providence-Warwick, RI-MA	48†	71†	92	91	138	3.0†	4.4†	5.7	5.6	8.5
Raleigh, NC	115	135	130	105	166	9.0	10.4	9.7	7.7	12.2
Richmond, VA	98	162	157	162	180	7.7	12.6	12.1	12.4	13.8
Riverside-San Bernardino-Ontario, CA	311	379	513	605	749	6.9	8.4	11.2	13.1	16.2

Sacramento-Roseville-Arden-Arcade, CA	137	133	194	244	285	6.0	5.8	8.3	10.4	12.2
Salt Lake City, UT	23	43	55	71	70†	2.0	3.6	4.6	5.8	5.7†
San Antonio-New Braunfels, TX	258	339	485	553	452	10.8	14.0	19.6	22.0	18.0
San Diego-Carlsbad, CA	343	461	550	535	601	10.4	13.9	16.5	16.0	18.0
San Francisco-Oakland-Hayward, CA	964	919	1,218	1,264	1,414	20.7	19.6	25.8	26.7	29.9
San Jose-Sunnyvale-Santa Clara, CA	96	135	200	233	234	4.9	6.8	10.0	11.7	11.7
Seattle-Tacoma-Bellevue, WA	221	303	424	422	507	5.9	8.0	11.0	10.7	12.9
St. Louis, MO-IL	138	151	245	233	238	4.9	5.4	8.7	8.3	8.5
Tampa-St. Petersburg-Clearwater, FL	258	364	296	392	491	8.7	12.0	9.6	12.5	15.6
Virginia Beach-Norfolk-Newport News, VA-NC	167	245	270	244	226	9.7	14.2	15.6	14.1	13.1
Washington-Arlington-Alexandria, DC-VA-MD-WV	320†	355	820	893	1,050	5.2†	5.8	13.2	14.3	16.8
SELECTED MSAs TOTAL	18,279	21,727	25,544	28,654	30,882	10.3	12.2	14.2	15.9	17.1

* MSAs were selected on the basis of the largest population in the 2010 US Census.

† The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

‡ 2016 county data for Alabama have been corrected and may not match previous reports.

Table 38. Unknown Duration or Late Syphilis* — Reported Cases and Rates of Reported Cases by State/Territory and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	197	232	347	354	461	4.1	4.8	7.1	7.2	9.4
Alaska	3	3	6	16	35	0.4	0.4	0.8	2.2	4.7
Arizona	532	680	829	1,243	1,444	7.8	9.8	11.8	17.3	20.1
Arkansas	145	131	156	287	414	4.9	4.4	5.2	9.5	13.7
California	4,966	6,216	7,787	9,609	11,817	12.7	15.8	19.7	24.3	29.9
Colorado	96	211	240	378	485	1.8	3.8	4.3	6.6	8.5
Connecticut	30	23	28	94	110	0.8	0.6	0.8	2.6	3.1
Delaware	21	34	88	63	55	2.2	3.6	9.1	6.5	5.7
District of Columbia	26	51	230	148	362	3.9	7.5	33.1	21.1	51.5
Florida	2,723	3,233	3,435	3,773	4,645	13.4	15.7	16.4	17.7	21.8
Georgia	1,245	1,478	1,580	1,773	2,144	12.2	14.3	15.1	16.9	20.4
Hawaii	14	13	10	27	34	1.0	0.9	0.7	1.9	2.4
Idaho	21	44	46	54	61	1.3	2.6	2.7	3.1	3.5
Illinois	1,285	1,623	1,399	1,570	1,760	10.0	12.7	10.9	12.3	13.8
Indiana	189	197	211	258	318	2.9	3.0	3.2	3.9	4.8
Iowa	88	127	96	112	126	2.8	4.1	3.1	3.5	4.0
Kansas	0	0	3	44	84	0.0	0.0	0.1	1.5	2.9
Kentucky	123	159	218	212	254	2.8	3.6	4.9	4.7	5.7

Louisiana	1,277	1,233	1,495	1,456	1,400	27.3	26.3	31.9	31.2	30.0
Maine	0	16	31	30	28	0.0	1.2	2.3	2.2	2.1
Maryland	749	719	783	913	888	12.5	12.0	12.9	15.1	14.7
Massachusetts	486	416	387	133	600	7.2	6.1	5.6	1.9	8.7
Michigan	393	424	447	622	652	4.0	4.3	4.5	6.2	6.5
Minnesota	220	289	327	330	354	4.0	5.2	5.9	5.9	6.3
Mississippi	136	107	71	50	91	4.5	3.6	2.4	1.7	3.0
Missouri	220	271	397	544	706	3.6	4.4	6.5	8.9	11.5
Montana	2	4	13	34	47	0.2	0.4	1.2	3.2	4.4
Nebraska	31	34	48	63	109	1.6	1.8	2.5	3.3	5.6
Nevada	133	347	575	775	985	4.6	11.8	19.2	25.5	32.5
New Hampshire	28	27	29	31	37	2.1	2.0	2.2	2.3	2.7
New Jersey	220	381	489	406	612	2.5	4.3	5.4	4.6	6.9
New Mexico	141	160	196	337	552	6.8	7.7	9.4	16.1	26.3
New York	2,975	3,484	3,592	3,404	3,232	15.0	17.6	18.1	17.4	16.5
North Carolina	783	756	1,015	1,075	1,231	7.8	7.5	9.9	10.4	11.9
North Dakota	14	16	22	30	42	1.8	2.1	2.9	3.9	5.5
Ohio	445	483	596	667	718	3.8	4.2	5.1	5.7	6.1
Oklahoma	83	90	95	253	577	2.1	2.3	2.4	6.4	14.6
Oregon	218	227	283	299	416	5.4	5.5	6.8	7.1	9.9
Pennsylvania	356	295	335	416	622	2.8	2.3	2.6	3.2	4.9

Rhode Island	48	81	79	117	213	4.5	7.7	7.5	11.1	20.1
South Carolina	41	36	40	27	92	0.8	0.7	0.8	0.5	1.8
South Dakota	21	15	20	23	28	2.4	1.7	2.3	2.6	3.2
Tennessee	575	713	543	688	898	8.7	10.7	8.1	10.2	13.3
Texas	4,047	4,666	6,035	5,819	5,707	14.7	16.7	21.3	20.3	19.9
Utah	73	106	97	152	169	2.4	3.5	3.1	4.8	5.3
Vermont	0	0	0	0	2	0.0	0.0	0.0	0.0	0.3
Virginia	276	235	551	659	722	3.3	2.8	6.5	7.7	8.5
Washington	366	400	480	504	632	5.1	5.5	6.5	6.7	8.4
West Virginia	17	45	25	64	109	0.9	2.5	1.4	3.5	6.0
Wisconsin	88	140	176	193	195	1.5	2.4	3.0	3.3	3.4
Wyoming	4	5	11	8	21	0.7	0.9	1.9	1.4	3.6
US TOTAL	26,170	30,676	35,992	40,137	47,296	8.1	9.5	11.1	12.3	14.5
Northeast	4,143	4,723	4,970	4,631	5,456	7.4	8.4	8.8	8.3	9.7
Midwest	2,994	3,619	3,742	4,456	5,092	4.4	5.3	5.5	6.5	7.5
South	12,464	13,918	16,707	17,614	20,050	10.3	11.4	13.5	14.1	16.1
West	6,569	8,416	10,573	13,436	16,698	8.6	11.0	13.7	17.2	21.4
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	16	10	5	9	21	9.9	6.0	3.0	5.4	12.5
Northern Mariana Islands	NR	NR	NR	1	1	—	—	—	1.9	1.9
Puerto Rico	166	117	110	138	155	4.8	3.4	3.3	4.2	4.7

Virgin Islands	10	0	0	NR	NR	9.7	0.0	0.0	—	—
TERRITORIES	192	127	115	148	177	5.1	3.4	3.2	4.2	5.0
TOTAL	26,362	30,803	36,107	40,285	47,473	8.1	9.4	11.0	12.2	14.4

* The case classification of 'Unknown duration or late syphilis' went into effect in January 2018. During 2014–2017, cases in this category include cases classified as late latent syphilis and late syphilis with clinical manifestations. See Technical Notes for a detailed explanation of changes to the syphilis case definition.

NR = No report.

NOTE: See Technical Notes for more information on interpreting case counts and rates in US territories.

Table 39. Unknown Duration or Late Syphilis* — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)† in Alphabetical Order, United States, 2015-2019

MSAs	Cases					Rates per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Atlanta-Sandy Springs-Roswell, GA	927‡	1,135	1,146	1,249	1,537	16.2‡	19.6	19.5	21.0	25.8
Austin-Round Rock, TX	175	212	226	295	366	8.7	10.3	10.7	13.6	16.9
Baltimore-Columbia-Towson, MD	316	327	389	470	456	11.3	11.7	13.9	16.8	16.3
Birmingham-Hoover, AL	62	57 §	68	85	123	5.4	5.0 §	5.9	7.4	10.7
Boston-Cambridge-Newton, MA-NH	319‡	271‡	266	104	440	6.7‡	5.7‡	5.5	2.1	9.0
Buffalo-Cheektowaga-Niagara Falls, NY	53	54	83	65	60	4.7	4.8	7.3	5.8	5.3
Charlotte-Concord-Gastonia, NC-SC	191	201	252	247	313	7.9	8.1	10.0	9.6	12.2
Chicago-Naperville-Elgin, IL-IN-WI	1,169	1,529	1,288	1,424	1,600	12.2	16.1	13.5	15.0	16.8
Cincinnati, OH-KY-IN	129	105	136	149	142	6.0	4.8	6.2	6.8	6.5
Cleveland-Elyria, OH	120	159	176	181	238	5.8	7.7	8.5	8.8	11.6
Columbus, OH	106	109	155	149	172	5.2	5.3	7.5	7.1	8.2
Dallas-Fort Worth-Arlington, TX	837	1,069	1,854	1,773	1,752	11.8	14.8	25.1	23.5	23.2
Denver-Aurora-Lakewood, CO	59	150	185	268	333	2.1	5.3	6.4	9.1	11.4
Detroit-Warren-Dearborn, MI	291	295	312	412	426	6.8	6.9	7.2	9.5	9.8
Hartford-West Hartford-East Hartford, CT	8	3	3	27	37	0.7	0.2	0.2	2.2	3.1
Houston-The Woodlands-Sugar Land, TX	1,592	1,805	2,060	1,857	1,374	23.9	26.7	29.9	26.5	19.6
Indianapolis-Carmel-Anderson, IN	93	87	106	125	148	4.7	4.3	5.2	6.1	7.2
Jacksonville, FL	179	181	249	254	274	12.3	12.2	16.5	16.6	17.9

Kansas City, MO-KS	40	87	92	183	234	1.9	4.1	4.3	8.5	10.9
Las Vegas-Henderson-Paradise, NV	102	315	513	675	857	4.8	14.6	23.3	30.2	38.4
Los Angeles-Long Beach-Anaheim, CA	1,902	2,532	3,164	3,338	3,708	14.3	19.0	23.7	25.1	27.9
Louisville-Jefferson County, KY-IN	92	112	127	121	132	7.2	8.7	9.8	9.3	10.2
Memphis, TN-MS-AR	256	336	257	322	406	19.0	25.0	19.1	23.8	30.1
Miami-Fort Lauderdale-West Palm Beach, FL	1,524	1,868	1,745	1,920	2,312	25.3	30.8	28.3	31.0	37.3
Milwaukee-Waukesha-West Allis, WI	43	70	84	85	68	2.7	4.5	5.3	5.4	4.3
Minneapolis-St. Paul-Bloomington, MN-WI	192	251	261	265	272	5.4	7.1	7.2	7.3	7.5
Nashville-Davidson-Murfreesboro-Franklin, TN	161	196	101	168	253	8.8	10.5	5.3	8.7	13.1
New Orleans-Metairie, LA	370	363	391	394	333	29.3	28.6	30.6	31.0	26.2
New York-Newark-Jersey City, NY-NJ-PA	2,915	3,534	3,687	3,506	3,445	14.4	17.5	18.1	17.5	17.2
Oklahoma City, OK	32	47	42	104	220	2.4	3.4	3.0	7.4	15.8
Orlando-Kissimmee-Sanford, FL	344	416	509	522	712	14.4	17.0	20.3	20.3	27.7
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	314	266	342	380	489	5.2	4.4	5.6	6.2	8.0
Phoenix-Mesa-Scottsdale, AZ	394	534	645	945	968	8.6	11.5	13.6	19.5	19.9
Pittsburgh, PA	11	11	12	23	30	0.5	0.5	0.5	1.0	1.3
Portland-Vancouver-Hillsboro, OR-WA	171	173	207	221	284	7.2	7.1	8.4	8.9	11.5
Providence-Warwick, RI-MA	74‡	102‡	105‡	123	263	4.6‡	6.3‡	6.5‡	7.6	16.2
Raleigh, NC	125	109	169	170	206	9.8	8.4	12.7	12.5	15.1
Richmond, VA	36	35	111	107	136	2.8	2.7	8.6	8.2	10.4
Riverside-San Bernardino-Ontario, CA	508	707	911	1,319	1,798	11.3	15.6	19.9	28.5	38.9

Sacramento-Roseville-Arden-Arcade, CA	205	199	264	361	471	9.0	8.7	11.4	15.4	20.1
Salt Lake City, UT	50	76	61	80	84†	4.3	6.4	5.1	6.5	6.9†
San Antonio-New Braunfels, TX	483	531	612	585	636	20.3	21.9	24.7	23.2	25.3
San Diego-Carlsbad, CA	367	425	576	697	794	11.1	12.8	17.3	20.8	23.7
San Francisco-Oakland-Hayward, CA	553	629	691	800	959	11.9	13.4	14.6	16.9	20.3
San Jose-Sunnyvale-Santa Clara, CA	129	145	237	339	494	6.5	7.3	11.9	17.0	24.7
Seattle-Tacoma-Bellevue, WA	224	268	321	314	381	6.0	7.1	8.3	8.0	9.7
St. Louis, MO-IL	165	160	254	295	374	5.9	5.7	9.0	10.5	13.3
Tampa-St. Petersburg-Clearwater, FL	299	326	392	393	502	10.0	10.8	12.7	12.5	16.0
Virginia Beach-Norfolk-Newport News, VA-NC	90	65	122	201	202	5.2	3.8	7.1	11.6	11.7
Washington-Arlington-Alexandria, DC-VA-MD-WV	501	474	827	816	1,002	8.2	7.7	13.3	13.1	16.0
SELECTED MSAs TOTAL	19,298	23,111	26,786	28,906	32,816	10.9	13.0	14.9	16.0	18.2

* The case classification of 'Unknown duration or late syphilis' went into effect in January 2018. During 2015–2017, cases in this category include cases classified as late latent syphilis and late syphilis with clinical manifestations. See Technical Notes for a detailed explanation of changes to the syphilis case definition.

† MSAs were selected on the basis of the largest population in the 2010 US Census.

‡ The variable used to identify county, which is used to classify cases into MSAs, was complete for ≤95% of cases in a state contributing data to this MSA. See Technical Notes for more information.

§ 2016 county data for Alabama have been corrected and may not match previous reports.

Table 40. Congenital Syphilis — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2019

Rank*	State†	Cases	Rate per 100,000 Live Births
1	Texas	528	138.2
2	Arizona	109	133.1
3	New Mexico	28	117.8
4	Nevada	41	114.7
5	Louisiana	68	111.4
6	California	445	94.3
7	Oklahoma	43	85.6
8	Florida	145	64.8
9	Arkansas	21	56.0
	US TOTAL‡	1,870	48.5
10	Maryland	31	43.3
11	Oregon	18	41.3
12	Georgia	52	40.2
13	West Virginia	6	32.1
14	Minnesota	21	30.6
15	South Carolina	17	29.8
16	Alabama	15	25.4
17	Missouri	18	24.6
18	Kansas	9	24.6
19	North Carolina	27	22.5
20	Illinois	32	21.4
21	Delaware	2	18.4
22	Washington	15	17.1
23	Hawaii	3	17.1
24	New Hampshire	2	16.5

25	South Dakota	2	16.5
26	Kentucky	9	16.4
27	Tennessee	13	16.0
28	Indiana	13	15.8
29	Colorado	10	15.5
30	Michigan	17	15.3
31	New Jersey	15	14.8
32	Ohio	19	13.9
33	Massachusetts	9	12.7
34	New York	27	11.8
35	Virginia	11	11.0
36	Pennsylvania	13	9.4
37	Connecticut	3	8.5
38	Montana	1	8.5
39	Utah	4	8.2
40	Mississippi	3	8.0
41	Idaho	1	4.5
42	Wisconsin	2	3.1
43	Iowa	1	2.6
	Alaska	0	0.0
	Maine	0	0.0
	Nebraska	0	0.0
	North Dakota	0	0.0
	Rhode Island	0	0.0
	Vermont	0	0.0
	Wyoming	0	0.0

* States were ranked by rate; then case count, then in alphabetical order, with rates shown rounded to the nearest tenth.

† Mother's state of residence was used to assign case.

‡ Total includes cases reported by the District of Columbia with 1 case and a rate of 10.5, but excludes territories.

Table 41. Congenital Syphilis — Reported Cases and Rates of Reported Cases by Year of Birth, by State/Territory* and Region in Alphabetical Order, United States, 2015-2019

State/Territory	Cases					Rates per 100,000 Live Births				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Alabama	3	4	6	7	15	5.0	6.8	10.2	11.9	25.4
Alaska	0	0	0	1	0	0.0	0.0	0.0	9.6	0.0
Arizona	14	17	32	61	109	16.4	20.1	39.1	74.5	133.1
Arkansas	5	6	8	25	21	12.9	15.7	21.3	66.6	56.0
California	140	207	281	329	445	28.5	42.3	59.6	69.8	94.3
Colorado	0	4	4	8	10	0.0	6.0	6.2	12.4	15.5
Connecticut	1	0	0	2	3	2.8	0.0	0.0	5.7	8.5
Delaware	1	0	0	0	2	9.0	0.0	0.0	0.0	18.4
District of Columbia	1	1	0	1	1	10.4	10.1	0.0	10.5	10.5
Florida	40	61	99	109	145	17.8	27.1	44.3	48.7	64.8
Georgia	21	21	23	31	52	16.0	16.1	17.8	24.0	40.2
Hawaii	2	1	3	4	3	10.9	5.5	17.1	22.8	17.1
Idaho	0	0	0	1	1	0.0	0.0	0.0	4.5	4.5
Illinois	31	18	22	30	32	19.6	11.7	14.7	20.1	21.4
Indiana	5	8	8	1	13	5.9	9.6	9.7	1.2	15.8
Iowa	0	1	2	3	1	0.0	2.5	5.2	7.8	2.6
Kansas	0	2	1	8	9	0.0	5.3	2.7	21.9	24.6
Kentucky	1	5	6	9	9	1.8	9.0	11.0	16.4	16.4

Louisiana	54	47	57	43	68	83.5	74.4	93.4	70.5	111.4
Maine	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Maryland	18	16	20	29	31	24.5	21.9	27.9	40.5	43.3
Massachusetts	4	3	0	0	9	5.6	4.2	0.0	0.0	12.7
Michigan	11	13	10	14	17	9.7	11.5	9.0	12.6	15.3
Minnesota	2	7	2	10	21	2.9	10.0	2.9	14.6	30.6
Mississippi	0	2	1	3	3	0.0	5.3	2.7	8.0	8.0
Missouri	4	8	10	18	18	5.3	10.7	13.7	24.6	24.6
Montana	0	0	1	0	1	0.0	0.0	8.5	0.0	8.5
Nebraska	0	1	1	0	0	0.0	3.8	3.9	0.0	0.0
Nevada	8	12	24	31	41	22.0	33.1	67.1	86.7	114.7
New Hampshire	0	0	0	1	2	0.0	0.0	0.0	8.3	16.5
New Jersey	0	12	14	13	15	0.0	11.7	13.8	12.8	14.8
New Mexico	2	3	1	10	28	7.7	12.1	4.2	42.1	117.8
New York	12	13	16	28	27	5.1	5.5	7.0	12.2	11.8
North Carolina	9	18	25	19	27	7.4	14.9	20.8	15.8	22.5
North Dakota	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Ohio	17	12	18	21	19	12.2	8.7	13.2	15.3	13.9
Oklahoma	7	3	7	11	43	13.2	5.7	13.9	21.9	85.6
Oregon	6	6	8	20	18	13.1	13.2	18.3	45.8	41.3
Pennsylvania	7	5	7	9	13	5.0	3.6	5.1	6.5	9.4

Rhode Island	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
South Carolina	3	9	8	9	17	5.2	15.7	14.0	15.8	29.8
South Dakota	0	2	3	1	2	0.0	16.3	24.7	8.2	16.5
Tennessee	5	8	10	13	13	6.1	9.9	12.3	16.0	16.0
Texas	52	71	179	371	528	12.9	17.8	46.9	97.1	138.2
Utah	0	0	0	1	4	0.0	0.0	0.0	2.1	8.2
Vermont	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Virginia	3	8	12	10	11	2.9	7.8	12.0	10.0	11.0
Washington	5	3	6	6	15	5.6	3.3	6.9	6.9	17.1
West Virginia	0	2	3	1	6	0.0	10.5	16.1	5.4	32.1
Wisconsin	0	1	3	1	2	0.0	1.5	4.6	1.5	3.1
Wyoming	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
US TOTAL	494	641	941	1,323	1,870	12.4	16.2	24.4	34.3	48.5
Northeast	24	33	37	53	69	3.8	5.3	6.0	8.6	11.2
Midwest	70	73	80	107	134	8.4	8.8	9.9	13.2	16.5
South	223	282	464	691	992	14.4	18.4	30.9	45.9	66.0
West	177	253	360	472	675	18.4	26.4	38.9	51.0	72.9
American Samoa	NR	NR	NR	0	0	—	—	—	0.0	0.0
Guam	2	0	0	0	0	59.4	0.0	0.0	0.0	0.0
Northern Mariana Islands	NR	NR	NR	0	0	—	—	—	0.0	0.0
Puerto Rico	5	5	7	9	7	16.0	17.7	28.8	37.0	28.8

Virgin Islands	0	0	0	NR	0	0.0	0.0	0.0	—	0.0
TERRITORIES	7	5	7	9	7	19.5	15.2	24.3	31.1	23.2
TOTAL	501	646	948	1,332	1,877	12.5	16.2	24.4	34.3	48.3

* Mother's state/territory of residence was used to assign case.

NOTE: See Technical Notes for more information on interpreting case counts and rates in US territories.

NR = No report.

Table 42. Congenital Syphilis — Reported Cases and Rates of Reported Cases* by Year of Birth and Race/Hispanic Ethnicity of Mother, United States, 2015-2019

Year of Birth	American Indian/Alaska Natives		Asian/Pacific Islanders		Blacks		Whites		Other		Hispanics		Unknown		Total	
	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates
2015	4	10.7	15	5.5	208	35.0	97	4.5	7		143	15.5	20		494	12.4
2016	12	32.8	25	8.9	263	44.7	122	5.8	8		189	20.6	22		641	16.2
2017	14	40.2	13	4.7	361	61.0	213	10.4	12		309	34.4	19		941	24.4
2018	29	83.2	26	9.4	516	87.2	291	14.2	13		413	46.0	35		1,323	34.3
2019	54	154.9	34	12.3	630	106.4	453	22.1	36		583	64.9	80		1,870	48.5

* Per 100,000 live births.

NOTE: No population data exist for other or unknown race; therefore, rates are not calculated.

Table A1. Selected STDs — Percentage of Unknown, Missing, or Invalid Values for Selected Variables by State and by Nationally Notifiable STD, 2019

State	Primary and Secondary Syphilis				
	Percentage Unknown Race/Hispanic Ethnicity	Percentage Unknown Age	Percentage Unknown Sex	Percentage Unknown Sex of Sex Partners	Percentage Unknown County
Alabama	0.5	0.0	0.0	30.6	0.0
Alaska	0.8	0.0	0.0	7.8	0.8
Arizona	3.3	0.0	0.0	9.8	0.0
Arkansas	2.2	0.0	0.0	11.6	0.0
California	8.5	0.0	0.4	16.4	0.0
Colorado	2.3	0.0	0.0	10.7	0.0
Connecticut	4.8	0.5	0.5	37.1	5.2
Delaware	22.3	0.0	0.0	44.7	0.0
District of Columbia	11.0	0.0	1.3	46.4	0.0
Florida	5.8	0.0	0.0	19.8	0.0
Georgia	1.0	0.0	0.0	27.4	0.0
Hawaii	2.5	0.0	1.7	19.2	0.0
Idaho	21.3	0.0	0.0	31.9	0.0
Illinois	7.5	0.0	0.0	33.7	0.0
Indiana	0.6	0.0	0.0	13.7	0.0
Iowa	0.8	0.0	0.0	7.6	0.0

Kansas	3.7	0.0	0.0	19.5	0.0
Kentucky	2.7	0.0	0.0	22.1	0.0
Louisiana	0.0	0.0	0.0	9.4	0.0
Maine	1.8	0.0	0.0	69.1	0.0
Maryland	0.1	0.0	0.0	11.3	0.0
Massachusetts	3.1	0.0	0.7	7.4	0.2
Michigan	0.4	0.0	0.0	6.8	0.0
Minnesota	1.3	0.0	1.0	30.4	0.0
Mississippi	0.0	0.0	0.0	5.7	0.0
Missouri	1.1	0.0	0.0	12.5	0.0
Montana	0.0	0.0	0.0	25.4	6.0
Nebraska	17.6	0.7	0.0	44.9	8.8
Nevada	27.6	0.0	0.0	13.1	0.1
New Hampshire	23.4	0.0	0.0	17.0	0.0
New Jersey	4.8	0.0	0.2	9.2	0.0
New Mexico	18.4	0.0	0.0	20.2	0.0
New York	6.0	0.0	0.0	17.3	0.0
North Carolina	0.0	0.0	0.0	13.5	2.5
North Dakota	4.4	0.0	0.0	15.6	0.0
Ohio	0.1	0.0	0.0	8.3	0.0
Oklahoma	0.3	0.0	0.0	6.2	0.0

Oregon	7.7	0.0	0.0	16.5	0.0
Pennsylvania	8.1	0.0	0.1	11.9	0.0
Rhode Island	5.0	0.0	0.0	17.8	0.0
South Carolina	0.8	0.0	0.8	6.2	0.0
South Dakota	0.0	0.0	0.0	8.3	0.0
Tennessee	0.0	0.0	0.0	12.0	0.0
Texas	5.2	0.0	1.0	26.3	0.3
Utah	2.9	0.0	0.0	8.7	10.9
Vermont	36.4	0.0	0.0	81.8	9.1
Virginia	0.5	0.0	2.1	8.6	0.0
Washington	8.5	0.0	0.1	7.8	0.0
West Virginia	0.0	0.0	0.0	22.8	1.3
Wisconsin	1.7	0.0	0.0	76.5	0.6
Wyoming	45.5	0.0	0.0	45.5	0.0
U.S. Total	5.4	0.0	0.2	17.3	0.2

State	Gonorrhea				Chlamydia			
	Percentage Unknown Race/Hispanic Ethnicity	Percentage Unknown Age	Percentage Unknown Sex	Percentage Unknown County	Percentage Unknown Race/Hispanic Ethnicity	Percentage Unknown Age	Percentage Unknown Sex	Percentage Unknown County
Alabama	33.6	0.1	0.3	0.0	40.8	0.1	0.3	0.0
Alaska	7.7	0.0	0.0	0.6	14.0	0.0	0.0	2.4
Arizona	23.6	0.0	0.1	0.0	35.0	0.0	0.1	0.0
Arkansas	11.5	0.0	0.0	0.0	14.6	0.0	0.1	0.0
California	23.2	0.2	0.4	0.0	38.6	0.2	0.3	0.0
Colorado	22.4	0.0	0.0	0.0	35.8	0.0	0.0	0.0
Connecticut	49.0	0.1	0.1	3.4	56.2	0.1	0.4	3.4
Delaware	8.4	0.1	0.1	0.0	13.8	0.0	0.3	0.0
District of Columbia	71.2	0.2	1.0	0.0	92.8	0.4	1.2	0.0
Florida	14.2	0.0	0.0	0.0	22.0	0.0	0.0	0.0
Georgia	12.2	0.1	1.4	6.3	20.3	0.1	1.7	7.0
Hawaii	45.5	0.1	0.6	0.0	61.4	0.1	0.2	0.0
Idaho	26.1	0.3	0.0	0.0	31.2	0.0	0.0	0.0
Illinois	10.9	0.0	0.3	0.0	16.0	0.0	0.3	0.0
Indiana	10.8	0.0	0.1	3.6	16.9	0.1	0.0	4.8
Iowa	3.1	0.0	0.0	0.0	9.7	0.0	0.0	0.0
Kansas	13.8	0.0	0.0	0.3	24.1	0.0	0.0	0.0
Kentucky	42.5	0.4	0.6	0.0	50.7	0.3	0.5	0.4

Louisiana	1.9	0.0	0.0	0.0	4.8	0.0	0.0	0.0
Maine	5.1	0.0	0.0	0.0	29.8	58.7	0.0	2.1
Maryland	15.6	0.0	0.0	0.0	32.9	0.0	0.0	0.0
Massachusetts	31.3	0.1	0.6	0.9	53.8	0.1	0.3	2.9
Michigan	15.1	0.0	0.0	0.0	21.4	0.0	0.0	0.0
Minnesota	14.5	0.0	0.3	0.9	16.9	0.0	0.1	1.0
Mississippi	21.9	0.0	0.1	0.0	30.6	0.0	0.2	0.0
Missouri	8.6	0.0	0.0	0.0	12.5	0.0	0.0	0.0
Montana	0.8	0.1	0.0	0.3	1.6	0.3	0.1	1.3
Nebraska	17.0	0.0	0.1	0.1	23.6	0.0	0.1	0.0
Nevada	56.4	0.0	0.1	0.0	60.1	0.0	0.2	0.0
New Hampshire	16.1	0.0	0.0	0.0	23.9	0.0	0.0	0.0
New Jersey	35.6	0.0	0.2	0.1	50.0	0.0	0.3	0.1
New Mexico	32.2	0.0	0.1	0.0	35.0	0.0	0.1	0.0
New York	21.6	0.1	0.0	0.0	33.9	0.2	0.0	0.0
North Carolina	17.1	0.0	0.0	0.2	21.8	0.0	0.0	1.3
North Dakota	7.9	0.0	0.0	0.0	17.8	0.1	0.2	0.0
Ohio	13.8	0.0	0.0	1.4	19.7	0.0	0.0	1.8
Oklahoma	11.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0
Oregon	14.5	0.0	0.3	0.0	28.8	0.0	0.1	0.0
Pennsylvania	20.3	0.0	0.1	0.0	28.7	0.0	0.1	0.0

Rhode Island	13.9	0.0	0.0	0.3	18.8	0.0	0.0	0.9
South Carolina	30.1	0.0	0.4	0.5	38.4	0.0	0.3	0.8
South Dakota	1.4	0.0	0.0	9.7	6.2	0.0	0.0	8.1
Tennessee	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Texas	33.0	0.3	0.6	0.3	44.3	0.0	0.4	0.2
Utah	4.1	0.0	0.0	9.3	8.2	0.0	0.0	7.7
Vermont	30.9	0.0	0.0	1.1	45.6	0.0	0.2	0.9
Virginia	14.0	0.0	0.2	0.0	30.0	0.0	0.1	0.0
Washington	15.7	0.0	0.1	0.0	33.0	0.4	0.1	0.0
West Virginia	30.6	0.0	0.1	5.6	35.0	4.7	0.0	6.1
Wisconsin	9.4	0.0	0.1	0.0	10.9	0.0	0.1	0.0
Wyoming	43.8	0.0	0.0	0.0	63.5	0.0	0.0	0.0
U.S. Total	19.7	0.1	0.2	0.5	29.5	0.2	0.2	0.7

Table A2. Reported Cases of STDs by Reporting Source and Sex, United States, 2019

Disease	Non-STD Clinic			STD Clinic			Total		
	Male	Female	Total*	Male	Female	Total*	Male†	Female†	Total‡
Chlamydia	488,821	934,566	1,426,509	55,149	45,185	100,453	644,337	1,160,470	1,808,703
Gonorrhea	273,188	200,317	474,679	37,756	15,056	52,875	361,586	253,359	616,392
Primary Syphilis	9,263	1,615	10,900	2,402	238	2,641	12,899	2,073	15,003
Secondary Syphilis	14,216	3,500	17,761	3,627	553	4,188	19,503	4,420	23,989
Early Non-Primary Non-Secondary Syphilis	26,652	5,636	32,378	4,640	864	5,519	34,427	7,081	41,655
Syphilis, Unknown Duration or Late	22,878	10,918	33,967	2,850	946	3,807	32,411	14,598	47,296
Chancroid	2	2	4	0	0	0	6	2	8

* Total includes cases reported with unknown sex.

† Total includes cases reported with unknown reporting source.

‡ Total includes cases reported with unknown sex and reporting source.

Technical Notes

Sexually Transmitted Disease Surveillance 2019 presents statistics and trends for sexually transmitted diseases (STDs) in the United States through 2019. This annual publication is intended as a reference document for policy makers, program managers, health planners, researchers, and others who are concerned with the public health implications of these diseases. The figures and tables in this edition supersede those in earlier publications of these data. The surveillance information in this report is based on case notification data provided to the Centers for Disease Control and Prevention (CDC) through the National Notifiable Diseases Surveillance System (NNDSS) and data collected through projects and programs that monitor STDs in various settings, including the National Job Training Program (NJTP), the STD Surveillance Network (SSuN), and the Gonococcal Isolate Surveillance Project (GISP).

The majority of data included presents trends in diagnoses of three STDs: chlamydia, gonorrhea, and syphilis, including congenital syphilis. It is important to note that these data reflect only a portion of STDs occurring in the US population. Over 30 pathogens can be sexually transmitted, including common STDs, such as herpes simplex virus, which causes genital herpes, and human papillomavirus, which can lead to genital warts and cervical cancer. Additionally, STDs are often asymptomatic and may not be diagnosed. Published estimates of the burden of STDs in the United States, including estimated prevalence, incidence, and cost, can be found in the January 2021 special issue of the journal *Sexually Transmitted Diseases*, available here: <https://journals.lww.com/stdjournal/pages/collectiondetails.aspx?TopicalCollectionId=4>

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*As documented on the Council of State and Territorial Epidemiologists website (<https://www.cste.org/page/StateEpi>) as of January 20, 2021

National Notifiable Diseases Surveillance System (NNDSS)

Four STDs are nationally notifiable conditions: chlamydia, gonorrhea, syphilis, and chancroid. STD control programs in state, local, and territorial health departments (also referred to as jurisdictions) collect case reports for these conditions using case definitions developed by the Council of State and Territorial Epidemiologists (CSTE) and CDC. Health departments voluntarily provide STD case data to the Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, CDC for national surveillance efforts. HIV, which can be sexually transmitted, is also a nationally notifiable condition; national data for trends in diagnosed HIV are available here: <https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>

National data collection for gonorrhea, syphilis, and chancroid began in 1941; however, gonorrhea, syphilis, and chancroid became nationally notifiable in 1944. Data collection for chlamydia began in 1984 and chlamydia was made nationally notifiable in 1995; however, chlamydia was not reportable in all 50 states and the District of Columbia until 2000. For more information on nationally notifiable conditions, please refer to the NNDSS website: <https://wwwn.cdc.gov/nndss/conditions/>

Reporting formats

NNDSS STD data presented in this report are compiled from electronic data received through the National Electronic Telecommunications System for Surveillance (NETSS) and via Health level 7 (HL7) messaging using National Electronic Disease Surveillance System (NEDSS) standards. Additionally, select jurisdictions provide congenital syphilis cases via REDCap and a few jurisdictions (e.g., territories) provide data using standardized hard copy reporting forms. Surveillance data sent to CDC through December 21, 2020 are included in this report.

Prior to 2003, the following hard copy forms were used to provide NNDSS STD data to CDC:

FORM CDC 73.998: *Monthly Surveillance Report of Early Syphilis*. This monthly hard copy reporting form was used during 1984–2002 to report summary data for primary and secondary (P&S) syphilis and early latent syphilis by county and state.

FORM CDC 73.688: *Sexually Transmitted Disease Morbidity Report*. This quarterly hard copy reporting form was used during 1963–2002 to report summary data for all stages of syphilis, congenital syphilis, gonorrhea, chancroid, chlamydia, and other STDs by sex and source of report (private versus public) for all 50 states, the District of Columbia, 64 selected cities, and territories of the United States. Chlamydia became a nationally notifiable condition in 1995 and the form was modified to support reporting of chlamydia that year. Congenital syphilis was dropped from this aggregate form in 1995 to encourage use of the congenital syphilis case-specific CDC 73.126 form that was introduced in 1983.

FORM CDC 73.2638: *Report of Civilian Cases of Primary & Secondary Syphilis, Gonorrhea, and Chlamydia by Reporting Source, Sex, Race/Ethnicity, and Age Group*. This annual hard copy form was used during 1981–2002 to report summary data for P&S syphilis, gonorrhea, and chlamydia by age, race, sex, and source of report (private versus public) for all 50 states, seven large cities (Baltimore, Chicago, New York City, Los Angeles, Philadelphia, San Francisco, and the District of Columbia), and territories of the United States. Chlamydia became a nationally notifiable condition in 1995, and the form was modified to support reporting of chlamydia that year.

FORM CDC 73.126: *Congenital Syphilis (CS) Case Investigation and Reporting*. This case-specific hard copy form was first used in 1983 and was revised in 1990 and in 2013 to align with changes to the congenital syphilis case definition; minor revisions were also made in 2010. It continues to form the basis of the congenital syphilis REDCap form used by some jurisdictions.

As of December 31, 2003, all 50 states and the District of Columbia converted from summary hard copy reporting to electronic submission of line-listed (i.e., case-specific) data for chlamydia, gonorrhea, syphilis, and chancroid through NETSS. Puerto Rico converted to electronic reporting in 2006 for all STDs, excluding congenital syphilis. American Samoa, Guam, Northern Mariana Islands, and the Virgin Islands continue to report STD data through summary hard copy forms. In 2019, six jurisdictions

(Connecticut, Idaho, Michigan, North Carolina, Oregon, and South Carolina) provided STD case data to CDC via HL7 messaging. In 2019, 20 states/cities that reported congenital syphilis data through REDCap.

Reporting Practices

Although most state and local STD programs generally adhere to the national notifiable STD case definitions collaboratively developed by CSTE and CDC, differences in policies and systems for collecting surveillance data may exist. Thus, comparisons of case numbers and rates between jurisdictions should be interpreted with caution. However, because case definitions and surveillance activities within a given area remain relatively stable over time, trends should be minimally affected by these differences.

Chlamydia and Gonorrhea Reporting

Trends in rates of reported cases of chlamydia and gonorrhea are influenced by changes in incidence of infection, as well as changes in diagnostic, screening, and reporting practices. As both chlamydial and gonococcal infections can be asymptomatic, the number of infections identified and reported can increase as more people are screened—even when incidence is flat or decreasing. Beginning in 2000, the expanded use of more sensitive diagnostic tests (e.g., nucleic acid amplification tests) likely increased the number of infections identified and reported independently of increases in incidence. Additionally, expanded testing at extragenital (rectal and pharyngeal) anatomic sites likely increased the number of infections identified. Further, the increased use of electronic laboratory reporting over the last decade or so also likely increased the proportion of diagnosed infections reported. Although chlamydia has been a nationally notifiable condition since 1994, it was not until 2000 that all 50 states and the District of Columbia required reporting of chlamydia cases. National chlamydia case rates prior to 2000 reflect incomplete reporting. Consequently, increasing case rates over time may reflect more complete reporting, as well as increases in incidence of infection, screening coverage, and use of more sensitive tests. Likewise, decreases in case rates may suggest decreases in incidence of infection or screening coverage.

Syphilis Reporting

The surveillance case definition for syphilis has changed over time. Since 2018, the category of “total syphilis” or “all stages of syphilis” includes: primary, secondary, early non-primary non-secondary, unknown duration or late, congenital syphilis, and syphilitic stillbirth. However, in previous years, “total syphilis” or “all stages of syphilis” have included different case classifications. For example, in the 1990 syphilis case definition, “total syphilis” or “all stages of syphilis” included: primary, secondary, latent, early latent, late latent, latent unknown duration, neurosyphilis, syphilitic stillbirth, and congenital syphilis. More information on syphilis case definition changes over time can be found at: <https://wwwn.cdc.gov/nndss/conditions/syphilis/case-definition/2018/>.

Congenital Syphilis Reporting

Prior to 1989, reported cases of congenital syphilis were defined and classified on the basis of a complex set of clinical and serologic features known as the Kaufman criteria. The Kaufman criteria, however, were not designed for use as a surveillance case definition. In 1988, CDC developed a surveillance case definition for congenital syphilis, which was more sensitive (i.e., inclusive) than the Kaufman clinical criteria. At the same time, many STD programs began to enhance active case finding for congenital syphilis. These surveillance changes, in addition to rising morbidity, led to a dramatic increase in the number of congenital syphilis cases reported during 1989–1991. By January 1, 1992, the new congenital syphilis case definition was fully implemented by all reporting areas. Since 1995, congenital syphilis cases are reported by state and city of residence of the mother and by the reported race/Hispanic ethnicity of the mother. Congenital syphilis is usually diagnosed at birth but can be identified years later; therefore, cases are sent to CDC when they are reported to local public health officials and are assigned to the infant’s year of birth. Congenital syphilis data reported after publication of the current annual STD surveillance report will appear in subsequent reports.

Missed prevention opportunities among mothers of infants with congenital syphilis are identified based on information reported to CDC related to prenatal care, syphilis testing, and treatment. To describe the primary missed prevention opportunity, each

reported congenital syphilis case is assigned to one of five mutually exclusive categories, assigned by hierarchy: 1) lack of timely prenatal care with no timely syphilis testing; 2) lack of timely syphilis testing despite timely prenatal care; 3) lack of adequate maternal treatment despite a timely syphilis diagnosis; 4) late identification of seroconversion during pregnancy (identified <30 days before delivery); or 5) clinical evidence of congenital syphilis despite maternal treatment completion. For categorization purpose, congenital syphilis prevention opportunities are considered timely if they occurred ≥ 30 days before delivery. Adequate maternal treatment is defined as completion of a penicillin-based regimen recommended for the mother's stage of syphilis which was initiated ≥ 30 days before delivery. For a case of congenital syphilis to be categorized as resulting from lack of adequate maternal treatment despite a timely syphilis diagnosis, a pregnant person would 1) need to have evidence of a diagnosis of syphilis during pregnancy with syphilis testing performed ≥ 30 days before delivery and 2) not have received adequate treatment for syphilis. Those who did not receive adequate treatment had no treatment at all, only received 1 dose when 3 doses were indicated based on maternal staging, received the doses at improper intervals, received the first dose of treatment <30 days before delivery, or were treated with a nonpenicillin-based regimen.

Race/Hispanic Ethnicity

In April 2008, the NETSS record layout was updated to conform to the Office of Management and Budget's (OMB's) current government-wide standard for collection and reporting of race/Hispanic ethnicity data. The OMB standards were first issued in 1997. Beginning with the publication of *Sexually Transmitted Disease Surveillance 2012*, the majority of race/Hispanic ethnicity data are presented according to the current OMB standard categories: American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander (NHOPI), White, and Multirace. Cases are reported with information on both race and Hispanic ethnicity. Cases reported as Hispanic are classified as Hispanic, regardless of their race, and include cases with unknown race. Cases reported as non-Hispanic or of unknown Hispanic ethnicity are considered non-Hispanic and categorized based on race.

Most reporting jurisdictions are locally compliant with current OMB standards and report in the current OMB standard race categories, including Multirace; however, in 2019, a small number of jurisdictions reported race in pre-1997 single race categories or reported race using categories based on current OMB standards but were unable to report more than one race per person. For this report, all race/Hispanic ethnicity data reported by jurisdictions are summarized in tables, charts, and interpretative text regardless of local compliance with the 1997 OMB standards. The few cases reported in the legacy 'Asian/Pacific Islander' category from non-OMB compliant jurisdictions are re-coded to 'Unknown' because these cases cannot be properly re-coded into a category currently in OMB standards. Therefore, the rates for Asians, NHOPI, or Multirace individuals may be minimally under- or overestimated. An exception to this approach is the presentation of congenital syphilis data; due to current availability of data from the National Center for Health Statistics (NCHS) Vital Statistics Cooperative Program, congenital syphilis data are presented using NCHS bridged race categories to allow for the display of data across several years.

In 2019, 29.7% of chlamydia cases and 19.7% of gonorrhea cases were reported with missing information on race/Hispanic ethnicity. (Table A1) Given the substantial number of these infections diagnosed, case data are primarily based on information received on the laboratory report which may not contain information about race/Hispanic ethnicity. As most P&S syphilis cases are investigated by local public health officials, only a small proportion (5.6%) were reported with missing information on race/Hispanic ethnicity in 2019. Cases missing race and/or Hispanic ethnicity are not included in the calculation of rates by race/Hispanic ethnicity. As a consequence, rate data presented in this report underestimate actual case incidence in these population categories and caution should be used in interpreting specific rate data points.

Reporting Sources

Before 1996, states classified the source of case reports as either private source (including private physicians, hospitals, and institutions) or public source (primarily STD clinics). As states began reporting morbidity data electronically in 1996, the classification categories for source of case reports expanded to include the following data sources: STD clinics, HIV counseling and testing sites, drug treatment clinics, family planning clinics, prenatal/obstetrics clinics, tuberculosis clinics, private physicians/health maintenance organizations, hospitals (inpatient), emergency rooms, correctional facilities, laboratories, blood banks, the National Job Training Program, school-based clinics, mental health providers, the military, the Indian Health Service, and other unspecified sources. For figures displaying trends in source of report, the five most commonly reported sources for

the population included in the figure, along with trends for all other reporting sources combined into the “All Other” category, and trends in the proportion of cases with unknown reporting source. [Table A2](#) provides trends by STD clinic versus non-STD clinic.

Geography

Data are presented at the national, regional, state and territory, metropolitan statistical areas (MSA), and county level. Data are presented for MSAs with the largest populations according to 2010 United States census data. Reported cases are assigned to MSAs based on the reported county; cases reported with a missing value for the county variable cannot be assigned to an MSA. Consequently, if a jurisdiction reports cases missing values for the county variable, reported rates for MSAs in their jurisdiction may be incomplete. Additionally, relative rankings of case counts by counties may be impacted by completeness of the county variable. [Table A1](#) displays the percentage of cases reported with missing county information in each state for P&S syphilis, chlamydia, and gonorrhea. For more information on the MSA definitions used in this report, go to: <https://www.census.gov/programs-surveys/metro-micro.html>.

Selected tables and figures include data from five U.S. territories (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands); however, the majority of national case counts and rates presented in the report exclude data from these territories. There are a number of issues affecting STD surveillance data reported to CDC from the US territories, including limited access to test kits, resulting in an inability to test or screen for undetermined periods of time, as well as a variety of data collection, entry, and transmission issues. As such, the data likely underestimate the total STD burden in these areas and should be interpreted cautiously.

Population Denominators and Rate Calculations

2000–2019 Rates and Population

For those figures and tables presenting race using the 1997 Office of Management and Budget (OMB) standards, non-bridged-race data provided directly by the United States Census Bureau were used to calculate rates. To align with previous reports, the 2018 population estimates were used to calculate 2019 rates. Because of the use of the updated population data, rates for 2000–2018 may be different from those presented in previous STD surveillance reports.

Population estimates for Puerto Rico, American Samoa, Guam, Northern Mariana Islands, and the Virgin Islands were obtained from the US Census Bureau International Programs Web site at: www.census.gov/programs-surveys/international-programs.html

1990–1999 Rates and Population

The population counts for 1990 through 1999 incorporated the bridged single-race estimates of the April 1, 2000 US resident population. These files were prepared by the US Census Bureau with support from the National Cancer Institute.

1981–1989 Rates and Population

Rates were calculated by using US Census Bureau population estimates for 1981 through 1989.

1941–1980 Rates and Population

Rates for 1941 through 1980 were based on population estimates from the US Census Bureau and are currently maintained by CDC’s Division of STD Prevention.

1941–2019 Congenital Syphilis Rates and Live Births

The congenital syphilis data in [Table 1](#) of this report represent the number of congenital syphilis cases per 100,000 live births for all years during 1941–2019. Previous publications presented congenital syphilis rates per 100,000 population during 1941–1994 and rates for cases diagnosed at younger than 1 year of age per 100,000 live births during 1995–2005. To allow for trends in

congenital syphilis rates to be compared for the period of 1941 through 2019, live births now are used as the denominator for congenital syphilis and case counts are no longer limited to those diagnosed within the first year of life. Congenital syphilis morbidity is assigned by year of birth. Rates of congenital syphilis for 1963 through 1988 were calculated by using published live birth data. Congenital syphilis rates for 1989 through 2019 were calculated by using live birth data provided to NCHS through the Vital Statistics Cooperative Program. Rates for 2019 were calculated using live birth data for 2017, the most recently available data at time of publication.

2010–2019 Gay, Bisexual, and Other Men Who Have Sex with Men Rates and Population

For figures showing rates of reported cases of gonorrhea and P&S syphilis among gay, bisexual, and other men who have sex with men (MSM), population estimates of MSM are based on a method that combines published estimates of the prevalence of same-sex behavior among adult men with housing and population data from the American Community Survey 5-year summary file (2014–2018).¹ County-specific estimates begin with MSM prevalence estimates that are determined by their urbanicity according to the NCHS urban-rural classification scheme for counties and their United States region. Estimates are then multiplied by a modified ratio of each county's percentage of male same-sex households to the total percentage of male same-sex households among all counties at the same level of urbanicity and within the same region. Thus, the final estimate for each county reflects what would be expected based on the county's geography, urban-rural classification, and observed concentration of households with a male head of household and a male partner. State-level estimates are then aggregated from the county-specific estimates.

Other Sources of Surveillance Data

STD Surveillance Network

In 2005, CDC established the STD Surveillance Network (SSuN) as a collaborative network of state, county and/or city health departments following common protocols to conduct sentinel and enhanced STD surveillance activities. The purpose of SSuN is to improve the capacity of national, state and local STD programs to detect, monitor, and respond to trends in STDs through enhanced data collection, reporting, analysis, visualization, and interpretation of disease information. More details about SSuN are available here: <https://www.cdc.gov/std/ssun/default.htm>

Cycle 4 (2019–2024) of SSuN provides funding to 11 jurisdictions to conduct two core sentinel and enhanced STD surveillance activities. SSuN Cycle 4 sentinel surveillance activities include abstraction of clinical and demographic information on a full census of patients attending participating STD clinics. SSuN Cycle 4 enhanced surveillance activities include conducting health department registry matching, as well as provider and patient investigations on a probability sample of all persons diagnosed and reported with gonorrhea. Funded jurisdictions for core activities in SSuN Cycle 4 include Baltimore City (Maryland), California (excluding San Francisco County), City of Columbus, Florida, Indiana, Multnomah County (Oregon), Philadelphia City (Pennsylvania), New York City (New York), San Francisco County (California), and Washington State. Data presented in this report also includes information from SSuN Cycle 3 collaborators Massachusetts and Minnesota for cases reported Jan 2020 through Sep 2020.

In both components of SSuN, unique persons (diagnosed and reported with gonorrhea or seeking care in participating clinical facilities) are longitudinally followed using unique, coded IDs to provide information on repeat infections and/or care seeking behaviors. The primary unit of analysis for sentinel surveillance activities in clinical facilities is unique persons. These data are merged with multiple clinic visit, laboratory, diagnostic, and treatment observations to provide a comprehensive picture of services and diagnoses received for each individual patient. For enhanced, case-based surveillance activities in SSuN, the primary unit of analysis is a diagnosed and reported episode (case) of gonorrhea from any provider type or setting within the funded jurisdiction. Case data also included a unique person identifier, which allowed merging with multiple laboratory observations, matching with other health department disease registries, querying provider-based clinical information, and unique patient demographic and behavioral data obtained through direct patient interviews. For analysis in the population component, cases in the probability sample were weighted to reflect study design and to adjust for non-response by demographic category of the patient. Weighted analysis provides estimates of case-level and person-level characteristics representative of all reported cases in the funded jurisdictions.

MSM are defined in all SSuN data collection activities as men who: a) reported having sex with another man in the preceding 2–3 months, and/or, b) those who reported that they considered themselves gay/homosexual or bisexual. Men who have sex with women (MSW) are defined as men who reported having sex with women exclusively, or who did not report the sex of their sex partners but reported that they considered themselves to be straight/heterosexual.

Data presented in figures in this report from the sentinel surveillance component of SSuN include data from nine of the 10 participating Cycle 3 jurisdictions (Baltimore [Maryland], Miami [Florida], Boston [Massachusetts], Minneapolis [Minnesota], Multnomah County [Oregon], New York City [New York], Philadelphia [Pennsylvania], San Francisco [California], and Seattle [Washington]), except for Figure GG which includes data from the seven Cycle 3 jurisdictions which provided data on P&S syphilis diagnoses (Baltimore [Maryland], Miami [Florida], Minneapolis [Minnesota], Multnomah County [Oregon], New York City [New York], San Francisco [California], and Seattle [Washington]).

Data presented in figures in this report from the population component of SSuN for 2019 include gonorrhea cases sampled from all funded jurisdictions January – September in Cycle 3 and for October – December for sites continuing into Cycle 4. Trend data across previous cycles of SSuN (Figure 26) include only those jurisdictions participating continuously in Cycles 2 through 4 (Baltimore, California [excluding San Francisco], Philadelphia, New York City, San Francisco, and Washington State).

Gonococcal Isolate Surveillance Project

Data on antimicrobial susceptibility in *Neisseria gonorrhoeae* were collected through the Gonococcal Isolate Surveillance Project (GISP), a sentinel system of selected STD clinics located at an average of 27 GISP sentinel sites and 4 regional laboratories in the United States. More details about GISP are available here: <https://www.cdc.gov/std/GISP/>.

For 2019, the antimicrobial agents tested by GISP were ceftriaxone, cefixime, azithromycin, ciprofloxacin, penicillin, tetracycline, and gentamicin.

Many of the antimicrobial susceptibility criteria used in GISP for 2019 are also recommended by the Clinical and Laboratory Standards Institute (CLSI).² As of December 2019, the CLSI criteria for resistance to ceftriaxone, cefixime, gentamicin, and azithromycin and for susceptibility to gentamicin have not been established for *N. gonorrhoeae*. The following criteria are used in GISP:

Ceftriaxone, minimum inhibitory concentration (MIC) ≥ 0.5 $\mu\text{g/ml}$ (decreased susceptibility)

Ceftriaxone, MIC ≥ 0.125 $\mu\text{g/ml}$ (elevated MIC)

Cefixime, MIC ≥ 0.5 $\mu\text{g/ml}$ (decreased susceptibility)

Cefixime, MIC ≥ 0.25 $\mu\text{g/ml}$ (elevated MIC)

Azithromycin, MIC ≥ 2.0 $\mu\text{g/ml}$ (elevated MIC)

Ciprofloxacin, MIC ≥ 1.0 $\mu\text{g/ml}$ (resistance)

Ciprofloxacin, MIC 0.125–0.5 $\mu\text{g/ml}$ (intermediate resistance)

Penicillin, MIC ≥ 2.0 $\mu\text{g/ml}$ (resistance)

Tetracycline, MIC ≥ 2.0 $\mu\text{g/ml}$ (resistance)

Gentamicin (MIC values correlated with susceptibility and resistance have not been established)

National Job Training Program

The National Job Training Program (NJTP) is the largest nationwide residential career training program in the country. The NJTP is conducted by the Office of Job Corps, Employment and Training Administration, US Department of Labor. The program helps eligible young people ages 16 through 24 complete their high school education, trains them for meaningful careers, and assists them with obtaining employment. As part of the health and wellness program, NJTP students are provided a medical examination at enrollment, including chlamydia and gonorrhea screening. De-identified chlamydia and gonorrhea test results are provided to CDC by the U.S. Department of Labor. More information is available at: <https://www.dol.gov/agencies/eta/jobcorps>

Chlamydia and gonorrhea prevalence were calculated for males and females entering the NJTP. To increase the stability of the estimates, chlamydia or gonorrhea prevalence data are presented when valid test results for 100 or more students per year are available for the population subgroup and state. The majority of NJTP's chlamydia screening tests are conducted by a single national contract laboratory and are included in the data provided to CDC. Gonorrhea screening tests in some training centers are conducted by local laboratories; results from these tests are not provided to CDC. To minimize bias from missing test results, gonorrhea test results are included only if the number of gonorrhea tests submitted is greater than 90% of the number of chlamydia tests submitted from the same center for the same period.

References

1. Grey JA, Bernstein KT, Sullivan PS, et al. Estimating the population sizes of men who have sex with men in US states and counties using data from the American Community Survey. *JMIR Public Health Surveill.* 2016;2(1):e14.
2. Clinical and Laboratory Standards Institute. Performance standards for antimicrobial susceptibility testing; Twenty-fifth informational supplement. In. Wayne (PA): Clinical and Laboratory Standards Institute; 2015.

Case Definitions in Effect During 2019

Nationally Notifiable STDs

The Council of State and Territorial Epidemiologists (CSTE) recommends that state health departments report cases of selected diseases to CDC's National Notifiable Diseases Surveillance System (NNDSS). Case definitions are periodically revised using CSTE's Position Statements and provide uniform criteria of nationally notifiable conditions for reporting purposes. The surveillance case definitions for nationally notifiable STDs in place during 2019 are listed below. Please see the NNDSS website (<https://ndc.services.cdc.gov/>) for historical case definitions and for the case definitions in use for the current calendar year.

Chancroid (Effective 9/1996)

Clinical description

A sexually transmitted disease characterized by painful genital ulceration and inflammatory inguinal adenopathy. The disease is caused by infection with *Haemophilus ducreyi*.

Laboratory criteria for diagnosis

Isolation of *H. ducreyi* from a clinical specimen.

Case classification

Probable: a clinically compatible case with both a) no evidence of *Treponema pallidum* infection by darkfield microscopic examination of ulcer exudate or by a serologic test for syphilis performed ≥ 7 days after onset of ulcers, and b) either a clinical presentation of the ulcer(s) not typical of disease caused by herpes simplex virus (HSV) or a culture negative for HSV.

Confirmed: a clinically compatible case that is laboratory confirmed.

Chlamydia trachomatis Infection (Effective 1/2010)

Clinical description

Infection with *Chlamydia trachomatis* may result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted; however, the infection is often asymptomatic in women. Perinatal infections may result in inclusion conjunctivitis and pneumonia in newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum (see Lymphogranuloma Venereum) and trachoma.

Laboratory criteria for diagnosis

Isolation of *C. trachomatis* by culture, or

Demonstration of *C. trachomatis* in a clinical specimen by detection of antigen or nucleic acid.

Case classification

Confirmed: a case that is laboratory confirmed.

Gonorrhea (Effective 1/2014)

Clinical description

A sexually transmitted infection commonly manifested by urethritis, cervicitis, proctitis, salpingitis, or pharyngitis. Infection may be asymptomatic.

Laboratory criteria for diagnosis

Observation of gram-negative intracellular diplococci in a urethral smear obtained from a male or an endocervical smear obtained from a female, or

Isolation of typical gram-negative, oxidase-positive diplococci by culture (presumptive *Neisseria gonorrhoeae*) from a clinical specimen, or

Demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid.

Case classification

Probable: demonstration of gram-negative intracellular diplococci in a urethral smear obtained from a male or an endocervical smear obtained from a female.

Confirmed: a person with laboratory isolation of typical gram-negative, oxidase-positive diplococci by culture (presumptive *N. gonorrhoeae*) from a clinical specimen, or demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or detection of nucleic acid via nucleic acid amplification (e.g., polymerase chain reaction [PCR]) or hybridization with a nucleic acid probe.

Syphilis (Effective 1/2018)

Syphilis is a complex sexually transmitted disease that has a highly variable clinical course. Adherence to the surveillance case definitions will facilitate understanding the epidemiology of syphilis across the US.

Syphilis, primary

Clinical description

A stage of infection with *Treponema pallidum* characterized by one or more ulcerative lesions (e.g., chancre), which might differ considerably in clinical appearance.

Laboratory criteria for diagnosis

Confirmatory:

Demonstration of *T. pallidum* by darkfield microscopy in a clinical specimen that was not obtained from the oropharynx and is not potentially contaminated by stool, OR

Demonstration of *T. pallidum* by polymerase chain reaction (PCR) or equivalent direct molecular methods in any clinical specimen.

Supportive:

A reactive nontreponemal serologic test (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], or equivalent serologic methods), OR

A reactive treponemal serologic test (*T. pallidum* particle agglutination [TP-PA], enzyme immunoassay [EIA], chemiluminescence immunoassay [CIA], or equivalent serologic methods).*

* These treponemal tests supersede older testing technologies, including microhemagglutination assay for antibody to *T. pallidum* [MHA-TP].

Case classification

Probable: a case that meets the clinical description of primary syphilis and the supportive laboratory criteria.

Confirmed: a case that meets the clinical description of primary syphilis and the supportive confirmatory criteria.

Syphilis, secondary

Clinical description

A stage of infection caused by *T. pallidum* characterized by localized or diffuse mucocutaneous lesions (e.g., rash – such as non-pruritic macular, maculopapular, papular, or pustular lesions), often with generalized lymphadenopathy. Other symptoms can include mucous patches, condyloma lata, and alopecia. The primary ulcerative lesion may still be present. Because of the wide array of symptoms and signs possibly indicating secondary syphilis, serologic tests for syphilis and a physical examination are crucial to determining if a case should be classified as secondary syphilis.

Laboratory criteria for diagnosis

Confirmatory:

Demonstration of *T. pallidum* by darkfield microscopy in a clinical specimen that was not obtained from the oropharynx and is not potentially contaminated by stool, OR

Demonstration of *T. pallidum* by polymerase chain reaction (PCR) or equivalent direct molecular methods in any clinical specimen.

Supportive:

A reactive nontreponemal serologic test (VDRL, RPR, or equivalent serologic methods), AND

A reactive treponemal serologic test (TP-PA, EIA, CIA, or equivalent serologic methods).

Case classification

Probable: a case that meets the clinical description of secondary syphilis and the supportive laboratory criteria.

Confirmed: a case that meets the clinical description of secondary syphilis and the confirmatory laboratory criteria.

Syphilis, early non-primary non-secondary

Clinical description

A stage of infection caused by *T. pallidum* in which initial infection has occurred within the previous 12 months, but there are no signs or symptoms of primary or secondary syphilis.

Laboratory criteria for diagnosis

Supportive:

A current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer, unless there is evidence that this increase was not sustained for >2 weeks.

Case classification

Probable: a person with no clinical signs or symptoms of primary or secondary syphilis who has one of the following:

No prior history of syphilis, AND a current reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), AND a current reactive treponemal test (e.g., TP-PA, EIA, CIA, or equivalent serologic methods), OR

A prior history of syphilis and meets the supportive laboratory criteria.

AND evidence of having acquired the infection within the previous 12 months based on one or more of the following criteria:

Documented seroconversion or fourfold or greater increase in titer of a nontreponemal test during the previous 12 months, unless there is evidence that this increase was not sustained for >2 weeks

Documented seroconversion of a treponemal test during the previous 12 months

A history of symptoms consistent with primary or secondary syphilis during the previous 12 months

Meets epidemiologic criteria.

Epidemiological criteria:

A history of sexual exposure to a partner within the previous 12 months who had primary, secondary, or early non-primary non-secondary syphilis (documented independently as duration <12 months).

Only sexual contact (sexual debut) was within the previous 12 months.

Syphilis, unknown duration or late

Clinical description

A stage of infection caused by *T. pallidum* in which initial infection has occurred >12 months previously or in which there is insufficient evidence to conclude that infection was acquired during the previous 12 months.

Case classification

Probable: a person with no clinical signs or symptoms of primary or secondary syphilis who meets one of the following sets of criteria:

No prior history of syphilis, and a current reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), and a current reactive treponemal test (e.g., TP-PA, EIA, CIA, or equivalent serologic methods), OR

A prior history of syphilis, and a current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer, unless there is evidence that this increase was not sustained for >2 weeks, OR

Clinical signs or symptoms and laboratory results that meet the likely or verified criteria for neurologic, ocular, otic, or late clinical manifestations syphilis (see below)

AND who has no evidence of having acquired the disease within the preceding 12 months (see Syphilis, early non-primary non-secondary).

Comments: Although cases of syphilis of unknown duration are grouped together with late syphilis for the purposes of surveillance, the conservative clinical and public health responses to these cases will differ when there is uncertainty about the duration of infection. When faced with uncertainty, clinicians should act conservatively and treat unknown duration syphilis as if it were late infection, with three doses of benzathine penicillin. In contrast, the most conservative approach for STD control programs would be to manage cases of syphilis of unknown duration as early non-primary non-secondary infections and search for partners who may have been recently infected. Because this would not be feasible for most STD control programs, programs should consider prioritizing cases of syphilis of unknown duration with higher nontreponemal titers (e.g., 1:32 or higher) for investigation and partner services. Although nontreponemal titers cannot reliably distinguish between early infection (<12 months duration) and late infection (>12 months duration), nontreponemal titers usually are higher early in the course of syphilis infection.

Syphilis, Congenital

Clinical description

A condition caused by infection in utero with *T. pallidum*. A wide spectrum of severity exists, from inapparent infection to severe cases that are clinically apparent at birth. An infant or child (aged less than 2 years) may have signs such as hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice (nonviral hepatitis), pseudoparalysis, anemia, or edema (nephrotic syndrome and/or

malnutrition). An older child may have stigmata (e.g., interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints).

Laboratory criteria for diagnosis

- Demonstration of *T. pallidum* by darkfield microscopy of lesions, body fluids, or neonatal nasal discharge, OR
- PCR or other equivalent direct molecular methods of lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material, OR
- Immunohistochemistry (IHC), or special stains (e.g., silver staining) of specimens from lesions, placenta, umbilical cord, or autopsy material.

Case classification

Probable: a condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant, OR an infant or child who has a reactive non-treponemal test for syphilis (VDRL, RPR, or equivalent serologic methods) AND any one of the following:

- Any evidence of congenital syphilis on physical examination (see Clinical description).
- Any evidence of congenital syphilis on radiographs of long bones.
- A reactive CSF VDRL test.
- In a non-traumatic lumbar puncture, an elevated CSF leukocyte (white blood cell [WBC]) count or protein (without other cause):
 - Suggested parameters for abnormal CSF WBC and protein values:
 1. During the first 30 days of life, a CSF WBC count of >15 WBC/mm³ or a CSF protein >120 mg/dL is abnormal.
 2. After the first 30 days of life, a CSF WBC count of >5 WBC mm³ or a CSF protein >40 mg/dL, regardless of CSF serology.

The treating clinician should be consulted to interpret the CSF values for the specific patient.

* Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery.

Confirmed: a case that is laboratory confirmed.

Comments: Congenital and acquired syphilis may be difficult to distinguish when a child is seropositive after infancy. Signs of congenital syphilis may not be obvious, and stigmata may not yet have developed. Abnormal values for CSF VDRL, WBC count, and protein may be found in either congenital or acquired syphilis. Findings on radiographs of long bones may help because radiographic changes in the metaphysis and epiphysis are considered classic signs of congenitally acquired syphilis. While maternal antibodies can complicate interpretation of serologic tests in an infant, reactive tests past 18 months of age are considered to reflect the status of the child. The decision may ultimately be based on maternal history and clinical judgment. In a young child, the possibility of sexual abuse should be considered as a cause of acquired rather than congenital syphilis, depending on the clinical picture. For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.

Syphilitic Stillbirth

Clinical case definition

A fetal death that occurs after a 20-week gestation or in which the fetus weighs greater than 500g and the mother had untreated or inadequately treated* syphilis at delivery.

* Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery.

Comments: For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.

Comments: Additional information to be collected on clinical manifestations of reported syphilis cases

Syphilis is a systemic infection that, if untreated, can cause a variety of clinical manifestations, including:

Signs and symptoms of primary and secondary syphilis (see above case definitions).

Latent infections (i.e., those lacking any signs or symptoms).

Neurologic, ocular, or otic manifestations (neurosyphilis, ocular syphilis, or otosyphilis), which can occur at any stage of syphilis.

Late clinical manifestations (tertiary syphilis), which generally occur after 15–30 years of untreated infection.

The following provides guidance for reporting neurologic, ocular, otic, and late clinical manifestations of syphilis. Cases should be reported according to stage of infection, as defined above (e.g., primary syphilis; secondary syphilis; early non-primary, non-secondary syphilis; or unknown duration or late syphilis) and the clinical manifestations should be reported in the case report data, as defined below.

Neurologic manifestations:

Neurologic manifestations (neurosyphilis) can occur at any stage of syphilis. If the patient has neurologic manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if neurologic manifestations were not present) and neurologic manifestations should be noted in the case report data.

Clinical description

Infection of the central nervous system with *T. pallidum*, as evidenced by manifestations including syphilitic meningitis, meningovascular syphilis, general paresis, including dementia, and tabes dorsalis.

Classification of neurologic manifestations (neurosyphilis)

Possible: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and clinical symptoms or signs that are consistent with neurosyphilis without other known causes for these clinical abnormalities.

Likely: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) with both of the following:

Clinical symptoms or signs that are consistent with neurosyphilis without other known causes for these clinical abnormalities,
AND

Elevated CSF protein (>50 mg/dL²) or leukocyte count (>5 WBC/mm³ CSF) in the absence of other known causes of these abnormalities.

Verified: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) with both of the following:

Clinical symptoms or signs that are consistent with neurosyphilis without other known causes for these clinical abnormalities, AND

A reactive VDRL in CSF in the absence of grossly bloody contamination of the CSF.

Ocular Manifestations:

Ocular manifestations (ocular syphilis) can occur at any stage of syphilis. If the patient has ocular manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if ocular manifestations were not present) and ocular manifestations should be noted in the case report data.

Clinical description

Infection of any eye structure with *T. pallidum*, as evidenced by manifestations including posterior uveitis, panuveitis, anterior uveitis, optic neuropathy, and retinal vasculitis. Ocular syphilis may lead to decreased visual acuity including permanent blindness.

Classification of ocular manifestations (ocular syphilis)

Possible: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and clinical symptoms or signs consistent with ocular syphilis without other known causes for these clinical abnormalities.

Likely: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following:

Clinical symptoms or signs consistent with ocular syphilis without other known causes for these clinical abnormalities, AND

Findings on exam by an ophthalmologist that are consistent with ocular syphilis in the absence of other known causes for these abnormalities.

Verified: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following:

Clinical symptoms or signs consistent with ocular syphilis without other known causes for these clinical abnormalities, AND

Demonstration of *T. pallidum* in aqueous or vitreous fluid by darkfield microscopy, or by PCR or equivalent direct molecular methods.

Otic Manifestations:

Otic manifestations can occur at any stage of syphilis. If the patient has otic manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if otic manifestations were not present) and otic manifestations should be noted in the case report data.

Clinical description

Infection of the cochleovestibular system with *T. pallidum*, as evidenced by manifestations including sensorineural hearing loss, tinnitus, and vertigo.

Classification of otic manifestations (otosyphilis)

Possible: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and clinical symptoms or signs consistent with otosyphilis without other known causes for these clinical abnormalities.

Likely: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following:

Clinical symptoms or signs consistent with otosyphilis without other known causes for these clinical abnormalities, AND

Findings on exam by an otolaryngologist that are consistent with otosyphilis in the absence of other known causes for these abnormalities.

Verified: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and both of the following:

Clinical symptoms or signs consistent with otosyphilis without other known causes for these clinical abnormalities, AND

Demonstration of *T. pallidum* in inner ear fluid by darkfield microscopy, or by PCR or equivalent direct molecular detection methods.

Late Clinical Manifestations:

Late clinical manifestations of syphilis usually develop only after a period of 15–30 years of untreated infection. Therefore, if the patient has late clinical manifestations of syphilis, the case should be reported with the appropriate stage of infection (for the vast majority of cases, unknown duration or late syphilis) and late clinical manifestations should be noted in the case report data.

Clinical description

Late clinical manifestations of syphilis (tertiary syphilis) may include inflammatory lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue. Rarely, other structures (e.g., the upper and lower respiratory tracts, mouth, eye, abdominal organs, reproductive organs, lymph nodes, and skeletal muscle) may be involved. In addition, certain neurologic manifestations (e.g., general paresis and tabes dorsalis) are also late clinical manifestations of syphilis.

Classification of late clinical manifestations of syphilis (tertiary syphilis)

Likely: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) with either of the following:

Characteristic abnormalities or lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue, in the absence of other known causes of these abnormalities, OR

Clinical signs and symptoms consistent with late neurologic manifestations of syphilis (e.g., general paresis, including dementia, or tabes dorsalis) in a case that meets the criteria for likely neurologic manifestations of syphilis (see above).

Verified: a person with a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods) and a reactive treponemal test (e.g., TP-PA, EIA, CIA or equivalent serologic methods) and either of the following:

Characteristic abnormalities or lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue in the absence of other known causes of these abnormalities, in combination with either demonstration of *T. pallidum* in late lesions by special stains or equivalent methods, or by PCR or equivalent direct molecular methods, or demonstration of pathologic changes that are consistent with *T. pallidum* infection on histologic examination of late lesions, OR

Clinical signs and symptoms consistent with late neurologic manifestations of syphilis (e.g., general paresis, including dementia, or tabes dorsalis) in a case that meets the criteria for verified neurologic manifestations of syphilis (see above).

Non-nationally Notifiable STDs

Although the conditions below are not currently nationally notifiable, they may be reportable in some jurisdictions. To provide uniform criteria for those jurisdictions, case definitions are provided by CSTE. Case definitions are periodically revised. The most current surveillance case definitions for non-notifiable STDs are listed below. Please see the NNDSS website (<https://wwwn.cdc.gov/nndss/case-definitions.html>) for historical case definitions.

Genital Herpes (Herpes Simplex Virus) (Effective 9/1996)

Clinical description

A condition characterized by visible, painful genital or anal lesions.

Laboratory criteria for diagnosis

Isolation of herpes simplex virus from cervix, urethra, or anogenital lesion, OR

Demonstration of virus by antigen detection technique in clinical specimens from cervix, urethra, or anogenital lesion, OR

Demonstration of multinucleated giant cells on a Tzanck smear of scrapings from an anogenital lesion.

Case classification

Probable: a clinically compatible case (in which primary and secondary syphilis have been excluded by appropriate serologic tests and darkfield microscopy, when available) with either a diagnosis of genital herpes based on clinical presentation (without laboratory confirmation) or a history of one or more previous episodes of similar genital lesions.

Confirmed: a clinically compatible case that is laboratory confirmed.

Comment

Genital herpes should be reported only once per patient. The first diagnosis for a patient with no previous diagnosis should be reported.

Genital Warts (Effective 9/1996)

Clinical description

An infection characterized by the presence of visible, exophytic (raised) growths on the internal or external genitalia, perineum, or perianal region.

Laboratory criteria for diagnosis

Histopathologic changes characteristic of human papillomavirus infection in specimens obtained by biopsy or exfoliative cytology, OR

Demonstration of virus by antigen or nucleic acid detection in a lesion biopsy.

Case classification

Probable: a clinically compatible case without histopathologic diagnosis and without microscopic or serologic evidence that the growth is the result of secondary syphilis.

Confirmed: a clinically compatible case that is laboratory confirmed.

Comment

Genital warts should be reported only once per patient. The first diagnosis for a patient with no previous diagnosis should be reported.

Granuloma Inguinale

Clinical description

A slowly progressive ulcerative disease of the skin and lymphatics of the genital and perianal area caused by infection with *Calymmatobacterium granulomatis*. A clinically compatible case would have one or more painless or minimally painful granulomatous lesions in the anogenital area.

Laboratory criteria for diagnosis

Demonstration of intracytoplasmic Donovan bodies in Wright or Giemsa-stained smears or biopsies of granulation tissue.

Case classification

Confirmed: a clinically compatible case that is laboratory confirmed.

Lymphogranuloma Venereum

Clinical description

Infection with L1, L2, or L3 serovars of *C. trachomatis* may result in a disease characterized by genital lesions, suppurative regional lymphadenopathy, or hemorrhagic proctitis. The infection is usually sexually transmitted.

Laboratory criteria for diagnosis

Isolation of *C. trachomatis*, serotype L1, L2, or L3 from clinical specimen, OR

Demonstration by immunofluorescence of inclusion bodies in leukocytes of an inguinal lymph node (bubo) aspirate, OR

Positive microimmunofluorescent serologic test for a lymphogranuloma venereum strain of *C. trachomatis*.

Case classification

Probable: a clinically compatible case with one or more tender fluctuant inguinal lymph nodes or characteristic proctogenital lesions with supportive laboratory findings of a single *C. trachomatis* complement fixation titer of >64.

Confirmed: a clinically compatible case that is laboratory confirmed.

Mucopurulent Cervicitis (Effective 9/1996)

Clinical description

Cervical inflammation that is not the result of infection with *N. gonorrhoeae* or *Trichomonas vaginalis*. Cervical inflammation is defined by the presence of one of the following criteria:

Mucopurulent secretion (from the endocervix) that is yellow or green when viewed on a white, cotton-tipped swab (positive swab test), OR

Induced endocervical bleeding (bleeding when the first swab is placed in the endocervix).

Laboratory criteria for diagnosis

No evidence of *N. gonorrhoeae* by culture, Gram stain, or antigen or nucleic acid detection, and no evidence of *T. vaginalis* on wet mount.

Case classification

Confirmed: a clinically compatible case in a female who does not have either gonorrhea or trichomoniasis.

Comment

Mucopurulent cervicitis (MPC) is a clinical diagnosis of exclusion. The syndrome may result from infection with any of several agents (see *C. trachomatis*). If gonorrhea, trichomoniasis, and chlamydia are excluded, a clinically compatible illness should be classified as MPC. An illness in a female that meets the case definition of MPC and *C. trachomatis* infection should be classified as chlamydia.

Nongonococcal Urethritis (Effective 9/1996)

Clinical description

Urethral inflammation that is not the result of infection with *N. gonorrhoeae*. Urethral inflammation may be diagnosed by the presence of one of the following criteria:

A visible abnormal urethral discharge, OR

A positive leukocyte esterase test from a male aged <60 years who does not have a history of kidney disease or bladder infection, prostate enlargement, urogenital anatomic anomaly, or recent urinary tract instrumentation, OR

Microscopic evidence of urethritis (≥5 white blood cells per high-power field) on a Gram stain of a urethral smear.

Laboratory criteria for diagnosis

No evidence of *N. gonorrhoeae* infection by culture, Gram stain, or antigen or nucleic acid detection.

Case classification

Confirmed: a clinically compatible case in a male in whom gonorrhea is not found, either by culture, Gram stain, or antigen or nucleic acid detection.

Comment

Nongonococcal urethritis (NGU) is a clinical diagnosis of exclusion. The syndrome may result from infection with any of several agents (see *C. trachomatis*). If gonorrhea and chlamydia are excluded, a clinically compatible illness should be classified as NGU. An illness in a male that meets the case definition of NGU and *C. trachomatis* infection should be classified as chlamydia.

Pelvic Inflammatory Disease (Effective 9/1996)

Clinical case definition

A clinical syndrome resulting from the ascending spread of microorganisms from the vagina and endocervix to the endometrium, fallopian tubes, and/or contiguous structures. In a female who has lower abdominal pain and who has not been diagnosed as having an established cause other than pelvic inflammatory disease (PID) (e.g., ectopic pregnancy, acute appendicitis, and functional pain), all the following clinical criteria must be present:

Lower abdominal tenderness, AND

Tenderness with motion of the cervix, AND

Adnexal tenderness.

In addition to the preceding criteria, at least one of the following findings must also be present:

Meets the surveillance case definition of *C. trachomatis* infection or gonorrhea

Temperature >100.4 F (>38.0 C)

Leukocytosis >10,000 WBC/mm³

Purulent material in the peritoneal cavity obtained by culdocentesis or laparoscopy

Pelvic abscess or inflammatory complex detected by bimanual examination or by sonography

Patient is a sexual contact of a person known to have gonorrhea, chlamydia, or nongonococcal urethritis.

Case classification

Confirmed: a case that meets the clinical case definition.

Comment

For reporting purposes, a clinician's report of PID should be counted as a case.