

Sexually Transmitted Diseases in California

2019 Executive Summary

The California Sexually Transmitted Disease (STD) Annual Report is prepared to provide the most recent data on the burden of reportable bacterial STDs among Californians. This resource is intended to inform state and local public health program STD control interventions for reducing the impact of STDs in collaboration with clinical, community, and governmental partners.

In 2019, the burden of notifiable bacterial STDs in California (chlamydia, gonorrhea, and syphilis) continued to be substantial and increasing when compared against 2018 and the prior five years.¹ In this summary, we describe differences in STD burden over time, geography, and demographic characteristics to inform the design and implementation of state and local interventions to reduce STD and HIV transmission and improve sexual and reproductive health.

Based on Centers for Disease Control and Prevention (CDC) 2019 data, California had the largest number of reported chlamydia, gonorrhea, and adult (primary and secondary) syphilis cases and the second largest number of congenital syphilis cases among all states.²

OVERALL SUMMARY

In 2019, bacterial STDs in California (chlamydia, gonorrhea, and syphilis) significantly increased. Important disparities persisted, with the highest rates found among young people, Black/African Americans, and gay, bisexual and other men who have sex with men (MSM). Populations at higher risk for STDs may also be at risk for related health outcomes such as HIV infection, infertility, ocular and neurosyphilis, and multi-drug resistant gonorrhea. Exposure to syphilis in pregnancy can lead to stillbirth and severe illness in infants from congenital syphilis.

Chlamydia (CT) remains the most common reportable STD in California and is at the highest level since mandated reporting began in 1990 with a 2.2 percent increase in cases compared with 2018. Although CT increases since 2013 were similar across California regions, the sharpest increase by 2019 was observed for San Francisco. Across California, the highest rates were among young women who are at risk for serious reproductive health outcomes such as pelvic inflammatory disease and infertility. Similar to recent years, the one-year increase in the male rate (3.8 percent from 2018 to 2019) was higher than the increase in the female rate (0.6 percent). Disproportionally higher rates among Black/African American adolescents and young

¹ Tables: [STD Data All Tables, 2019, Table All-1](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-All-STDs-Tables.pdf)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH Document Library/2019-STD-Data-All-STDs-Tables.pdf>

Slides: [All STDs Summary, Slides, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Annual-Report-Graph-Set.pptx)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Annual-Report-Graph-Set.pptx>

² [2019 CDC STD Surveillance](https://www.cdc.gov/std/statistics/2019): <https://www.cdc.gov/std/statistics/2019>

adult women persisted statewide, and were three to five times higher compared with white adolescents and young adult women, respectively.

Gonorrhea (GC) cases continued to increase across all regions of the state, with an overall 1.6 percent increase in cases compared with 2018. San Francisco continued to have significantly higher rates compared to other regions, however in 2019, San Francisco GC rates decreased 5.6 percent. Between 2018 and 2019, the rate among females increased 3.5 percent, compared to no rate change among males. For females, rates were highest for those under age 30. For males, rates were highest for those ages 20-34. Racial disparities persisted with rates among Black/African Americans 4.4 times higher than among whites. Among isolates tested in the Gonococcal Isolate Surveillance Project (GISP), the proportion with an alert value for ceftriaxone remained low (0.2 percent). However, the proportion of isolates with an alert value for azithromycin increased from 0.1 percent in 2012 to 9.9 percent in 2019. Alert values are set by CDC and indicate that an isolate may have a decreased susceptibility to a given antibiotic.

Early syphilis (ES) cases (primary, secondary, and early non-primary non-secondary) continued to increase in most regions of California with an overall 7.7 percent increase compared with 2018 cases; San Francisco continued to have significantly higher ES rates compared to other regions. Although MSM accounted for 57 percent of all cases, the number of cases among females of reproductive age (ages 15-44) continued to rise, increasing by 17 percent compared with 2018. Racial disparities continued as rates among Black/African Americans were nearly three times higher than among whites.

The number of infants born with congenital syphilis (CS) increased for the seventh consecutive year and by 36 percent compared to 2018. There were 446 CS cases including 43 stillbirths or neonatal deaths in 2019. This is the highest number of reported CS cases since 1993.

KEY FINDINGS

Chlamydia (CT) remains the most frequently reported disease in California.³

- There were 237,630 CT cases reported in 2019 (594.7 per 100,000 population), a 2.2 percent increase in cases over 2018 and 25.2 percent increase since 2015.
- There were 13 counties with chlamydia rates higher than the overall state rate (594.7): San Francisco (1,064.5), Kings (779.6), Kern (753.0), Tulare (724.3), Sacramento (723.2), Fresno (711.3), San Diego (686.8), Los Angeles (681.5), Butte (635.6), San Bernardino (628.9), Humboldt (620.4), San Joaquin (619.7), and Madera (609.7).
- Female CT rates were 1.5 times the male CT rates.

³ Tables: [Chlamydia Data Tables, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Chlamydia-Tables.pdf)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Chlamydia-Tables.pdf>

Slides: [Chlamydia Slides, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Chlamydia-Slides.pptx)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Chlamydia-Slides.pptx>

- Female CT rates have continued to increase statewide, by 0.6 percent since 2018 and 15.5 percent since 2015.
- Female CT rates continued to be highest among adolescents and young adults ages 15-24 years.
- Adolescent Black/African American female CT rates remained high and were nearly five times the rate among white adolescent females.
- Male CT rates have continued to increase statewide, by 3.8 percent since 2018 and 34.4 percent since 2015. Male rates were highest among those 20-29 years of age.
- Observed differences by gender may reflect more frequent use of reproductive healthcare services by females. Increases in chlamydia among males may reflect either increases in transmission or screening, particularly rectal screening among MSM.
- **Programmatic priorities for chlamydia prevention based on the trends in chlamydia include increasing screening of young females to prevent reproductive health complications, and screening of MSM for rectal infections that may increase the risk of HIV transmission.**⁴

Gonorrhea (GC) rates continued to increase across all regions of the state.⁵

- There were 80,599 GC cases (201.7 per 100,000 population) reported in 2019, a 1.6 percent increase in cases over 2018 and 48.8 percent increase since 2015.
- In 2019, one-half of counties reported 10 percent or greater increases in GC rates. There were 12 counties with gonorrhea rates higher than the overall state rate (201.7): San Francisco (626.7), Yuba (318.0), Inyo (292.5), Sacramento (276.6), Los Angeles (256.1), Merced (243.5), Butte (237.8), Fresno (235.5), Kern (231.6), San Joaquin (221.1), Alameda (220.4), and Kings (204.0).
- GC male cases rose by 0.4 percent since 2018 and 48.3 percent since 2015. Among cases randomly sampled for enhanced interviews, men who have sex with men accounted for 61 percent of male gonorrhea cases (with known gender of sex partner). Reasons for these increases are not yet clear, and may include increased transmission as well as increased oral and rectal screening of MSM. Over half of these MSM GC cases were associated with only oral or rectal sites of infection and would have been missed with urine-based screening alone.
- Among GC cases randomly sampled for enhanced interviews, 30 percent of MSM with known HIV status were HIV-positive. Among interviewed MSM GC cases who were HIV-negative, 49 percent reported receiving HIV Pre-exposure Prophylaxis medication

⁴ Programmatic priorities are in-line with national recommendations and standard STD prevention strategies.

⁵ Tables: [Gonorrhea Data Tables, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Gonorrhea-Tables.pdf)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Gonorrhea-Tables.pdf>

Slides: [Gonorrhea Slides, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Gonorrhea-Slides.pptx)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Gonorrhea-Slides.pptx>

(PrEP). Ongoing assurance of HIV testing for GC cases can facilitate opportunities for PrEP and ultimately reduce HIV transmission in the community.

- GC female cases rose by 3.9 percent since 2018 and 49 percent since 2015. The highest GC rates for females were among ages 20-29 years.
- Disparities in GC rates by race/ethnicity persisted, with Black/African American GC rates 4.4 times those of white rates.
- GISP monitoring of trends in antibiotic susceptibility indicated that there was a decline from 2010 to 2018 in the proportion of gonococcal isolates with an alert value for recommended cephalosporin therapy, followed by an increase in 2019. In 2019, of the 608 isolates tested, one (0.2 percent) isolates had an alert value to ceftriaxone and 60 (9.9 percent) had an alert value to azithromycin. The proportion of GISP isolates with an alert value for azithromycin has been rising since 2012.
- **Programmatic priorities for gonorrhea prevention include screening of young females to prevent reproductive health complications, and screening of MSM for rectal and throat infections that may increase the risk of HIV transmission. High rates of gonorrhea among MSM provide opportunities for linkage to HIV care for HIV co-infected cases and linkage to HIV PrEP for HIV-negative cases. Healthcare provider adherence to recommended dual treatment regimens is essential to prevent the emergence of gonococcal antimicrobial resistance.**⁶

Early syphilis (ES), which includes primary, secondary, and early non-primary non-secondary stages, continued to increase in 2019 in most regions of the state.⁷

- There were 16,547 ES cases (41.4 per 100,000) reported in 2019, a 7.7 percent increase in cases over 2018, and 75.8 percent increase since 2015.
- There were 10 counties with early syphilis rates higher than the overall state rate (41.4): San Francisco (168.3), Los Angeles (59.5), San Joaquin (57.5), Yuba (54.9), Sutter (53.1), Shasta (49.4), Butte (45.2), Kern (44.6), Sacramento (44.4), and Stanislaus (42.4).
- Men who have sex with men accounted for 57 percent of all early syphilis cases.
- Among MSM ES cases with known HIV status, 50 percent were HIV-positive. The proportion of HIV-negative MSM ES cases reporting HIV PrEP increased slightly from 41 percent in 2018 to 44 percent in 2019 in the California Project Area (excludes Los Angeles and San Francisco).

⁶ Programmatic priorities are in-line with national recommendations and standard STD prevention strategies.

⁷ Tables: [Syphilis Data Tables, 2019](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-All-Stages-Tables.pdf):

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-All-Stages-Tables.pdf>

Slides: [Syphilis Slides, 2019](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-All-Stages-Slides.pptx):

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-All-Stages-Slides.pptx>

- In 2019, the early syphilis rate among MSM living with HIV (4,181 per 100,000) was estimated to be 10 times higher than HIV-negative MSM (408), and higher than heterosexual males (28) and females (14).
- For males and females, early syphilis rates were highest among those ages 25-34 years.
- There were 2,338 ES cases among females of reproductive age reported in 2019, a 16.7 percent increase over 2018 (2,004 cases) and 208.0 percent increase since 2015 (759 cases).
- Disparities in ES rates by race/ethnicity persist: ES rates were roughly three times higher among Black/African American males (148.5 per 100,000) and females (36.2) compared to the respective rates for white males (55.3) and females (11.2).
- Potential increases in ocular syphilis, a serious manifestation of syphilis, were noted nationally and in California in early 2015.⁸ Since then, analysis of California case data indicates that about one percent of all syphilis cases had symptoms associated with ocular syphilis in recent years.⁹ Additionally, the proportion of all syphilis cases that were associated with neurosyphilis from 2010-2019 remained about 2-3 percent.
- **Programmatic priorities for syphilis include increasing screening in settings that serve high priority populations (HIV care, community-based organizations serving MSM, emergency departments, jails, drug treatment programs, and mobile outreach programs serving people experiencing homelessness), improving linkage to HIV care or HIV PrEP for syphilis cases depending on HIV status, and ensuring timely, adequate treatment and partner services are provided.**¹⁰

Congenital syphilis (CS) increased for the sixth consecutive year.¹¹

- In 2019, there were 446 cases (99.9 per 100,000 live births), a 36.0 percent increase in cases since 2018 and 201.4 percent increase since 2015. This is the highest number of cases since 1993, over 25 years ago. After rising from one syphilitic stillbirth or neonatal in 2012 to 37 in 2017, then decreasing to 22 in 2018, the number of reported syphilitic stillbirths/neonatal deaths increased to 43 in 2019.
- According to the Centers for Disease Control and Prevention, the congenital syphilis incidence rate in California in 2019 was the sixth highest incidence rate in the United

⁸ Woolston S, Cohen SE, Fanfair RN et al. [A Cluster of Ocular Syphilis Cases — Seattle, Washington, and San Francisco, California, 2014–2015. Morbid Mortal Wkly Rpt 2015; 64\(40\);1150-1.](https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6440a6.htm)

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6440a6.htm>

⁹ Oliver SE, Aubin M, Atwell L, Matthias J, Cope A, Mobley V, Goode A, Minnerly S, Stoltey J, Bauer HM, Hennessy RR, DiOrio D, Fanfair RN, Peterman TA, Markowitz L. Ocular Syphilis - Eight Jurisdictions, United States, 2014-2015. MMWR Morb Mortal Wkly Rep. 2016 Nov 4;65(43):1185-1188.

¹⁰ Programmatic priorities are in-line with national recommendations and standard STD prevention strategies.

¹¹ Tables: [Congenital Syphilis Data Tables, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-Congenital-Tables.pdf)

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-Congenital-Tables.pdf>

Slides: [Congenital Syphilis Slides, 2019:](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-Congenital-Slides.pptx)

[https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH Document Library/2019-STD-Data-Syphilis-Congenital-Slides.pptx](https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/2019-STD-Data-Syphilis-Congenital-Slides.pptx)

States. Forty-two (of 61) local health jurisdictions reported at least one case of congenital syphilis in 2019. Counties with the highest number of cases include Los Angeles, San Bernardino, San Joaquin, Fresno, and Kern.

- Although the largest numbers of CS case mothers were Hispanic (219), the highest CS rate was among Black/African Americans (289.4 per 100,000 live births) which was nearly three times the rate for Hispanics (107.6) and whites (107.3).
- Factors associated with recent CS cases included lack of or late prenatal care, inadequate treatment, poverty, and substance use.
- **Programmatic priorities for congenital syphilis prevention include syphilis testing, treatment, and contact tracing among pregnant people and people who can become pregnant, including among people experiencing homelessness, disparities in access to care, and incarceration. Policies supporting the roll out and implementation of the California Expanded Syphilis Screening Recommendations, including screening at least twice during pregnancy and instituting routine, opt-out screening for syphilis and linkages to HIV care or HIV PrEP in settings serving people at high risk for syphilis who may not otherwise be accessing care are critical to stemming the tide of congenital syphilis infections in California, including emergency departments, jails, drug treatment programs, and mobile outreach programs serving people experiencing homelessness. Efforts to assess what social factors may be driving syphilis increases, and what opportunities there might be for working with other sectors—such as housing, behavioral health, prenatal care, correctional health—to prevent congenital syphilis is essential.**¹²

Guidance for Navigating the 2019 STD Annual Report

The 2019 STD Annual Report is designed to enable access to data in a variety of formats. The 2019 Annual Report is comprised of the Executive Summary, Technical Notes, STD tables, and graph slides, and is organized by “All STDs” and “specific STDs” on the [STD Data page](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/STD-Data.aspx) (<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/STD-Data.aspx>). The Annual Report includes 2019 and trend data on STDs and related services collected through case-based reporting as well as enhanced surveillance and prevalence monitoring. All data released in the 2019 STD Annual report supersede previously published data and comply with data de-identification criteria as set forth in the California Department of Health Care Services [Data De-identification Guidelines \(DDG\)](https://www.dhcs.ca.gov/dataandstats/Documents/DHCS-DDG-V2.0-120116.pdf) document (<https://www.dhcs.ca.gov/dataandstats/Documents/DHCS-DDG-V2.0-120116.pdf>).

¹² Programmatic priorities are in-line with national recommendations and standard STD prevention strategies.