Sexually Transmitted Disease Surveillance 2013

Division of STD Prevention
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NATIONAL CENTER FOR HIV/AIDS, VIRAL HEPATITIS, STD, AND TB PREVENTION
DIVISION OF STD PREVENTION
ATLANTA, GEORGIA 30333

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Web Site

The online version of this report is available at http://www.cdc.gov/std/stats.

Selected STD Surveillance and Prevention References and Web Sites

STD Surveillance Reports 1993–2012
http://www.cdc.gov/std/stats/

STD Data in the NCHHSTP Atlas
http://www.cdc.gov/nchhstp/atlas/

STD Data on Wonder
http://wonder.cdc.gov/std.html

STD Data Management & Information Technology
http://www.cdc.gov/std/Program/data-mgmt.htm

STD Fact Sheets
http://www.cdc.gov/std/healthcomm/fact_sheets.htm

STD Treatment Guidelines
http://www.cdc.gov/STD/treatment/

STD Program Evaluation Guidelines
http://www.cdc.gov/std/program/pupestd.htm

STD Program Operation Guidelines
http://www.cdc.gov/std/program/GL-2001.htm

Recommendations for Public Health Surveillance of Syphilis in the United States
http://www.cdc.gov/std/SyphSurvReco.pdf

Behavioral Surveillance
Youth Risk Behavior Surveillance System: http://www.cdc.gov/HealthyYouth/yrbs/index.htm

National Survey of Family Growth
http://www.cdc.gov/nchs/nsfg.htm

Foreword

"STDs are hidden epidemics of enormous health and economic consequence in the United States. They are hidden because many Americans are reluctant to address sexual health issues in an open way and because of the biologic and social characteristics of these diseases. All Americans have an interest in STD prevention because all communities are impacted by STDs and all individuals directly or indirectly pay for the costs of these diseases. STDs are public health problems that lack easy solutions because they are rooted in human behavior and fundamental societal problems. Many of the strongest predictors of health, including sexual health, are social, economic, and environmental. Providing information about personal health and health services can empower people to make healthier choices to protect their health. Indeed, there are many obstacles to effective prevention efforts. The first hurdle will be to confront the reluctance of American society to openly confront issues surrounding sexuality and STDs. Despite the barriers, there are existing individual- and community-based interventions that are effective and can be implemented immediately. That is why a multifaceted approach is necessary at both the individual and community levels.

To successfully prevent STDs, many stakeholders need to redefine their mission, refocus their efforts, modify how they deliver services, and accept new responsibilities. In this process, strong leadership, innovative thinking, partnerships, and adequate resources will be required. The additional investment required to effectively prevent STDs may be considerable, but it is negligible when compared with the likely return on the investment. The process of preventing STDs must be a collaborative one. No one agency, organization, or sector can effectively do it alone; all members of the community must do their part. A successful national initiative to confront and prevent STDs requires widespread public awareness and participation and bold national leadership from the highest levels."[1]

[1] Eng TR, Butler WT, editors; Institute of Medicine (US). Summary: The hidden epidemic: confronting sexually transmitted diseases. Washington (DC): National Academy Press; 1997. p. 43.

Preface

Sexually Transmitted Disease Surveillance 2013 presents statistics and trends for sexually transmitted diseases (STDs) in the United States through 2013. 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 the following sources of data: (1) notifiable disease reporting from state and local STD programs; (2) projects that monitor STD positivity and prevalence in various settings, including the National Job Training Program, the STD Surveillance Network, and the Gonococcal Isolate Surveillance Project; and (3) other national surveys implemented by federal and private organizations.

The STD surveillance systems operated by state and local STD control programs, which provide the case report data for chlamydia, gonorrhea, syphilis, and chancroid, are the data sources of many of the figures and most of the statistical tables in this publication. These systems are an integral part of program management at all levels of STD prevention and control in the United States. Because of incomplete diagnosis and reporting, the number of STD cases reported to the Centers for Disease Control and Prevention is less than the actual number of cases occurring in the U.S. population. National summary data of case reports for other STDs are not available because they are not nationally notifiable diseases.

Beginning with the publication of *Sexually Transmitted Disease Surveillance 2010*, redistribution methodology is no longer applied to any of the data to account for cases missing race, sex or age. The counts presented in this report are summations of all valid data reported in reporting year 2013. Because missing data are excluded from calculations of rates by age group, race/ethnicity, and sex, incidence rates by these characteristics, particularly by race/ethnicity for chlamydia and gonorrhea, appear somewhat lower than in reports released for data prior to 2010.

The collection of information on race/ethnicity has been standardized since 1997 in the United States from the Office of Management and Budget (OMB). Following a revision in the National Electronic Telecommunication System for Surveillance (NETSS) implementation guide in April 2008, jurisdictions reporting STD data were to collect race according to the OMB standard categories: American Indian or Alaska Native, Asian, black or African American, Hispanic or Latino, Native Hawaiian/Other Pacific Islander, white and multirace. While 48 jurisdictions (47 states and the District of Columbia) collect and report data for at least one STD in formats compliant with these standards as of 2013, some jurisdictions only recently adopted this standard and used previous standards to report their case data to CDC in past years. In 2013, one jurisdiction reported data for syphilis cases in compliance with OMB standards but reported chlamydia and gonorrhea using an outdated standard. Consequently, historical trend and rate data by race/ethnicity displayed in figures and interpreted in this report for 2009–2013 include only those jurisdictions reporting in the current standard consistently for 2009 through 2013 .

Sexually Transmitted Disease Surveillance 2013 consists of four sections: the National Profile, the Special Focus Profiles, the Tables, and the Appendix. The National Profile section contains figures that provide an overview of STD morbidity in the United States. The accompanying text identifies major findings and trends for selected STDs. The Special Focus Profiles section contains figures and text that describe STDs in selected populations that are a focus of national and state prevention efforts. The Tables section provides statistical information about STDs at county, metropolitan statistical area, regional, state, and national levels. The Appendix includes information on how to interpret the STD surveillance data used to produce this report, as well as information about *Healthy People 2020* STD objectives and progress toward meeting these objectives, Government Performance and Results Act goals and progress toward meeting these goals, and STD surveillance case definitions.

Any comments and suggestions that would improve future publications are appreciated and should be sent to

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Guide to Acronyms

CDC	Centers for Disease Control and Prevention
CSF	cerebrospinal fluid
DSTDP	Division of STD Prevention
GISP	Gonococcal Isolate Surveillance Project
HEDIS	Healthcare Effectiveness Data and Information Set
HHS	U.S. Department of Health and Human Services
HMOs	health maintenance organizations
HIV	human immunodeficiency virus
HP2020	*Healthy People 2020*
HPV	human papillomavirus
HSV	herpes simplex virus
MICs	minimum inhibitory concentrations
MPC	mucopurulent cervicitis
MSA	metropolitan statistical area
MSM	men who have sex with men
MSW	men who have sex with women only
NAATs	nucleic acid amplification tests
NDTI	National Disease and Therapeutic Index
NGU	nongonococcal urethritis
NHANES	National Health and Nutrition Examination Survey
NJTP	National Job Training Program
OMB	Office of Management and Budget
P&S	primary and secondary
PID	pelvic inflammatory disease
QRNG	quinolone-resistant *Neisseria gonorrhoeae*
RPR	rapid plasma reagin
SSuN	STD Surveillance Network
STD	sexually transmitted disease
VDRL	Venereal Disease Research Laboratory

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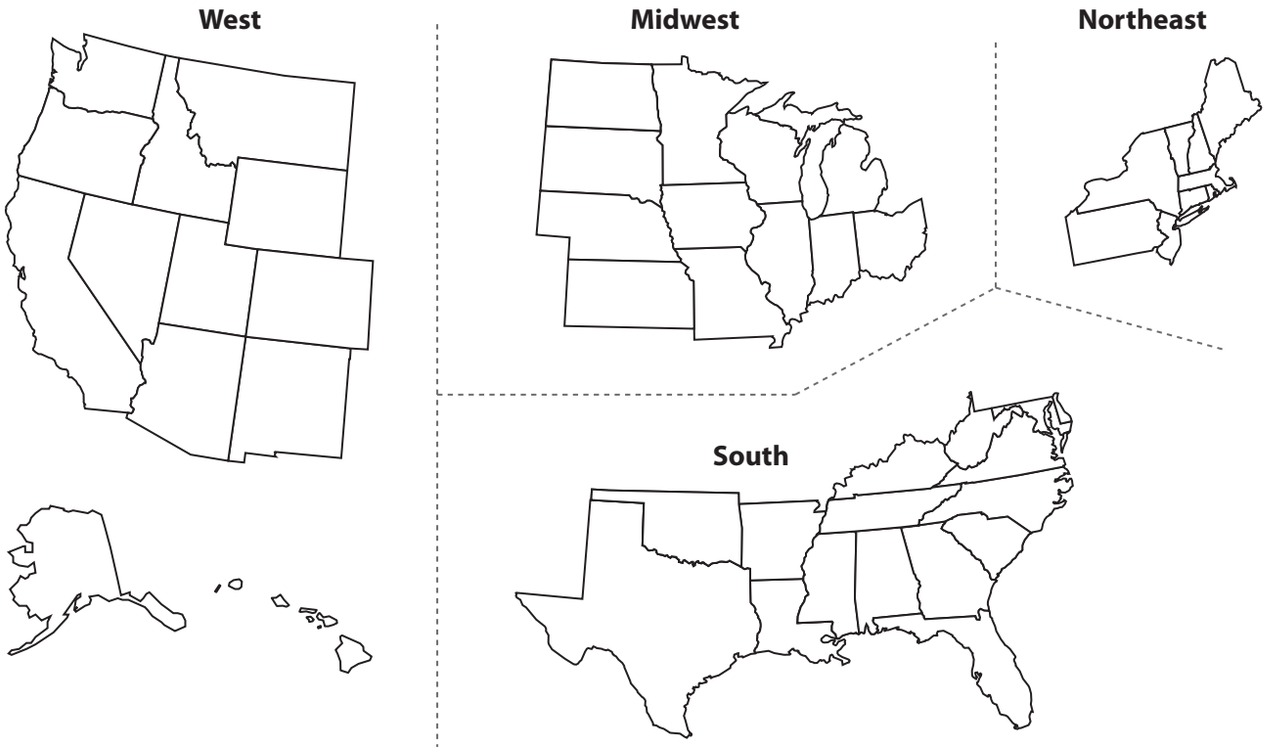
Census Regions of the United States



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Vermont

National Overview of Sexually Transmitted Diseases (STDs), 2013

All Americans should have the opportunity to make choices that lead to health and wellness. An approach to improve health equity can address what the health providers can do with other partners working together.[1] Interested committed public and private organizations, communities, and individuals can take action to prevent sexually transmitted diseases (STDs) and their related health burdens. In addition to federal, state, and local public support for STD prevention, local community leaders can promote STD prevention education. Health providers can assess their patients' risks and talk to them about testing. Parents can better educate their children about STDs and sexual health. Individuals can use condoms consistently and correctly, and openly discuss ways to protect their health with partners and providers. As noted in the Institute of Medicine report, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases,* surveillance is a key component of all our efforts to prevent and control these diseases.[2]

This overview summarizes national surveillance data for 2013 on the three notifiable diseases for which there are federally funded control programs: chlamydia, gonorrhea, and syphilis. The data presented here by race and ethnicity are categorized according to the Office of Management and Budget standards. However, data for all jurisdictions by race/ethnicity using these categories are not available; consequently, absolute rates by race/ethnicity and comparisons among racial/ethnic groups may not match those provided in previous reports.

Chlamydia

In 2013, a total of 1,401,906 cases of *Chlamydia trachomatis* infection were reported to the CDC (Table 1). This case count corresponds to a rate of 446.6 cases per 100,000 population, a decrease of 1.5% compared with the rate in 2012. This is the first time since nationwide reporting for chlamydia began that the overall rate of reported cases of chlamydia has decreased. The rate in women decreased 2.4% while rate in men increased 0.8%.

In 2013, the overall rate of chlamydial infection in the United States among women (623.1 cases per 100,000 females) was over two times the rate among men (262.6 cases per 100,000 males), reflecting the larger number of women screened for this infection (Tables 4 and 5). However, with the increased availability of urine testing, men are increasingly being tested for chlamydial infection. During 2009–2013, the chlamydia rate in men increased 21%, compared with an 6.2% increase in women during this period. Rates also varied among different racial and ethnic minority populations. For example, in 2013, the chlamydia rate in blacks was 6.4 times the rate in whites and the rate among American Indians/Alaska Natives was almost 4 times that rate among whites.

Gonorrhea

Following a 74% decline in the rate of reported gonorrhea during 1975–1997, overall gonorrhea rates plateaued for 10 years. After the decline halted for several years, gonorrhea rates decreased further to 98.1 cases per 100,000 population in 2009, the lowest rate since recording of gonorrhea rates began. Between 2009 and 2012, the gonorrhea rate increased slightly each year to 106.7 cases per 100,000 population in 2012. In 2013, there were 333,004 cases of gonorrhea reported and the national gonorrhea rate decreased slightly to 106.1 cases per 100,000 population. In 2013, rates decreased among all persons aged 15–19 years and in women 20–24 years; rates increased in other age groups.

In 2013, for the first time since 2000, the rate of reported gonorrhea cases among men was higher than the rate among women. During 2012–2013, the gonorrhea rate among men increased 4.3% and the rate among women decreased 5.1%. The increase among men compared with a decrease among women suggests either increased transmission or increased case ascertainment (e.g., through increased extra-genital screening) among gay, bisexual and other men who have sex with men.

In 2013, the gonorrhea rate in blacks was 12.4 times the rate in whites (Table 22B); while rates among blacks have been declining, even greater increases in whites have contributed to lessening of the apparent disparities in rates between blacks and whites. As with chlamydia, data on gonorrhea prevalence in defined populations were available from several sources in 2013. These data showed a continuing high burden of disease in some adolescents and young adults in parts of the United States.

Antimicrobial resistance remains an important consideration in the treatment of gonorrhea. With increased resistance to the fluoroquinolones and declining susceptibility to cefixime, dual therapy with ceftriaxone and azithromycin is now the only CDC recommended treatment for gonorrhea.[3] In 2013, decreases in minimum inhibitory concentrations (MICs) of cephalosporins (cefixime and ceftriaxone) were observed. Continued monitoring of susceptibility patterns to these antibiotics is critical. (Figures 25 and 26).

Syphilis

The rate of primary and secondary (P&S) syphilis reported in the United States decreased during the 1990s, and in 2000, it was the lowest since reporting began in 1941. The low rate of syphilis and the concentration of most syphilis cases in a small number of geographic areas led to the development of the *National Plan to Eliminate Syphilis from the United States*, which was announced by the Surgeon General in 1999 and updated in 2006.[4] The overall rate of P&S syphilis in the United States declined 89.7% during 1990–2000, then increased each year from 2001 through 2009. In 2010, the overall rate decreased for the first time in 10 years. While the rate remained unchanged in 2011, the rate increased 22% during 2011–2013.

In 2013, 1,708 more cases were reported than in 2012. This increase was almost solely among men (Figure 31). In 2013, men accounted for 91% of all P&S cases; in the 49 states and the District of Columbia that provided information about sex of sex partners of patients with syphilis, MSM accounted for 75% of all P&S cases. In areas where information for both sex of partner and HIV status was relatively complete (70% or greater for all cases), 52% of MSM with P&S syphilis were also co-infected with HIV; co-infection in MSW and women was 9.9% and 5.2%, respectively (Figure 42).

Rates in women remained unchanged between 2011 and 2013. In 2013, 1,500 cases of P&S syphilis were reported in women. The 2013 rate of congenital syphilis (8.7 cases per 100,000 live births) marks the first increase in congenital syphilis since 2008 and was largely driven by increases in the West, coinciding with increases in P&S syphilis among women in the West. There were 348 cases of congenital syphilis reported in 2013.

Significant racial and ethnic disparities in STD rates persist. In 2013, the P&S syphilis rate among blacks was almost six times the rate among whites (Figure 39). In some subgroups, however, these disparities are much higher. The 2013 rate among blacks aged 15–19 years was approximately 13 times the rate for whites in that age group (Table 36B). While rates in congenital syphilis have decreased in recent years, the rates are still 10 times higher in blacks than in whites and almost 3.5 times higher in Hispanics than in whites (Table 43).

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[1] Sadana R, Blas E. What can public programs do to improve health equity? Public Health Reports. 2013;Vol 128:12-20.

[2] Eng TR, Butler WT, editors; Institute of Medicine (US). The hidden epidemic: confronting sexually transmitted diseases. Washington (DC): National Academy Press; 1997. p 43.

[3] Centers for Disease Control and Prevention. CDC's sexually transmitted diseases treatment guidelines, 2014. MMWR Morb Mortal Wkly Rep. 2014 (in press).

[4] Centers for Disease Control and Prevention. The national plan to eliminate syphilis from the United States. Atlanta: U.S. Department of Health and Human Services; 2006.

NATIONAL PROFILE

NATIONAL PROFILE

National Profile

The National Profile section contains figures that show trends and the distribution of nationally reportable STDs (chlamydia, gonorrhea, syphilis, and chancroid) by age, sex, race/ethnicity, and location for the United States.

Chlamydia

Background

C. trachomatis infection is the most commonly reported notifiable disease in the United States. It is among the most prevalent of all STDs, and since 1994, has comprised the largest proportion of all STDs reported to CDC (Table 1). Studies also demonstrate the high prevalence of chlamydial infections in the general U.S. population, particularly among young women.[1,2]

Chlamydial infections in women are usually asymptomatic. However, untreated infection can result in pelvic inflammatory disease (PID), which is a major cause of infertility, ectopic pregnancy, and chronic pelvic pain. Data from randomized controlled trials of chlamydia screening suggested that screening programs can lead to a reduction in the incidence of PID.[3,4] As with other inflammatory STDs, chlamydial infection might facilitate the transmission of human immunodeficiency virus (HIV) infection.[5] In addition, pregnant women infected with chlamydia can pass the infection to their infants during delivery, potentially resulting in neonatal ophthalmia and pneumonia. Because of the large burden of disease and risks associated with infection, CDC recommends that all sexually active women younger than age 26 years receive annual chlamydia screening.[6]

The Healthcare Effectiveness Data and Information Set (HEDIS) contains a measure which assesses chlamydia screening coverage of sexually active young women who receive medical care through commercial or Medicaid managed care organizations. Among sexually-active women aged 16–24 years in commercial plans, chlamydia screening increased from 23.1% in 2001 to 45.1% in 2012. During the same time period, the screening rate among sexually-active women aged 16–24 years covered by Medicaid increased from 40.4% to 57.1%.[7] Although chlamydia screening is expanding, many women who are at risk are still not being tested—reflecting, in part, the lack of awareness among some health care providers and the limited resources available to support these screenings.

Interpreting Rates of Reported Cases of Chlamydia

Trends in rates of reported cases of chlamydia are influenced by changes in incidence of infection, as well as changes in diagnostic, screening, and reporting practices. As chlamydial infections are usually asymptomatic, the number of infections identified and reported can increase as more people are screened even when incidence is flat or decreasing. Expanded use of more sensitive diagnostics tests (e.g., nucleic acid amplification tests) can also increase the number of infections identified and reported independent of increases in incidence. 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 case rates prior to 2000 reflect incomplete reporting. Additionally, increasing use of electronic laboratory reporting has likely increased the proportion of diagnosed cases that are reported. Consequently, an increasing chlamydia case rate may reflect increases in incidence of infection, screening coverage, and use of more sensitive tests, as well as more complete reporting. Likewise, decreases in chlamydia case rates may suggest decreases in incidence of infection or screening coverage.

Chlamydia—United States

In 2013, a total of 1,401,906 chlamydial infections were reported to CDC in 50 states and the District of Columbia (Table 1). This case count corresponds to a rate of 446.6 cases per 100,000 population. During 1993–2011, the rate of reported chlamydial infection increased from 178.0 to 453.4 cases per 100,000 population (Figure 1, Table 1). During 2011–2012, the national rate of reported cases remained stable (453.4 to 453.3 cases per 100,000). During 2012–2013, the rate decreased 1.5% to 446.6 cases per 100,000. This is the first time since national reporting began that the rate of reported cases of chlamydia has decreased.

Chlamydia by Region

In 2013, rates of reported chlamydia were highest in the South (485.1 per 100,000 population), followed by the Midwest (439.0), the West (424.9), and the Northeast (403.3) (Table 3). Between 2004–2012, rates of reported cases of chlamydia increased in all regions (Figure 2). During 2012–2013, the rate decreased in the Northeast by 3.1%, in the Midwest by 2.7%, and in the South by 1.4% and increased in the West by 0.6% (Table 3).

Chlamydia by State

In 2013, rates of reported cases of chlamydia by state ranged from 236.2 cases per 100,000 population in New Hampshire to 789.4 cases in Alaska (Figure 3, Table 2); the rate in the District of Columbia was 1,104.4 cases per 100,000 (Table 3). During 2012–2013, rates of reported chlamydia decreased in 26 states and in the District of Columbia.

Chlamydia by Metropolitan Statistical Area

In 2013, the rate of reported cases of chlamydia per 100,000 population in the 50 most populous metropolitan statistical areas (MSAs) decreased 2.4% from the rate in 2012 (462.7 and 474.2 cases per 100,000, respectively) (Table 6). In 2013, 56.5% of chlamydia cases were reported by these MSAs. Among women in these MSAs, the rate decreased 3.6% during 2012–2013 (653.1 to 629.6 cases per 100,000) (Table 7). Among men, the 2013 rate (286.7 per 100,000 males) was similar to the 2012 rate (286.5 cases per 100,000 males) (Table 8).

Chlamydia by County

Counties in the United States with the highest rates of reported cases of chlamydia were located primarily in the Southeast and West, including Alaska (Figure 4). In 2013, 866 (27.6%) of 3,142 counties had rates higher than 400.0 cases per 100,000 population. Seventy counties and independent cities reported 43% of all chlamydia cases in 2013 (Table 9).

Chlamydia by Sex

In 2013, 993,348 cases of chlamydia were reported among females for a case rate of 623.1 per 100,000 females. During 1995–2011, the rate among females increased each year (Figure 1). During 2011–2012 the rate decreased slightly (0.7%) from 643.4 to 638.7 cases per 100,000 and during 2012–2013 decreased 2.4% from 638.7 to 623.1 cases per 100,000 (Table 4).

The overall case rate among males increased slightly (0.8%) during 2012–2013 (260.6 to 262.6 cases per 100,000 males). As in previous years, the reported case rate among females was about two times the case rate among males in 2013, likely reflecting a larger number of women screened for this infection (Figure 1, Tables 4 and 5). The lower rate among men also suggests that many of the sex partners of women with chlamydia are not receiving a diagnosis of chlamydia or being reported as having chlamydia.

However, with the advent of highly sensitive nucleic acid amplification tests (NAATs) that can be performed on urine, chlamydial infection is increasingly being diagnosed in symptomatic and asymptomatic men. During 2009–2013, the rate of reported cases among men increased 21.0% (from 217.1 to 262.6 cases per 100,000 males) compared with a 6.2% increase among women during the same period (from 586.7 to 623.1 cases per 100,000 females).

Chlamydia by Age

Rates of reported cases of chlamydia are highest among adolescents and young adults aged 15–24 years (Table 10). In 2013, the rate among 15–19 year olds was 1,852.1 cases per 100,000 and the rate among 20–24 year olds was 2,451.6 cases per 100,000.

Among women, the highest age-specific rates of reported chlamydia in 2013 were among those aged 15–19 years (3,043.3 cases per 100,000 females) and 20–24 years (3,621.1 cases per 100,000 females) (Figure 5, Table 10). Within these age ranges, reported rates were highest among women aged 19 years (4,767.2 cases per 100,000 females) and aged 20 years (4,507.3 cases per 100,000 females) (Table 12). After increasing steadily during 2000–2011, the rate among women aged 15–19 years decreased 5.6% during 2011–2012 and decreased 8.7% during 2012–2013. The rate increased slightly (1.8%) among women aged 20–24 years during 2011–2012 and was stable during 2012–2013.

Age-specific rates among men, although substantially lower than the rates among women, were highest in those aged 20–24 years (1,325.6 cases per 100,000 males) (Figure 5, Table 10). Similar to trends in women, after increasing for the last decade, reported case rate among men aged 15–19 years decreased 5.1% during 2011–2012 and decreased 9.0% during 2012–2013. Among men aged 20–24 years, the reported case rate was similar in 2012 and 2013 (1,322.8 and 1,325.6 cases per 100,000 males).

Chlamydia by Race/Ethnicity

Among the 47 jurisdictions (46 states and the District of Columbia) that submitted data in the race and ethnicity categories in 2013 according to Office of Management and Budget (OMB) standards, rates of reported cases of chlamydia were highest among black men and women (Figure L, Table 11B). The rate of chlamydia among blacks was 6.4 times the rate among whites (1,147.2 and 180.3

cases per 100,000 population, respectively). The rate among American Indians/Alaska Natives (697.9 cases per 100,000) was 3.9 times the rate among whites. The rate among Hispanics (377.0 cases per 100,000) was 2.1 times the rate among whites. The rate among Native Hawaiians/Other Pacific Islanders (633.3 cases per 100,000) was 3.5 times the rate among whites. The rate among Asians was lower than the rate among whites (111.5 cases and 180.3 cases per 100,000, respectively).

During 2009–2013, 40 jurisdictions (39 states and the District of Columbia) submitted chlamydia case report data in the race and ethnicity categories according to the OMB standards. Between 2009–2012, rates increased among all races and ethnicities (Figure 6). During 2012–2013, rates decreased among American Indians/Alaska Natives (5.0%), among blacks (6.8%), and among whites (0.8%), were stable among Hispanics, and increased 10.0% among Native Hawaiians/Other Pacific Islanders (Figure 6).

Chlamydia by Reporting Source

Most chlamydia cases reported in 2013 were from venues outside of STD clinics (Figure 8 and Table A2). Over time, the proportion of cases reported from non-STD clinic sites has continued to increase (Figure 7). In 2013, among women, only 5.5% of chlamydia cases were reported through an STD clinic (Figure 8). Most cases among women were reported from private physicians/health maintenance organizations (HMOs) (33.2%). Among men, 17.2% of chlamydia cases were reported from an STD clinic in 2013 and 24.3% were reported from private physicians/HMOs.

Chlamydia Prevalence in the Population

The National Health and Nutrition Examination Survey (NHANES) is a nationally representative survey of the U.S. civilian, non-institutionalized population aged 14–39 years that provides an important measure of chlamydia disease burden. From 1999–2000 to 2007–08, there was an estimated 40% reduction (95% Confidence Interval [CI]: 8%, 61%) in prevalence among persons aged 14–39 years.[1] During 2005–2008, the overall prevalence of chlamydia among persons aged 14–39 years was 1.5% (95% CI: 1.2%, 1.9%). Prevalence was highest among non-Hispanic blacks (5.9%, 95% CI: 4.5%, 7.7%) (Figure 10).

Chlamydia Positivity in Selected Populations

In 2005, the STD Surveillance Network (SSuN) was established to improve the capacity of national, state, and local STD programs to detect, monitor, and respond to trends in STDs. In 2013, a total of 42 STD clinics at 12 sites collected enhanced behavioral information on patients who presented for care to these clinics. More detailed information about SSuN methodology can be found in the STD Surveillance Network section of the Appendix, Interpreting STD Surveillance Data.

In 2013, the proportion of STD clinic patients testing positive for chlamydia varied by age, sex, and sexual behavior. Adolescent men who have sex with women (MSW) had the highest prevalence (31.7%), likely reflecting targeted testing of partners of females diagnosed with chlamydia. Among MSW and women, prevalence among those tested decreased with age. The variation in prevalence by age was not as pronounced for gay, bisexual, and other men who have sex with men (MSM) (Figure 9).

Chlamydia Among Special Populations

More information on chlamydia among women of reproductive age, adolescents and young adults, MSM, and minority populations is presented in the Special Focus Profiles.

Chlamydia Summary

Chlamydia continues to be the most commonly reported nationally notifiable disease with 1,401,906 cases reported in 2013. For the first time since national reporting began, the rate of reported cases of chlamydia decreased. Decreases in the overall rate were driven by decreases among women; in particular, decreases among women aged 15-19 years. However, both test positivity and the number of reported cases of *C. trachomatis* infections remain high among most age groups, racial/ethnic groups, geographic areas, and both sexes. Racial differences also persist; reported case rates and prevalence estimates among blacks continue to be substantially higher than among other racial/ethnic groups.

[1] Datta SD, Torrone E, Kruszon-Moran D, Berman S, Johnson R, Satterwhite CL, et al. Chlamydia trachomatis trends in the United States among persons 14 to 39 years of age, 1999-2008. Sex Transm Dis. 2012;39(2):92-6. doi: 10.1097/OLQ.0b013e31823e2ff7.

[2] Miller WC, Ford CA, Morris M, Handcock MS, Schmitz JL, Hobbs MM, et al. Prevalence of chlamydial and gonococcal infections among young adults in the United States. JAMA. 2004 12;291(18):2229-36.

[3] Scholes D, Stergachis A, Heidrich FE, Andrilla H, Holmes KK, Stamm WE. Prevention of pelvic inflammatory disease by screening for cervical chlamydial infection. N Engl J Med. 1996;34(21):1362-6.

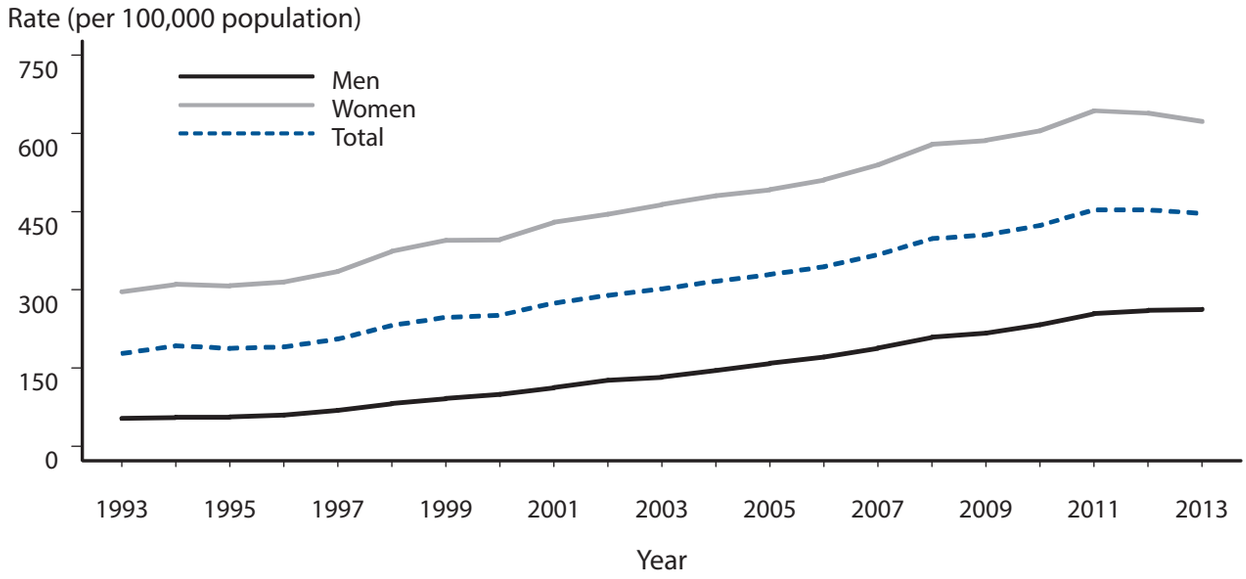
[4] Oakeshott P, Kerry S, Aghaizu A, Atherton H, Hay S, Taylor-Robinson D, et al. Randomised controlled trial of screening for *Chlamydia trachomatis* to prevent pelvic inflammatory disease: the POPI (prevention of pelvic infection) trial. BMJ. 2010;340:c1642. doi: 10.1136/bmj.c1642.

[5] Fleming DT, Wasserheit JN. From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sex Transm Infect. 1999;75:3-17.

[6] Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, MMWR Morb Mortal Wkly Rep. 2010; No.59(RR-12):1-110. Erratum in: MMWR Recomm Rep. 2011;60(1):18.

[7] National Committee for Quality Assurance. The state of healthcare quality 2013. Washington (DC): National Committee for Quality Assurance; 2013. p. 79-81.

Figure 1. Chlamydia — Rates of Reported Cases by Sex, United States, 1993–2013



NOTE: As of January 2000, all 50 states and the District of Columbia have regulations that require the reporting of chlamydia cases.

Figure 2. Chlamydia — Rates of Reported Cases by Region, United States, 2004–2013

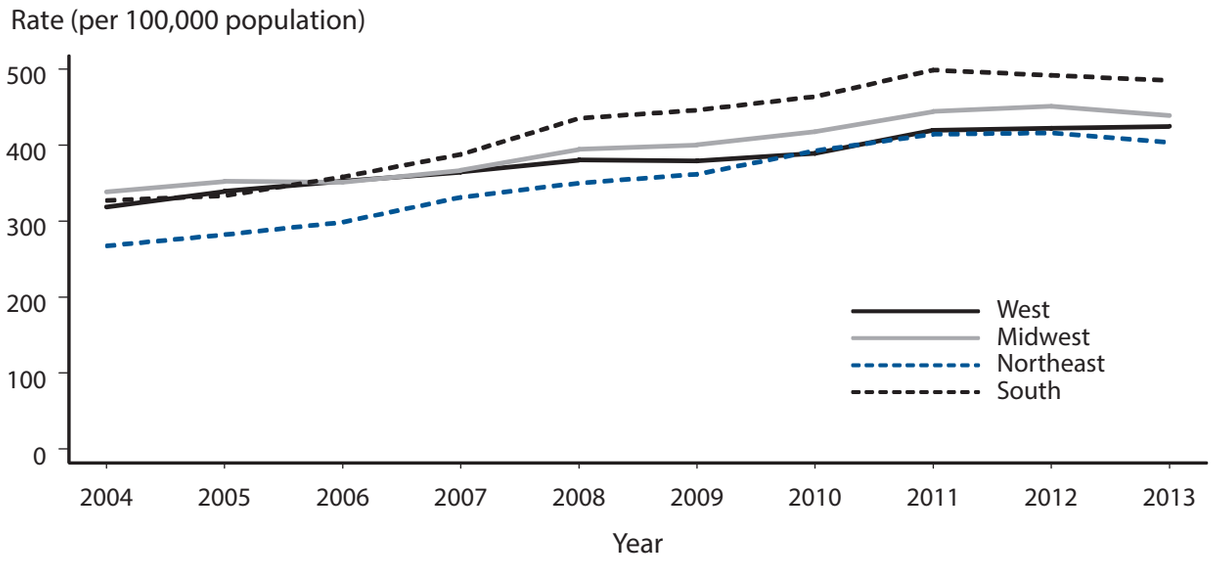
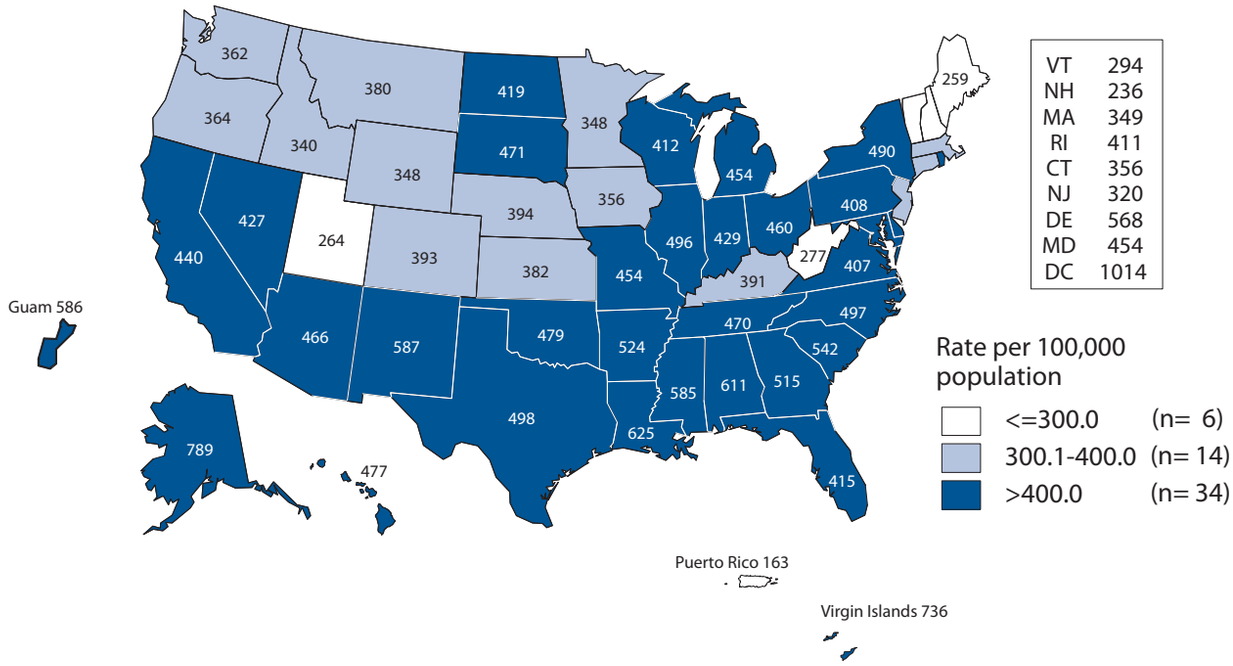


Figure 3. Chlamydia — Rates of Reported Cases by State, United States and Outlying Areas, 2013



NOTE: The total rate of reported cases of chlamydia for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 443.5 per 100,000 population.

Figure 4. Chlamydia — Rates of Reported Cases by County, United States, 2013

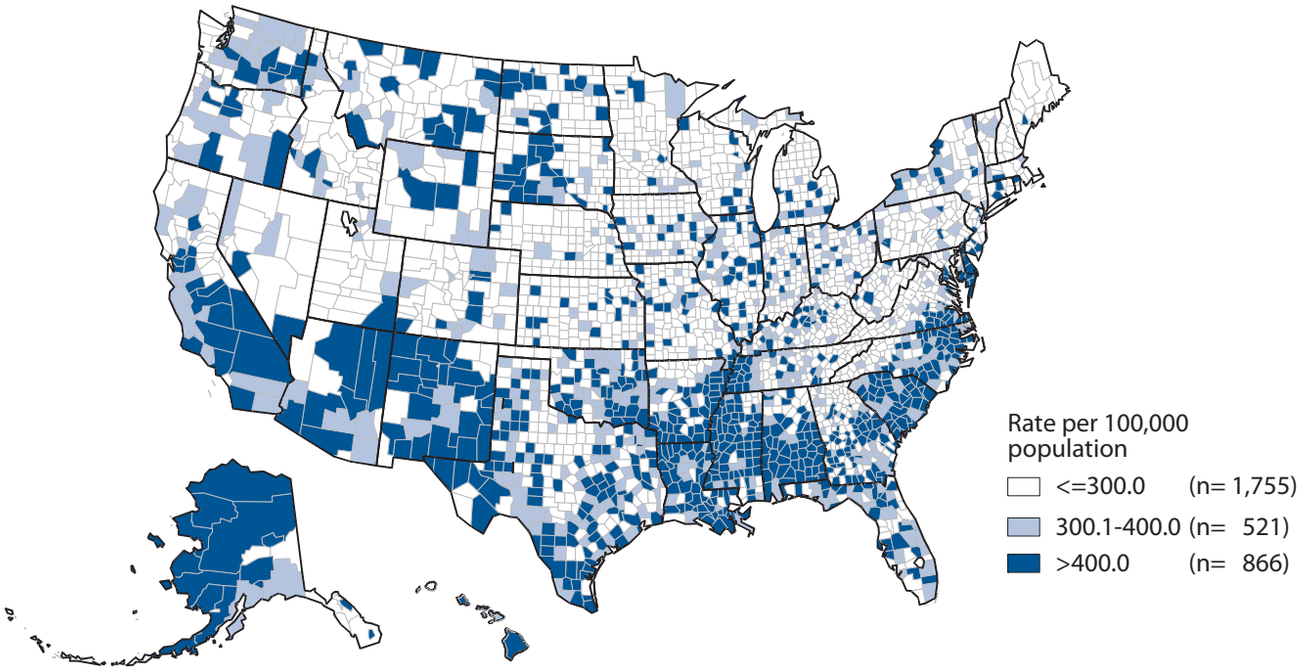


Figure 5. Chlamydia — Rates of Reported Cases by Age and Sex, United States, 2013

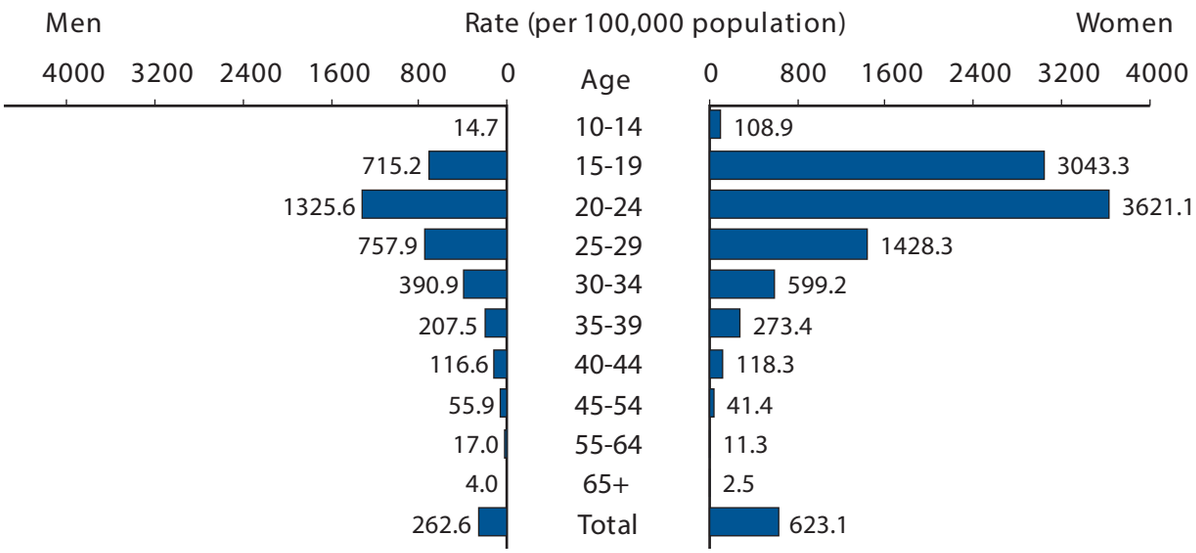
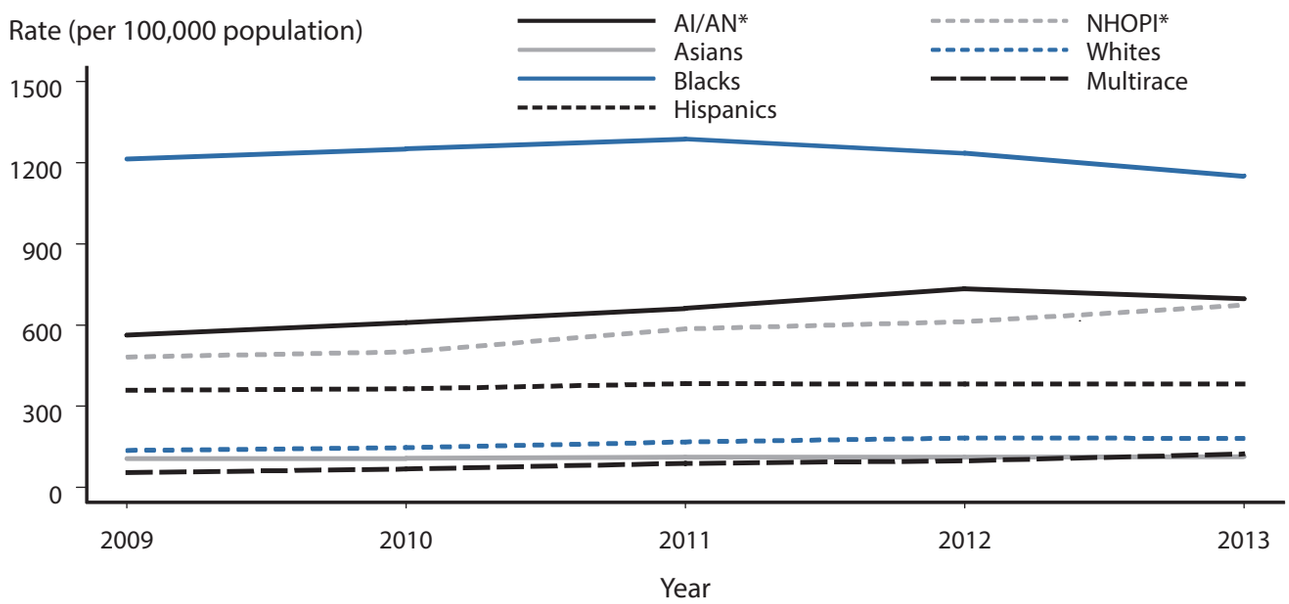


Figure 6. Chlamydia — Rates of Reported Cases by Race/Ethnicity, United States, 2009–2013



* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 39 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats during 2009–2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure 7. Chlamydia — Reported Cases by Reporting Source and Sex, United States, 2004–2013

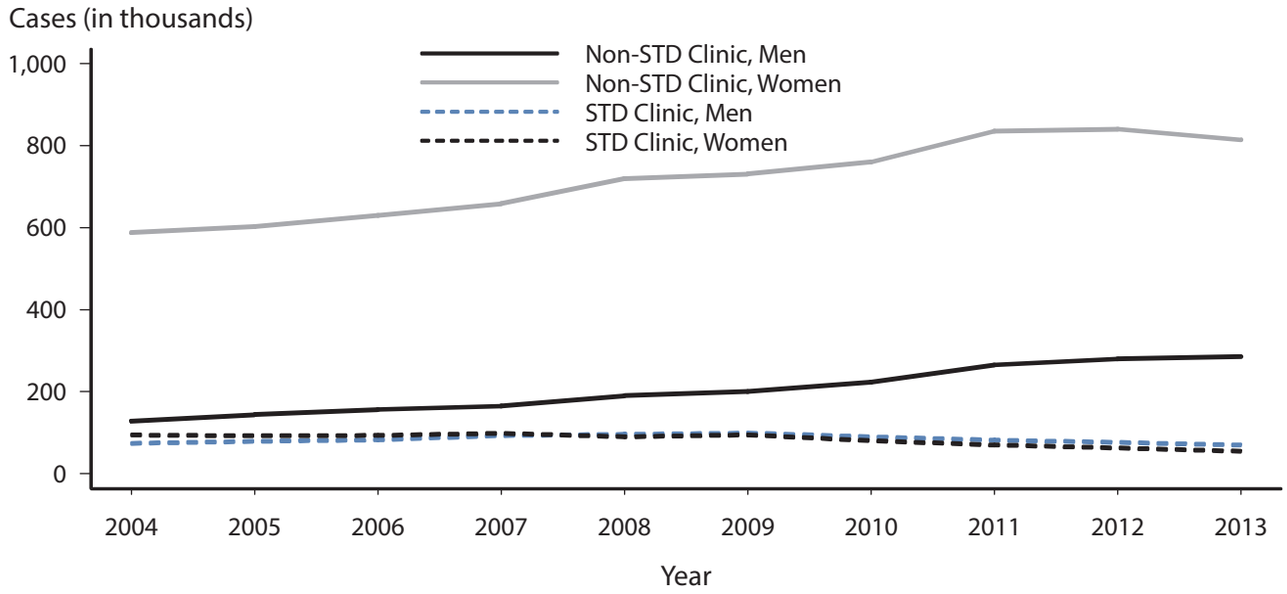
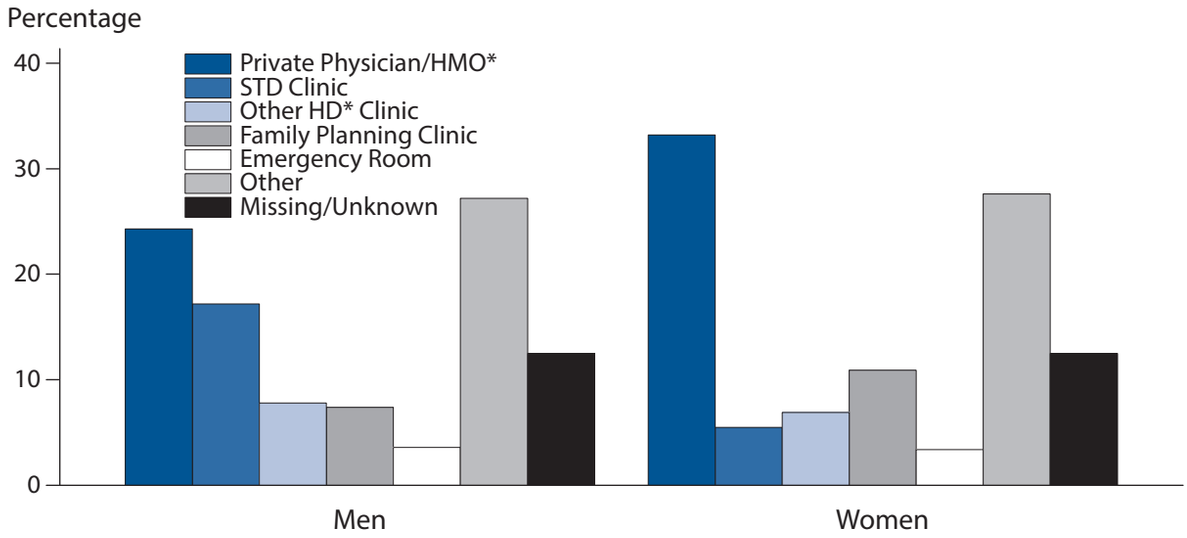


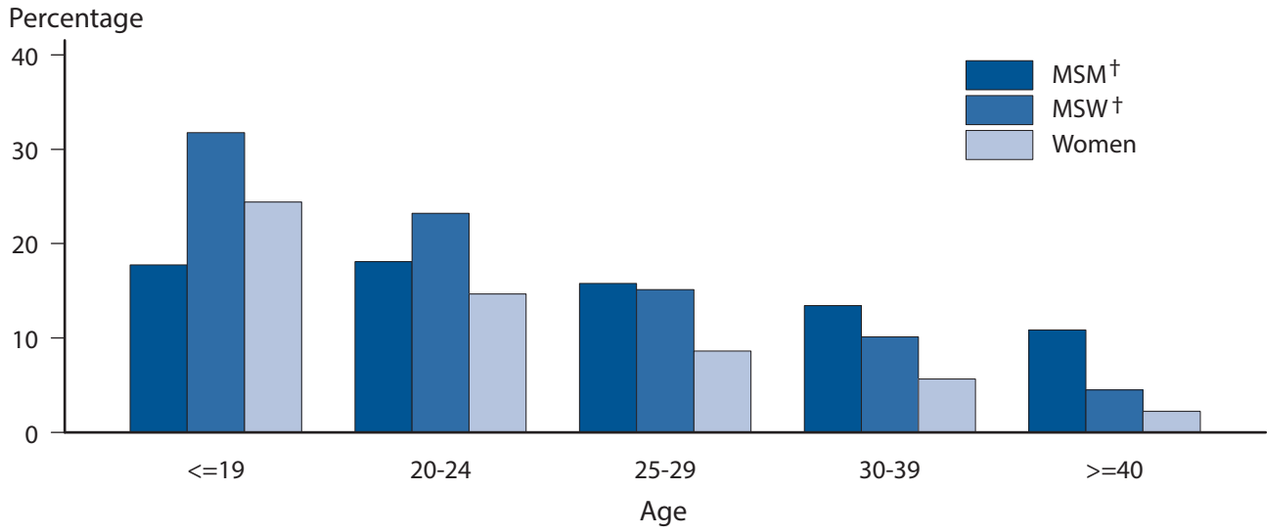
Figure 8. Chlamydia — Percentage of Reported Cases by Sex and Reporting Source, United States, 2013



* HMO = health maintenance organization; HD = health department.

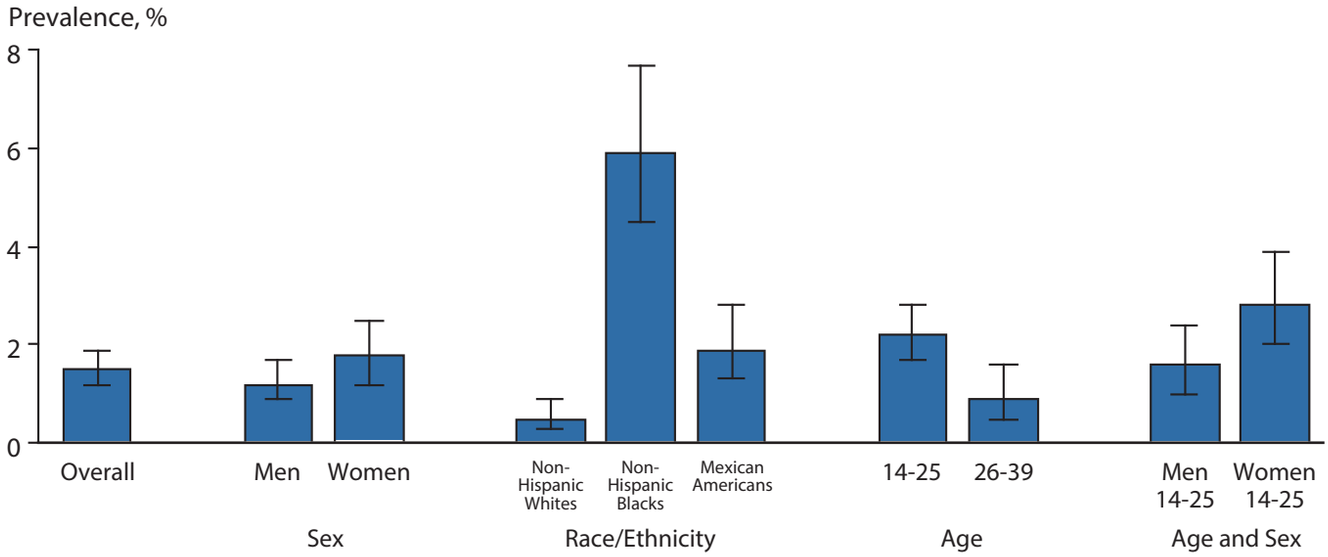
NOTE: Other includes: Drug Treatment, Tuberculosis Clinic, Correctional Facility, Laboratory, Blood Bank, Labor and Delivery, Prenatal Care, National Job Training Program, School-based Clinic, Mental Health Provider, Other Hospital, Indian Health Service, Military, and HIV Counseling and Testing Site

Figure 9. Chlamydia — Proportion of STD Clinic Patients* Testing Positive by Age, Sex, and Sexual Behavior, STD Surveillance Network (SSuN), 2013



* Only includes patients tested for chlamydia
† MSM = men who have sex with men; MSW = men who have sex with women only.
NOTE: Six jurisdictions (Birmingham, Chicago, Denver, Hartford/New Haven, New Orleans, and Richmond) contributed data from January through June 2013 and the remaining jurisdictions (Baltimore, Los Angeles, New York City, Philadelphia, San Francisco and Seattle) contributed data for all of 2013.

Figure 10. Chlamydia — Prevalence Among Persons Aged 14–39 Years by Sex, Race/Ethnicity, or Age Group, National Health and Nutrition Examination Survey, 2005–2008



NOTE: Error bars indicate 95% confidence intervals.

Gonorrhea

Background

Gonorrhea is the second most commonly reported notifiable disease in the United States. Infections due to *Neisseria gonorrhoeae*, like those resulting from *Chlamydia trachomatis*, are a major cause of pelvic inflammatory disease (PID) in the United States. PID can lead to serious outcomes in women, such as tubal infertility, ectopic pregnancy, and chronic pelvic pain. In addition, epidemiologic and biologic studies provide evidence that gonococcal infections facilitate the transmission of HIV infection.[1] Although an individual's sexual behavior can increase the risk of acquiring gonorrhea, social determinants of health, such as socioeconomic status, may contribute to the burden of gonorrhea in a community.[2]

In 2009, the national rate of reported gonorrhea cases reached an historic low of 98.1 cases per 100,000 population (Figure 11 and Table 1). However, during 2009–2012, the rate increased slightly each year, to 106.7 cases per 100,000 population in 2012. In 2013, a total of 333,004 gonorrhea cases were reported, and the national gonorrhea rate decreased slightly to 106.1 cases per 100,000 population.

The decrease in gonorrhea rate during 2012–2013 was observed primarily among women (Figure 12). Although trends by sex varied by region, nationwide, the gonorrhea rate decreased among women, but increased among men. Overall, the gonorrhea rate decreased in the Northeast, Midwest, and South, but increased in the West (Figure 13). The rate decreased among persons aged 15–19 years and 20–24 years, but increased among those aged 25 years or older (Table 21).

N. gonorrhoeae has progressively developed resistance to each of the antimicrobials used for treatment of gonorrhea. Most recently, declining susceptibility to cefixime resulted in a change to the CDC treatment guidelines, so that dual therapy with ceftriaxone and either azithromycin or doxycycline is now the only CDC-recommended treatment regimen for gonorrhea.[3] The emerging threat of cephalosporin resistance highlights the need for continued surveillance of *N. gonorrhoeae* antimicrobial susceptibility.

The combination of persistently high gonorrhea morbidity in some populations and the threat of cephalosporin-resistant gonorrhea reinforces the need to better understand the epidemiology of gonorrhea.

Interpreting Rates of Reported Cases of Gonorrhea

Although gonorrhea case reporting is useful for monitoring disease trends, the number of gonorrhea cases reported to CDC is affected by many factors in addition to the actual occurrence of the infection within the population. Changes in the burden of gonorrhea may be masked by changes in screening practices (e.g., screening for chlamydia with tests that also detect *N. gonorrhoeae* infections or increased screening at extra-genital anatomic sites), the use of diagnostic tests with different test performance (e.g., the broader use of nucleic acid amplification tests [NAATs]), and changes in reporting practices. As with other STDs, the reporting of gonorrhea cases to CDC is incomplete.[4] For these reasons, supplemental data on gonorrhea prevalence in persons screened in a variety of settings are useful in assessing the burden of disease in selected populations.

Gonorrhea—United States

In 2013, a total of 333,004 cases of gonorrhea were reported in the United States, yielding a rate of 106.1 cases per 100,000 population (Table 1). The rate decreased 0.6% since 2012; however, the rate increased 8.2% overall during 2009–2013.

Gonorrhea by Region

In 2013, as in previous years, the South had the highest rate of reported gonorrhea cases (128.6 cases per 100,000 population) among the four regions of the United States, followed by the Midwest (108.6 cases per 100,000 population), Northeast (85.5 cases per 100,000 population), and West (83.5 cases per 100,000 population) (Table 14). During 2012–2013, the gonorrhea rate decreased 7.3% in the Northeast, 5.0% in the Midwest, and 1.5% in the South, but increased 15.0% in the West (Figure 13, Table 14).

Gonorrhea by State

In 2013, rates of reported gonorrhea cases per 100,000 population ranged by state from 9.2 in New Hampshire to 188.4 in Louisiana; the gonorrhea rate in the District of Columbia was 391.9 per 100,000 population (Figure 14, Table 13). During 2012–2013, gonorrhea rates increased in 50% (25/50) of states and in the District of Columbia, decreased in 48% (24/50) of states, and did not change in one state (Table 14).

Gonorrhea by Metropolitan Statistical Area (MSA)

The overall rate of reported gonorrhea cases in the 50 most populous MSAs was 118.1 cases per 100,000 population in 2013 (Table 17), representing a 1.6% decrease compared with 2012 (120.0 cases per 100,000 population). In 2013, 60.7% of reported gonorrhea cases were reported by these MSAs. Since 2010, the gonorrhea rate among women in the 50 most populous MSAs has been lower than the rate among men (Tables 18 and 19). In 2013, the rate among women was 105.4 cases per 100,000 population, while the rate among men was 130.8 cases per 100,000 population.

Gonorrhea by County

In 2013, 51% of reported gonorrhea cases occurred in just 70 counties or independent cities (Table 20). In 2013, 1,108 counties (35.3%) in the United States had a rate less than or equal to 19 cases per 100,000 population (Figure 15). The rate ranged from 19.1 to 100 per 100,000 population in 1,424 counties (45.3%), and was more than 100 cases per 100,000 population in 610 counties (19.4%). As in previous years, most counties with more than 100 cases per 100,000 population were located in the South.

Gonorrhea by Sex

In 2013, for the first time since 2000, the rate of reported gonorrhea cases among men (109.5 cases per 100,000 population) was higher than the rate among women (102.4 cases per 100,000 population) (Figure 12, Tables 15 and 16). During 2012–2013, the gonorrhea rate among men increased 4.3%, and the rate among women decreased 5.1% During 2009–2013, the rate among men increased 20.3%, while the rate among women decreased 2.0%. The magnitude of the increase among men compared with a decrease among women suggests either increased transmission or increased case ascertainment (e.g., through increased extra-genital screening) among gay, bisexual, and other men who have sex with men (collectively referred to as MSM). However, most jurisdictions do not routinely report sex of sex partner or site of infection for gonorrhea cases, so trends in gonorrhea rates among MSM over time cannot be assessed.

Gonorrhea by Region and Sex

During 2012–2013 in the West, the rate of reported gonorrhea cases increased among men (17.3%) and among women (11.8%) (Tables 15 and 16). In contrast, in the Midwest and the South, the gonorrhea rate increased among men (increased 0.6% in the Midwest, 2.4% in the South), but decreased among women (decreased 9.2% in the Midwest, 5.0% in the South). In the Northeast, the gonorrhea rate decreased among men (1.9%) and among women (13.2%).

Gonorrhea by Age

In 2013, rates of reported gonorrhea cases were highest among adolescents and young adults. In 2013, the highest rates among women were observed among those aged 20–24 years (541.6 cases per 100,000 population) and 15–19 years (459.2 cases per 100,000 population). Among men, the rate was highest among those aged 20–24 years (459.4 cases per 100,000 population) (Figure 16, Table 21).

In 2013, persons aged 15–44 years accounted for 93.6% of reported gonorrhea cases with known age. During 2012–2013, the gonorrhea rate decreased 11.6% among those aged 15–19 years, and decreased 1.9% among those aged 20–24 years (Table 21). However, the gonorrhea rate increased 6.3% among those aged 25–29 years, 8.4% among those aged 30–34 years, 11.3% among those aged 35–39 years, and 7.9% among those aged 40–44 years.

Among women aged 15–44, the rate decreased among those aged 15–19 years and 20–24 years, but increased in older age groups (Figure 17). Among men aged 15–44, the rate decreased among those aged 15–19 years, but increased in those aged 20–24 years and in older age groups (Figure 18).

Gonorrhea by Race/Ethnicity

In 2013, among the 47 jurisdictions (46 states and the District of Columbia) that submitted data in the race and ethnicity categories according to Office of Management and Budget (OMB) standards, the rate of reported gonorrhea cases remained highest among blacks (426.6 cases per 100,000 population) (Table 22B). The rate among blacks was 12.4 times the rate among whites (34.5 cases per 100,000 population). The gonorrhea rate among American Indians/Alaska Natives (137.4 cases per 100,000 population) was 4.0 times that of whites, the rate among Native Hawaiians/Other Pacific Islanders (94.0 cases per 100,000 population) was 2.7 times that of whites, the rate among Hispanics (65.8 cases per 100,000 population) was 1.9 times that of whites, and the rate among Asians (17.1 cases per 100,000 population) was 0.5 times that of whites (Table 22B).

During 2009–2013, among the 40 jurisdictions (39 states and the District of Columbia) that submitted data in the OMB-compliant race and ethnicity categories for all five

years during that period, the gonorrhea rate increased among American Indians/Alaska Natives (87.4%), Native Hawaiians/Other Pacific Islanders (79.1%), whites (54.4%), Hispanics (50.2%), and Asians (29.4%) (Figure 19). During this same time period, the gonorrhea rate decreased 9.1% among blacks.

More information on gonorrhea rates among racial/ethnicity groups can be found in the Special Focus Profiles.

Gonorrhea by Reporting Source

The number of gonorrhea cases reported by STD clinics declined during 2004–2013 (Figure 20). In 2013, 16.3% of gonorrhea cases with known reporting source were reported by STD clinics (Table A2). This is a decrease from 2012, when 17.3% of gonorrhea cases were reported by STD clinics. In 2013, among women, private physicians or health maintenance organizations (HMOs) (25.5%) were the most common reporting source, followed by family planning clinics (9.4%), STD clinics (8.6%), other health department clinics (6.6%), and emergency rooms (5.2%) (Figure 21). Among men, private physicians/HMOs (20.1%) and STD clinics (19.8%) were the most common reporting sources. Other reporting sources for men included other health department clinics (8.5%), emergency rooms (5.5%), and family planning clinics (5.2%).

STD Surveillance Network

The STD Surveillance Network (SSuN) is a network of 12 states and independently funded cities that collect enhanced information on a representative sample of gonorrhea cases reported to the state or city health department from all reporting sources. This project provides more complete estimates of case characteristics often missing on routine case reports—such as gender of sex partners—which is essential for better targeting of gonorrhea control efforts. Between January 1st and June 30th, 2013, SSuN collaborators interviewed 3,121 gonorrhea cases representing 8.1% of total morbidity reported from participating jurisdictions during that time period. Based on these enhanced interviews, the burden of disease represented by MSM, men who have sex with women only (MSW), and women varied substantially across collaborating sites (Figure 22). San Francisco County had the highest proportion of estimated MSM cases (82.6%), while the lowest proportion of morbidity estimated to be attributed to MSM was found in Virginia at 13.0%. Across all SSuN jurisdictions in 2013, 27.4% of gonorrhea cases were estimated to be among MSM, 30.5% among MSW, and 42.1% among women.

In addition, a total of 42 STD clinics in the 12 SSuN jurisdictions collected enhanced behavioral information from patients who presented for care at these clinics during 2013. In 2013, the proportion of STD clinic patients who tested positive for gonorrhea varied by age, sex, and sex of sex partner (Figure 23). Among those attending these clinics, adolescent MSW ≤19 years of age had the highest gonorrhea positivity (32.4%). Within older age groups, MSM had a higher gonorrhea positivity than MSW or women.

Additional information about SSuN methodology can be found in the STD Surveillance Network section of the Appendix, Interpreting STD Surveillance Data.

Gonococcal Isolate Surveillance Project

Antimicrobial resistance remains an important consideration in the treatment of gonorrhea.[3, 5–9] In 1986, the Gonococcal Isolate Surveillance Project (GISP), a national sentinel surveillance system, was established to monitor trends in antimicrobial susceptibilities of urethral *N. gonorrhoeae* strains in the United States.[10] Data are collected from selected STD clinic sentinel sites and from regional laboratories (Figure 24).

Information on the antimicrobial susceptibility criteria used in GISP can be found in the Gonococcal Isolate Surveillance Project section of the Appendix, Interpreting STD Surveillance Data. More information about GISP and additional data can be found at http://www.cdc.gov/std/GISP.

Susceptibility to Ceftriaxone

Susceptibility testing for ceftriaxone began in 1987. The percentage of GISP isolates that exhibited elevated ceftriaxone minimum inhibitory concentrations (MICs), defined as ≥0.125 µg/ml, increased from 0.1% in 2008 to 0.4% in 2011, and decreased to 0.05% in 2013 (Figure 25).

Five isolates with decreased susceptibility to ceftriaxone (MIC = 0.5 µg/ml) have been previously identified in GISP: one from San Diego, California (1987), two from Cincinnati, Ohio (1992 and 1993), one from Philadelphia, Pennsylvania (1997), and one from Oklahoma City, Oklahoma (2012).

Susceptibility to Cefixime

Susceptibility testing for cefixime began in 1992, was discontinued in 2007, and was restarted in 2009. The percentage of isolates with elevated cefixime MICs (≥0.25 μg/ml) increased from 0.1% in 2006 to 1.4% in 2010 and 2011, and declined to 0.4% in 2013 (Figure 26). In 2013, no isolates had cefixime MICs of ≥0.5 μg/ml.

Susceptibility to Azithromycin

Susceptibility testing for azithromycin began in 1992. Figure 27 displays the distribution of azithromycin MICs among GISP isolates collected during 2009–2013. Most isolates had MICs of 0.125–0.25 μg/ml. The proportion of GISP isolates with azithromycin MICs of ≥2.0 μg/ml varied by year between 0.2% and 0.6%.

Susceptibility to Spectinomycin

All isolates were susceptible to spectinomycin in 2013. A spectinomycin-resistant isolate was last identified in GISP in 1994 (West Palm Beach, Florida).

Susceptibility to Ciprofloxacin

The proportion of GISP isolates with ciprofloxacin resistance (MIC ≥1 μg/ml) peaked in 2007 at 14.8%. Following a decline in 2008 and 2009, the proportion increased from 9.6% in 2009 to 16.1% in 2013. In 2013, 27.7% of isolates from MSM and 9.8% of isolates from MSW exhibited ciprofloxacin resistance.

Other Antimicrobial Susceptibility Testing

In 2013, 33.9% of isolates collected from GISP sites were resistant to penicillin, tetracycline, ciprofloxacin, or some combination of those antimicrobials (Figure 28). Although these antimicrobials are no longer recommended for treatment of gonorrhea, the resistance phenotypes remain common. Conversely, 66.1% of isolates were susceptible to all three of these antimicrobials.

Antimicrobial Treatments Given for Gonorrhea

The antimicrobial agents given to GISP patients for gonorrhea therapy are shown in Figure 29. The proportion of patients treated with ceftriaxone 250 mg increased from 84.0% in 2011 to 96.9% in 2013. The proportion treated with cefixime decreased from 5.3% in 2011 to 0.02% in 2013. In 2013, 1.7% of patients were treated with azithromycin 2 grams as monotherapy.

Among patients treated with ceftriaxone 250 mg in 2013, 95.4% were also treated with azithromycin one gram, 4.0% were also treated with doxycycline, and 0.5% did not receive a second antimicrobial.

Gonorrhea Among Special Populations

More information about gonorrhea in racial/ethnic groups, women of reproductive age, adolescents, MSM, and other populations at higher risk can be found in the Special Focus Profiles.

Gonorrhea Summary

The national rate of reported gonorrhea cases reached an historic low in 2009, but increased each year during 2009–2012. In 2013, the gonorrhea rate decreased slightly. This decrease was largely attributable to a decrease among women. The gonorrhea rate among men increased in every region except the Northeast, while the gonorrhea rate among women decreased in every region except the West. High gonorrhea rates persist in some geographic areas, among adolescents and young adults, and in some racial/ethnic groups.

GISP continues to monitor for the emergence of decreased susceptibility and resistance to cephalosporins and azithromycin.

[1] Fleming DT, Wasserheit JN. From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sex Transm Infect. 1999;75(1):3–17.

[2] Sullivan AB, Gesink DC, Brown P, Zhou L, Kaufman JS, Fitch M, et al. Are neighborhood sociocultural factors influencing the spatial pattern of gonorrhea in North Carolina? Ann Epidemiol. 2011; 21:245–252.

[3] Centers for Disease Control and Prevention. Update to CDC's sexually transmitted diseases treatment guidelines, 2010: Oral cephalosporins no longer a recommended treatment for gonococcal infections. MMWR Morb Mortal Wkly Rep. 2012;61(31):590–594.

[4] Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Ocfemia MC et al. Sexually transmitted infections among US women and men: prevalence and incidence estimates, 2008. Sex Transm Dis. 2013; 40(3):187–193.

[5] Centers for Disease Control and Prevention. Update to CDC's sexually transmitted diseases treatment guidelines, 2006: fluoroquinolones no longer recommended for treatment of gonococcal infections. MMWR Morb Mortal Wkly Rep. 2007;56:332–6.

[6] Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2010. MMWR Recomm Rep. 2010;59(No.RR-12).

[7] Centers for Disease Control and Prevention. *Neisseria gonorrhoeae* with reduced susceptibility to azithromycin — San Diego County, California, 2009. MMWR Morb Mortal Wkly Rep. 2011;60:579–81.

[8] Centers for Disease Control and Prevention. Cephalosporin susceptibility among *Neisseria gonorrhoeae* isolates—United States, 2000–2010. MMWR Morb Mortal Wkly Rep. 2011;60:873–7.

[9] Kirkcaldy RD, Ballard RC, Dowell D. Gonococcal resistance: Are cephalosporins next? Curr Infect Dis Rep. 2011;13: 196–204.

[10] Schwarcz S, Zenilman J, Schnell D, Knapp JS, Hook EW 3rd, Thompson S, et al. National surveillance of antimicrobial resistance in *Neisseria gonorrhoeae*. JAMA. 1990;264:1413–7.

Figure 11. Gonorrhea — Rates of Reported Cases by Year, United States, 1941–2013

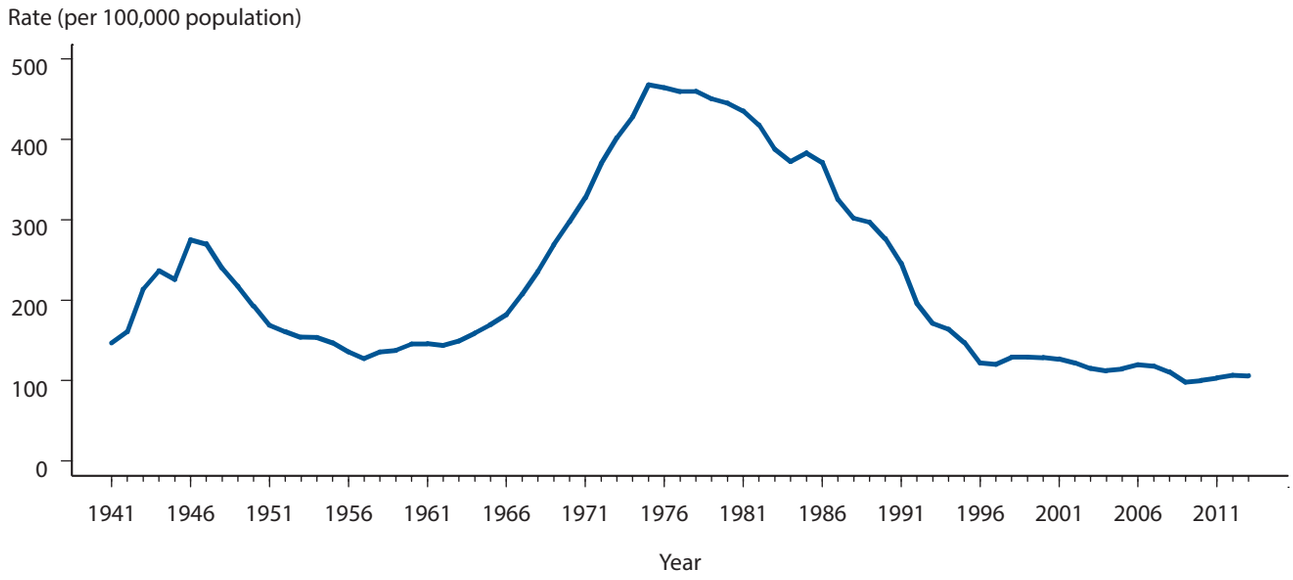


Figure 12. Gonorrhea — Rates of Reported Cases by Sex, United States, 1993–2013

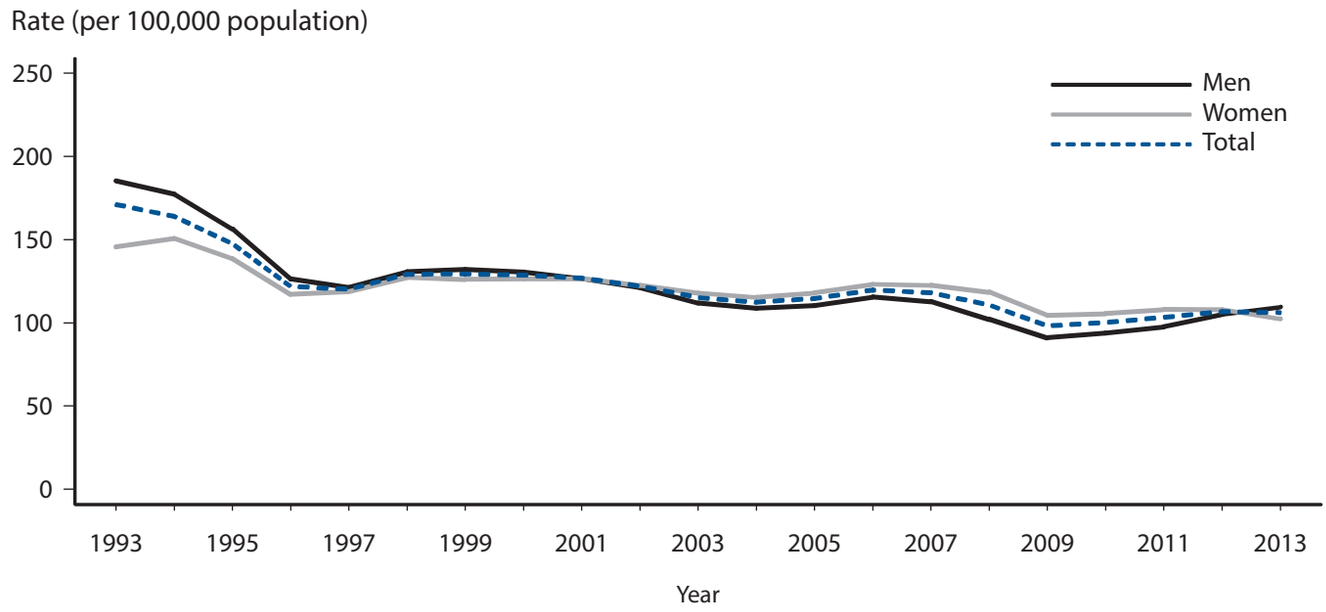


Figure 13. Gonorrhea — Rates of Reported Cases by Region, United States, 2004–2013

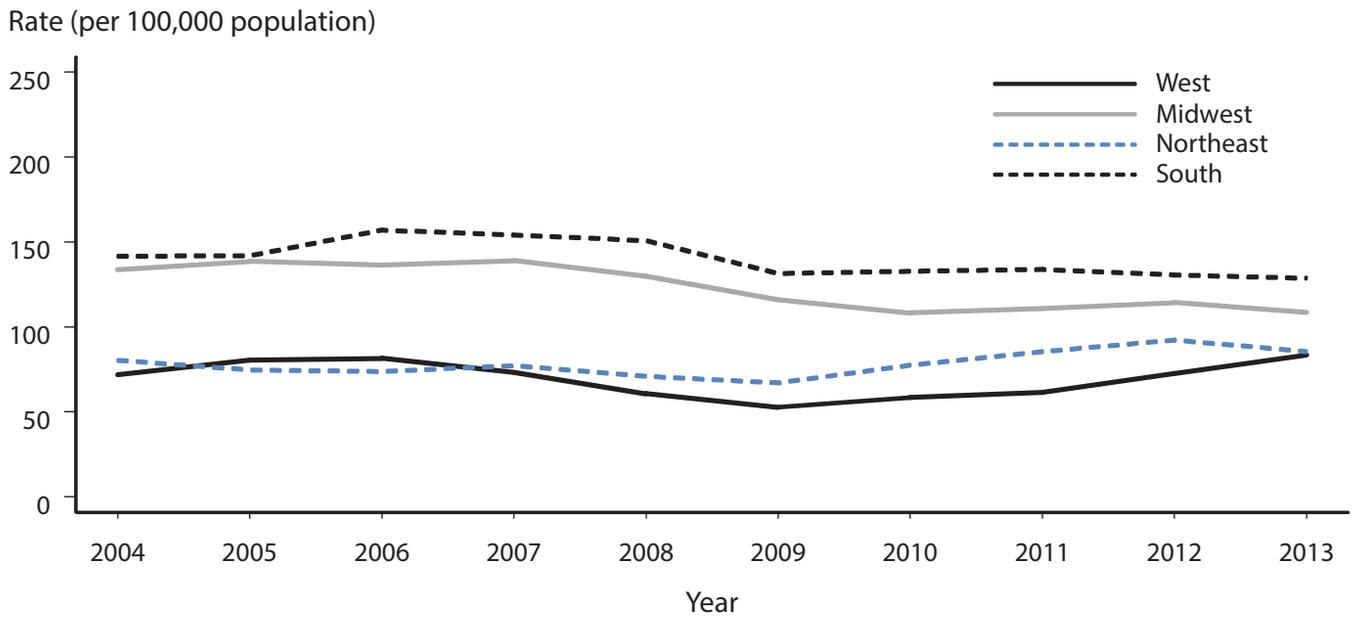
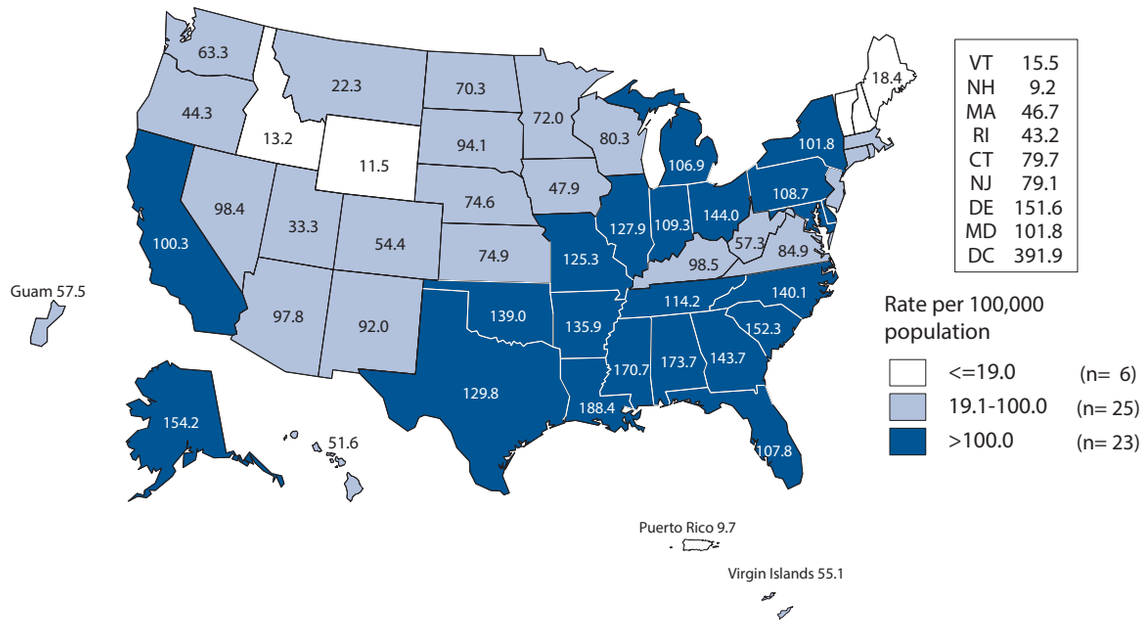


Figure 14. Gonorrhea — Rates of Reported Cases by State, United States and Outlying Areas, 2013



NOTE: The total rate of reported cases of gonorrhea for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 104.9 per 100,000 population.

Figure 15. Gonorrhea — Rates of Reported Cases by County, United States, 2013

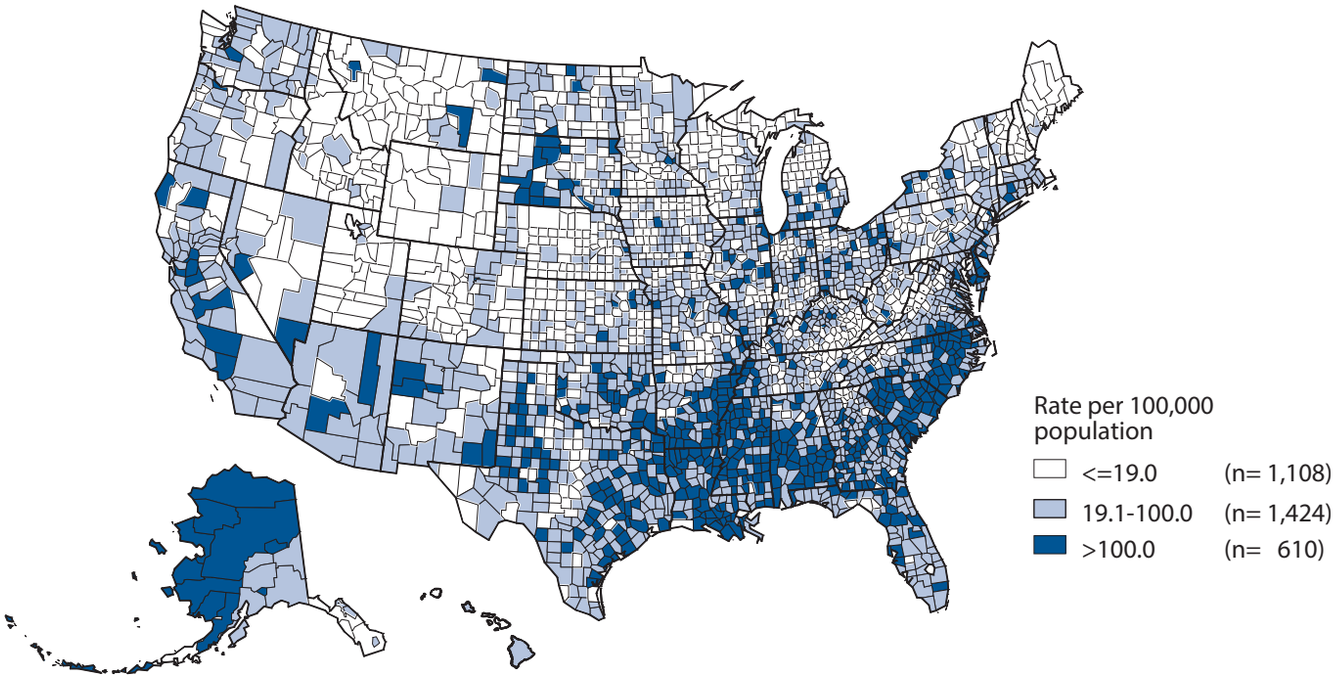


Figure 16. Gonorrhea — Rates of Reported Cases by Age and Sex, United States, 2013

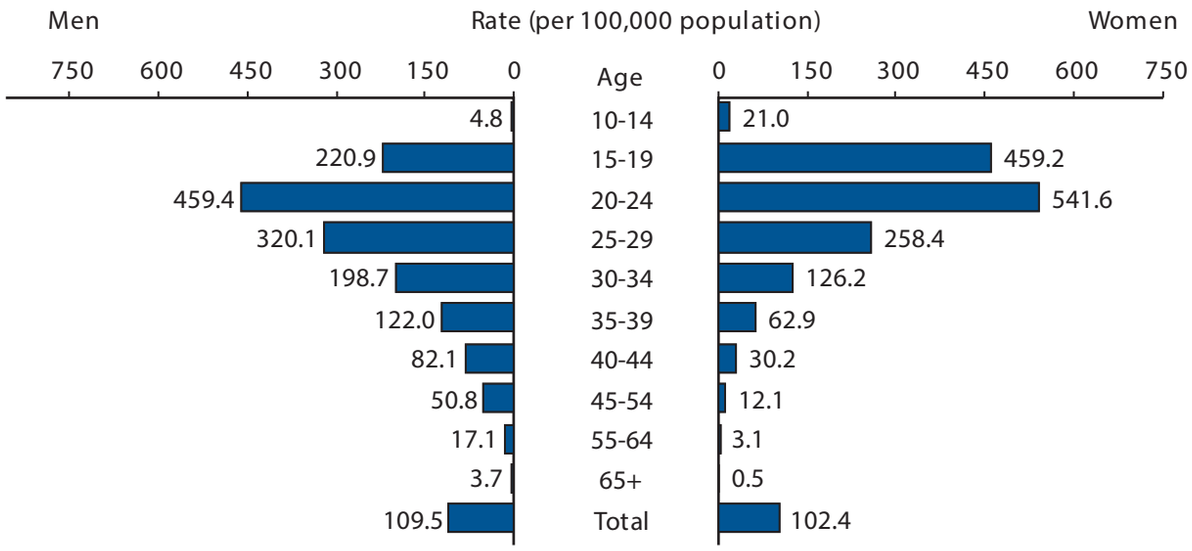


Figure 17. Gonorrhea — Rates of Reported Cases Among Women Aged 15–44 Years by Age, United States, 2004–2013

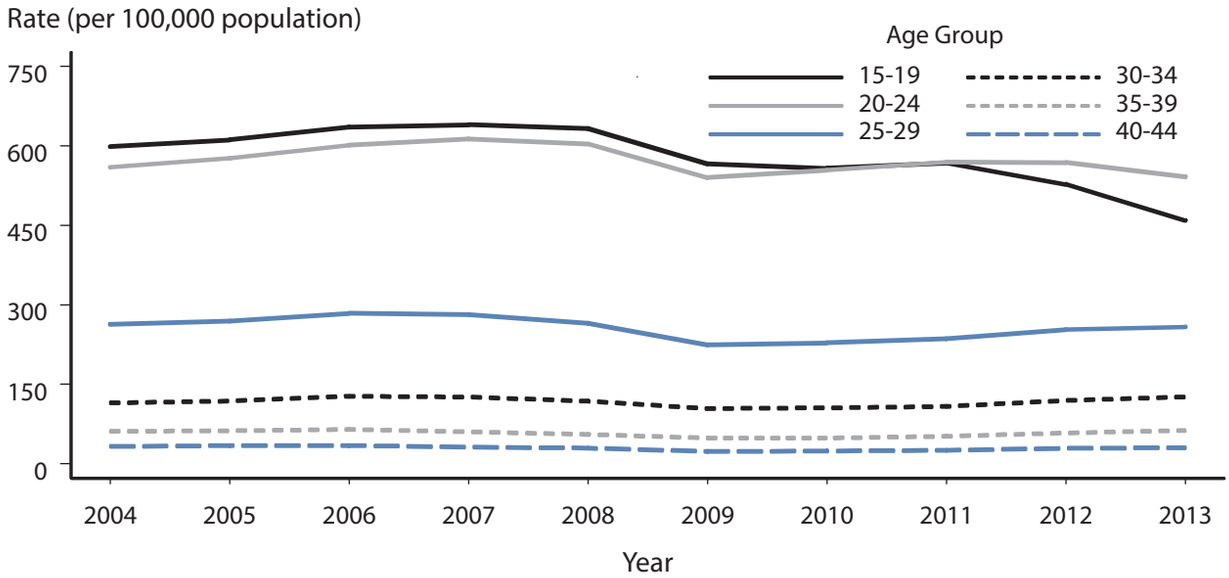


Figure 18. Gonorrhea — Rates of Reported Cases Among Men Aged 15–44 Years by Age, United States, 2004–2013

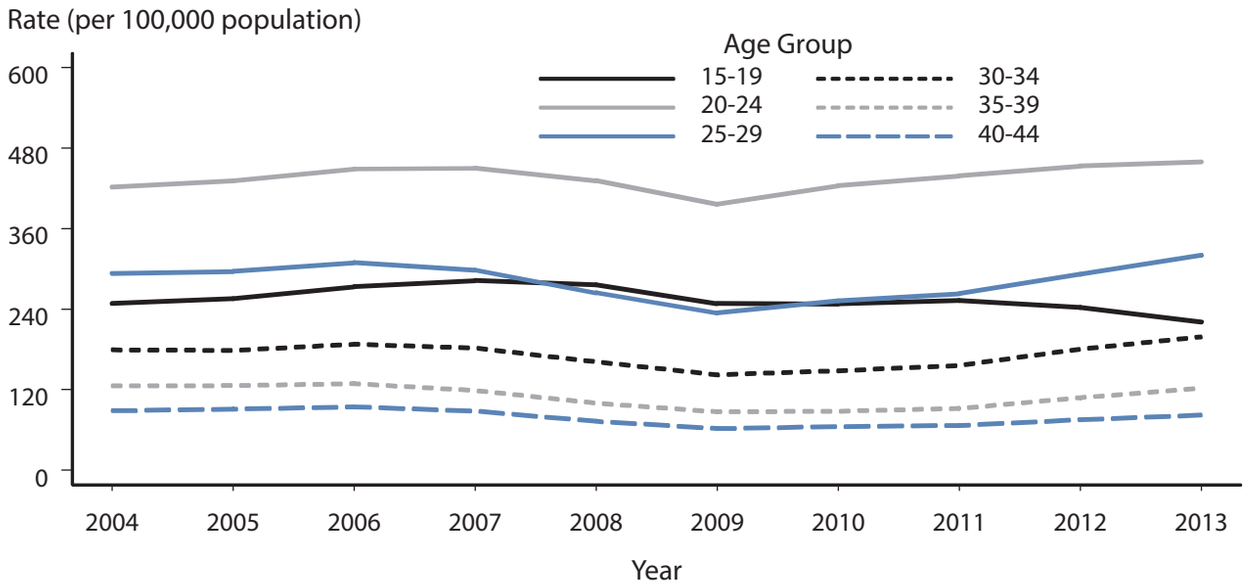
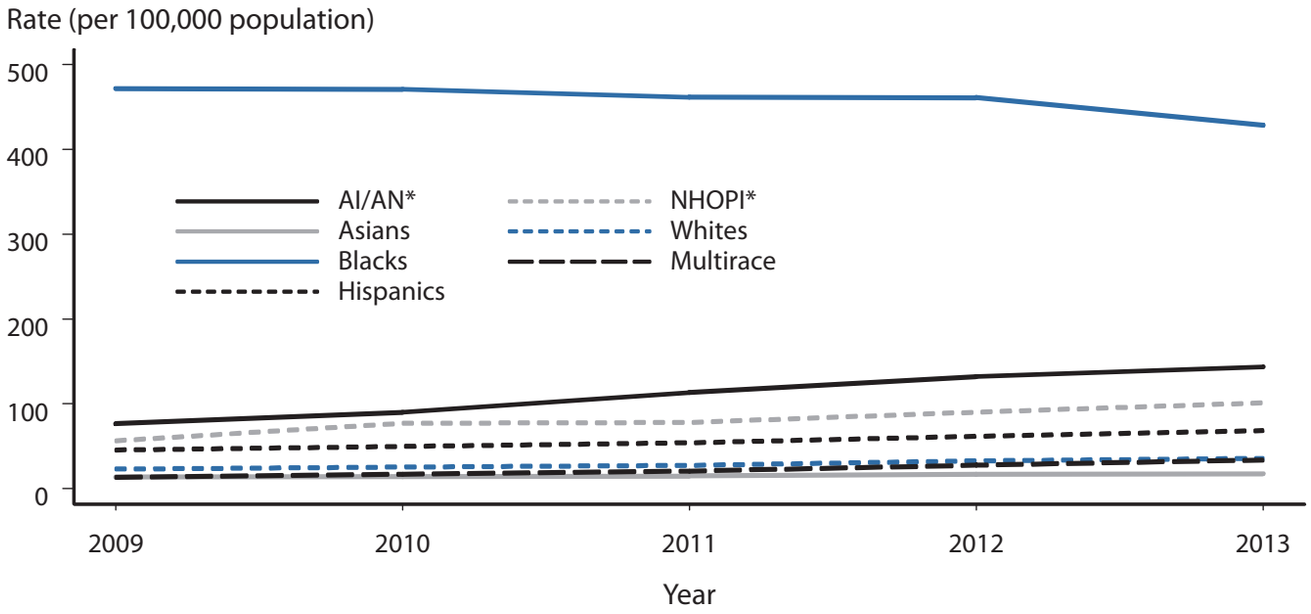


Figure 19. Gonorrhea — Rates of Reported Cases by Race/Ethnicity, United States, 2009–2013



* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 39 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats during 2009–2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure 20. Gonorrhea — Reported Cases by Reporting Source and Sex, United States, 2004–2013

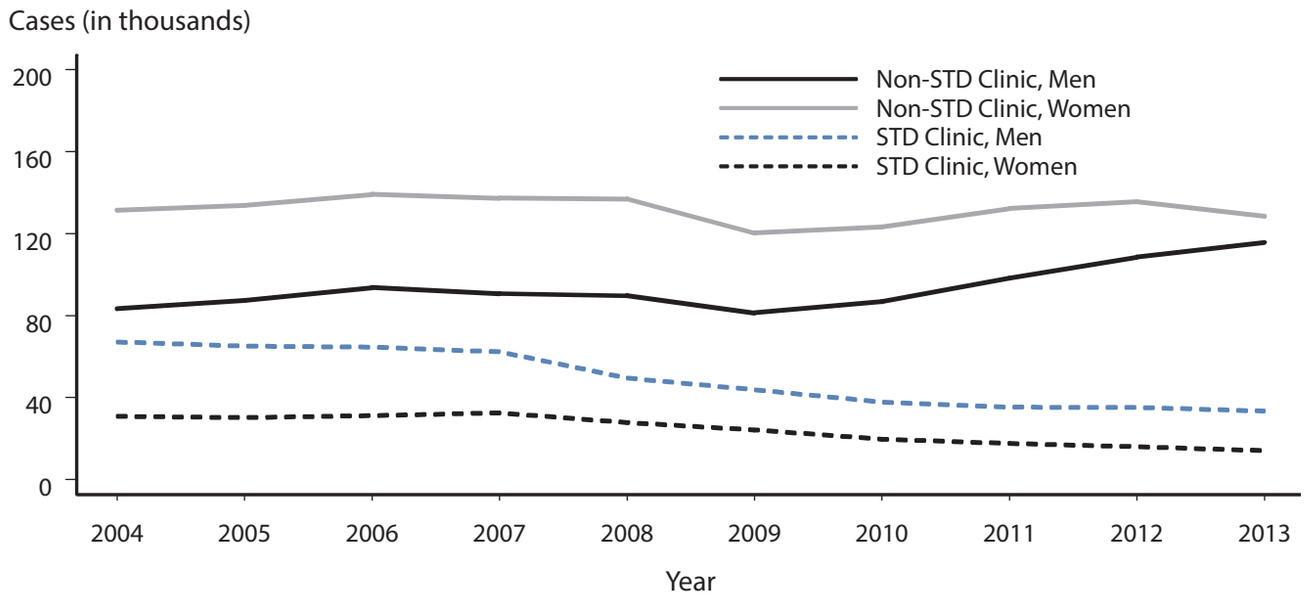
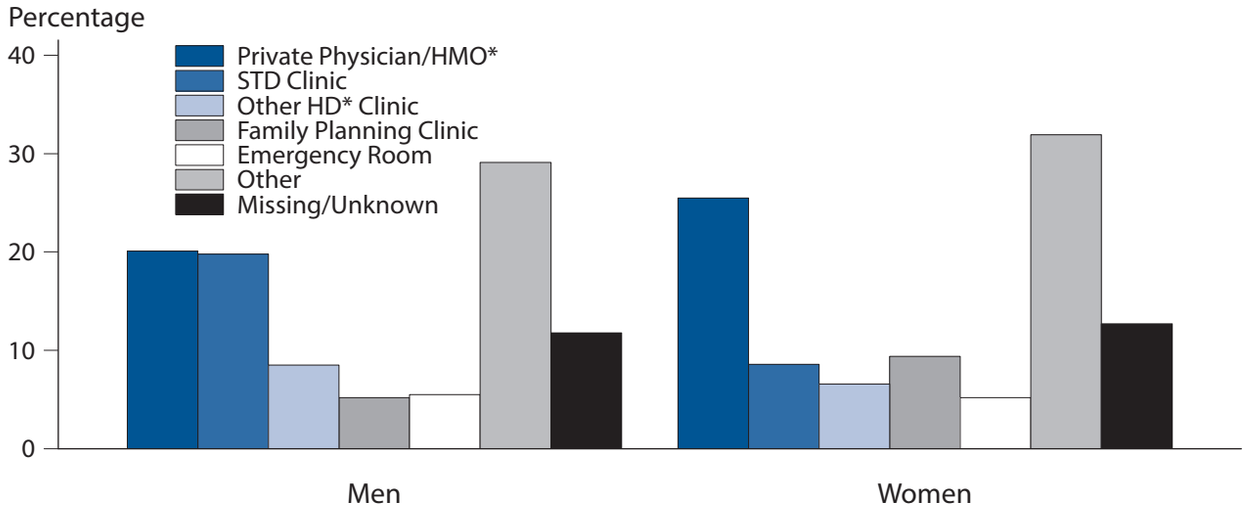
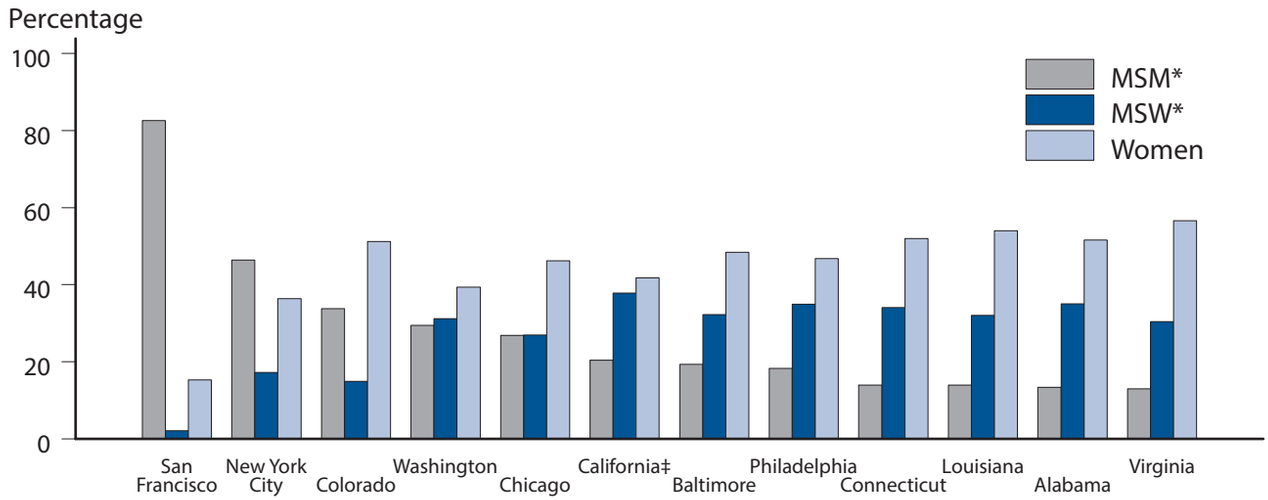


Figure 21. Gonorrhea — Percentage of Reported Cases by Sex and Reporting Source, United States, 2013



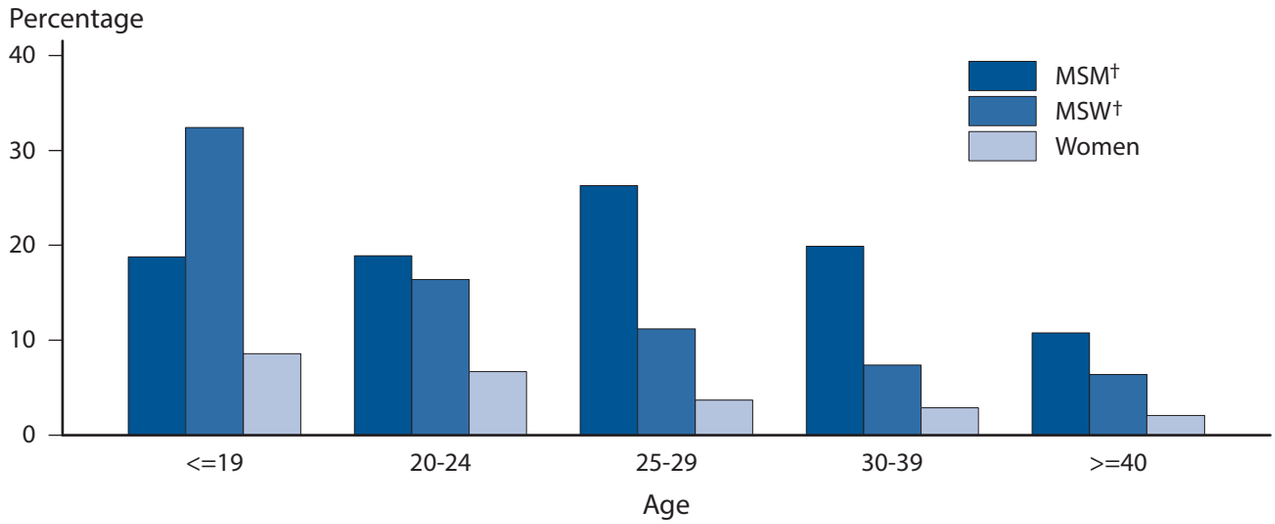
* HMO = health maintenance organization; HD = health department.
NOTE: Other includes: Drug Treatment, Tuberculosis Clinic, Correctional Facility, Laboratory, Blood Bank, Labor and Delivery, Prenatal Care, National Job Training Program, School-based Clinic, Mental Health Provider, Other Hospital, Indian Health Service, Military, and HIV Counseling and Testing Site

Figure 22. Estimated Proportion of MSM*, MSW*, and Women Among Gonorrhea Cases† by Site, STD Surveillance Network (SSuN), 2013



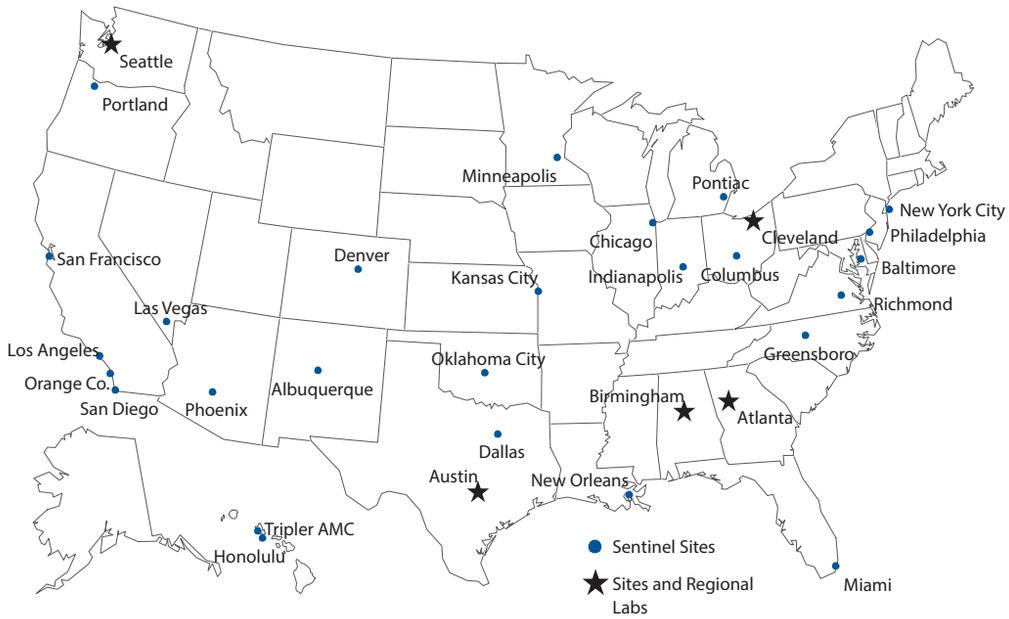
* MSM = men who have sex with men; MSW = men who have sex with women only.
† Estimate based on weighted analysis of data obtained from interviews (n=3,121) conducted among a random sample of reported gonorrhea cases during January to June 2013.
‡ California data excludes San Francisco County (shown separately).
NOTE: See STD Surveillance Network (SSuN) in the Appendix for SSuN methods and jurisdictions included in each project area.

Figure 23. Gonorrhea — Proportion of STD Clinic Patients* Testing Positive by Age, Sex, and Sexual Behavior, STD Surveillance Network (SSuN), 2013



* Only includes patients tested for gonorrhea.
† MSM = men who have sex with men; MSW = men who have sex with women only.
NOTE: Six jurisdictions (Birmingham, Chicago, Denver, Hartford/New Haven, New Orleans, and Richmond) contributed data from January through June 2013 and the remaining jurisdictions (Baltimore, Los Angeles, New York City, Philadelphia, San Francisco and Seattle) contributed data for all of 2013.

Figure 24. Location of Participating Sentinel Sites and Regional Laboratories, Gonococcal Isolate Surveillance Project (GISP), United States, 2013



NOTE: Austin is a regional laboratory only.

Figure 25. *Neisseria gonorrhoeae* — **Percentage of Isolates with Elevated Ceftriaxone Minimum Inhibitory Concentrations (MICs) (≥0.125 µg/ml), Gonococcal Isolate Surveillance Project (GISP), 2006–2013**

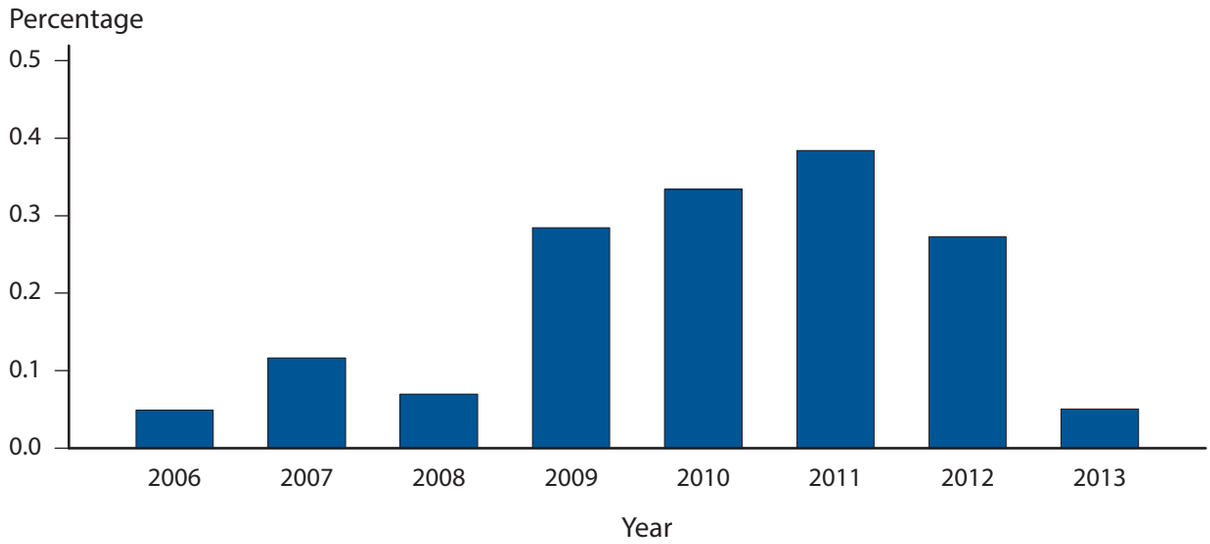
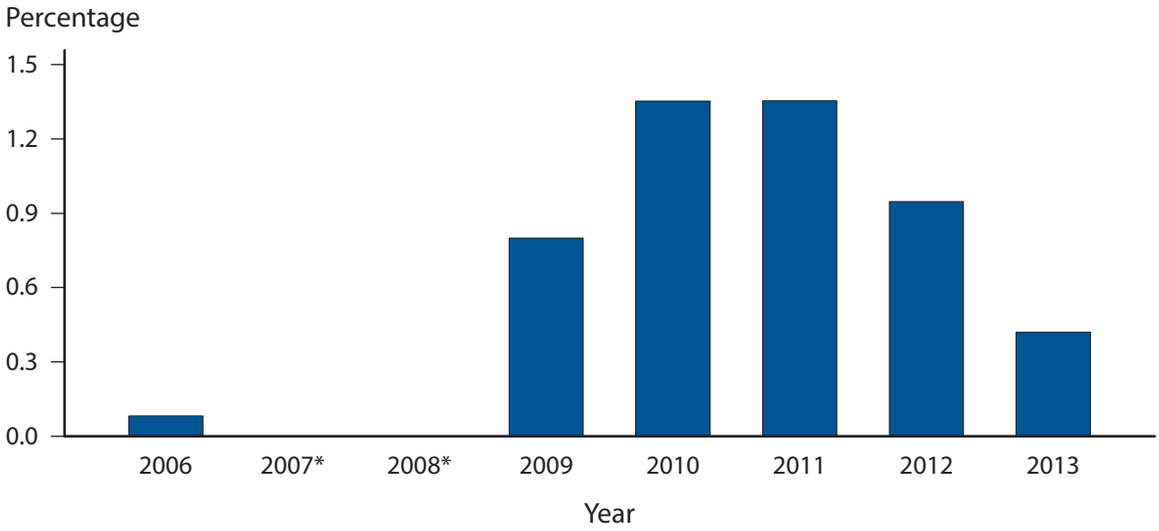


Figure 26. *Neisseria gonorrhoeae* — **Percentage of Isolates with Elevated Cefixime Minimum Inhibitory Concentrations (MICs) (≥0.25 µg/ml), Gonococcal Isolate Surveillance Project (GISP), 2006–2013**



* Isolates not tested for cefixime susceptibility in 2007 and 2008.

Figure 27. *Neisseria gonorrhoeae* **— Distribution of Azithromycin Minimum Inhibitory Concentrations (MICs), Gonococcal Isolate Surveillance Project (GISP), 2009–2013**

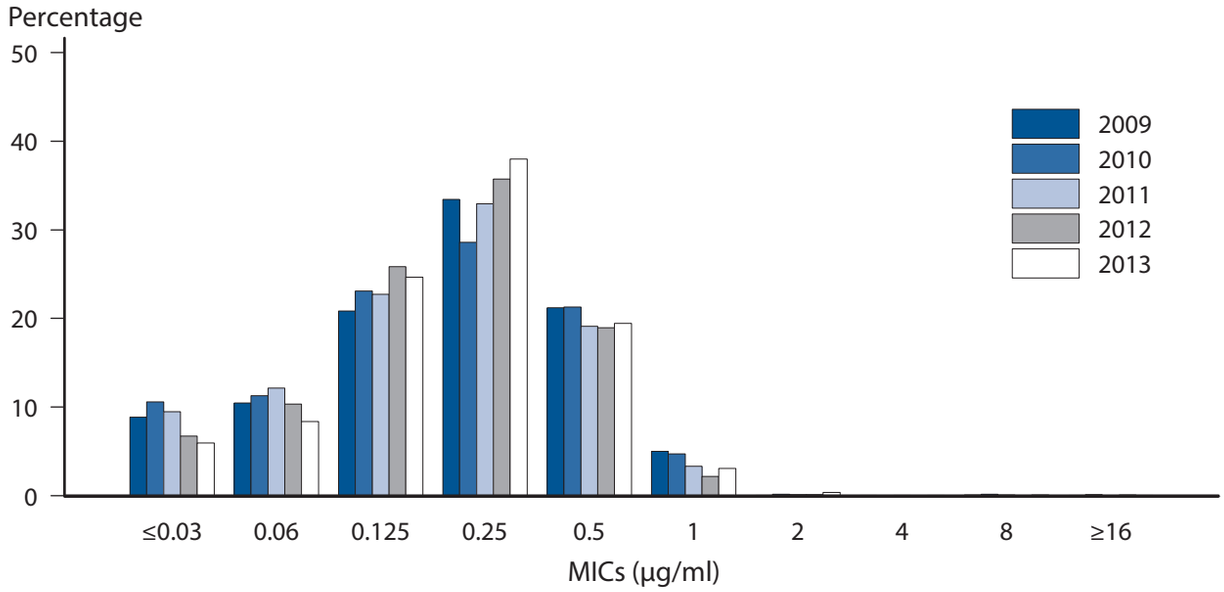
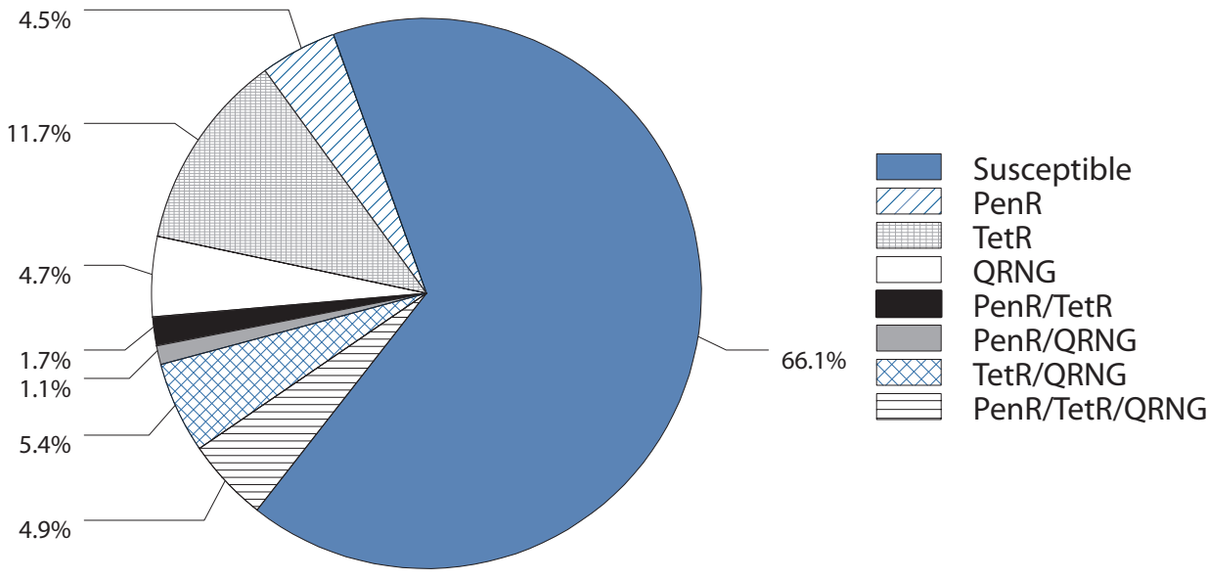
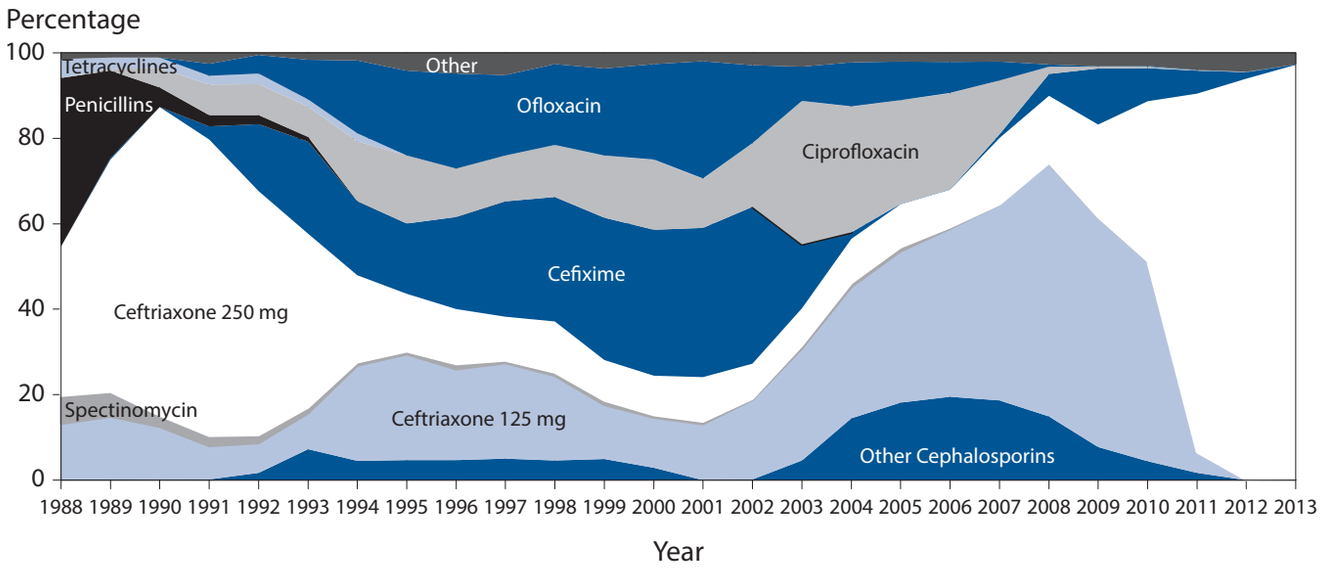


Figure 28. *Neisseria gonorrhoeae* **— Percentage of Isolates with Penicillin, Tetracycline, and/or Ciprofloxacin Resistance, Gonococcal Isolate Surveillance Project (GISP), 2013**



NOTE: PenR=penicillinase-producing *Neisseria gonorrhoeae* and chromosomally-mediated penicillin-resistant *N. gonorrhoeae*; TetR=chromosomally- and plasmid-mediated tetracycline-resistant *N. gonorrhoeae*; and QRNG=quinolone-resistant *N. gonorrhoeae*.

Figure 29. Primary Antimicrobial Drugs Used to Treat Gonorrhea Among Participants, Gonococcal Isolate Surveillance Project (GISP), 1988–2013



NOTE: For 2013, "Other" includes no therapy (0.9%), azithromycin 2g (1.7%), and other less frequently used drugs (<0.1%).

Syphilis

Background

Syphilis, a genital ulcerative disease, causes significant complications if untreated and facilitates the transmission of HIV infection. Untreated early syphilis in pregnant women results in perinatal death in up to 40% of cases and, if acquired during the 4 years before pregnancy, can lead to infection of the fetus in 80% of cases.[1]

The rate of primary and secondary (P&S) syphilis reported in the United States decreased during the 1990s; in 2000, the rate was the lowest since reporting began in 1941 (Figure 30). The low rate of P&S syphilis and the concentration of the majority of syphilis cases in a small number of geographic areas in the United States led to the development of CDC's *National Plan to Eliminate Syphilis*, which was announced by the Surgeon General in October 1999 and revised in May 2006.[2]

Syphilis remains a major health problem, with increased cases occurring among gay, bisexual and other men who have sex with men (MSM). Cases among MSM have been characterized by high rates of HIV co-infection and high-risk sexual behaviors.[3–7] The estimated proportion of P&S syphilis cases attributable to MSM increased from 7% in 2000 to 64% in 2004.[8,9] In 2005, CDC requested that all state health departments report the sex of sex partners for persons with syphilis. Of reported male cases with P&S syphilis, sex of sex partner information in 2013 was available for 83%. In 2013, 49 states and the District of Columbia provided information about sex of sex partners. Among cases of P&S syphilis for whom sex of partner was known, MSM accounted for 75% of P&S syphilis cases.

Interpreting rates of reported cases of syphilis

Left untreated, infection with syphilis can span decades. Primary and secondary syphilis are the earliest stages of infection, reflect symptomatic disease, and are indicators of incident infection.[10] For these reasons, trend analyses of syphilis focus upon cases and rates of reported cases of P&S syphilis. (When referred to as "P&S syphilis", case counts are the sum of both primary and secondary cases, while the "rate of P&S syphilis" is this sum per unit population.) However, changes in reporting and screening practices can complicate interpretation of these trends. To minimize the effect of changes in reporting over time, trend data in this report are restricted to jurisdictions that consistently report data of interest (e.g., sex of sex partner) for each year of a given time period. Details of these restrictions are provided in the text and footnotes of the pertinent text and figures.

Syphilis — All Stages (P&S, Early Latent, Late, Late Latent, and Congenital)

Total case counts and rates for syphilis were the highest recorded since 1996. The total number of cases of syphilis (P&S, early latent, late, late latent, and congenital) reported to CDC increased 13.1% during 2012–2013 (from 49,915 cases to 56,471 cases) (Table 1). The number of cases of early latent syphilis reported to CDC increased 16.7% (from 14,503 cases to 16,929 cases), and the number of cases of late and late latent syphilis increased 12.4% (from 19,411 cases to 21,819 cases) (Tables 1, 37, and 39).

P&S Syphilis — United States

Although the rate of P&S syphilis in the United States declined 89.7% during 1990–2000, the rate increased annually during 2001–2009 before decreasing in 2010 and remaining unchanged during 2011. The rate again increased during 2012 and 2013.

The case count and rate for P&S syphilis in 2013 was the highest recorded since 1995. The number of P&S syphilis cases reported to CDC increased from 15,667 in 2012 to 17,375 in 2013, an increase of 10.9%. The rate of P&S syphilis in the United States increased from 5.0 to 5.5 cases per 100,000 population (a 10.0% increase) during 2012–2013 (Table 1).

P&S Syphilis by Region

Each year since 2009, the rate of P&S syphilis has increased in the West. In 2013, for the first time in at least 50 years,[11] the rate in the West (6.8 cases per 100,000 population) exceeded the rate in the South (6.0 cases) (Figure 33). During 2012–2013, the rate of P&S syphilis increased 24.2% in the Midwest (from 3.3 to 4.1 cases), 19.3% in the West (from 5.7 to 6.8 cases), 11.6% in the Northeast (from 4.3 to 4.8 cases), and 3.4% in the South (from 5.8 to 6.0 cases per 100,000 population) (Figure 33, Table 27). The South continued to comprise the largest proportion of cases of P&S syphilis in 2013 (40%).

P&S Syphilis by State

In 2013, the 15 states and areas (including the District of Columbia) with the highest rates of P&S syphilis accounted for 70% of all U.S. cases of P&S syphilis. The rate of P&S syphilis in 14 of these 15 states and areas (including the District of Columbia) exceeded the national rate of 5.5 cases per 100,000 population; 9 of these 15 states and areas (including the District of Columbia) were in the South (Figure 34, Table 26).

P&S Syphilis by Metropolitan Statistical Area

The rate of P&S syphilis in 2013 for the 50 most populous MSAs (7.8 cases per 100,000 population) (Table 30) exceeded the overall rate for the United States (5.5 cases) (Table 27). The rate increased in 31 of these 50 MSAs (62%) during 2012–2013.

P&S Syphilis by County

Of 3,142 counties in the United States, counties reporting no cases of P&S syphilis decreased during 2012–2013, from 2,123 counties (67.6%) in 2012 to 2,029 counties (64.6%) in 2013 (Figure 35). In 2013, half of the total number of P&S syphilis cases was reported from 29 counties and two cities (Table 33).

P&S Syphilis by Sex

The rate of P&S syphilis increased 12.0% among men (from 9.2 to 10.3 cases per 100,000 men) during 2012–2013 (Figure 32, Table 29). During this same period, the rate among women remained unchanged (0.9 cases per 100,000 women) (Figure 32, Table 28).

P&S Syphilis by Age Group

In 2013, the rate of P&S syphilis was highest among persons aged 20–24 years and 25–29 years (16.1 and 15.6 cases per 100,000 population, respectively) (Table 35).

The rate of P&S syphilis decreased among women aged 15–19 years and 45–54 years (from 2.3 to 1.9 and from 0.6 to 0.5 cases per 100,000 population, respectively). The rate remained the same or increased for women of all other age groups. The rate remained highest among women aged 20–24 years (Figures 36 and 37, Table 35).

The rate of P&S syphilis was highest among men 20–29 years, increasing 11.7% (from 24.8 to 27.7 cases) among men 20–24 years and 14.8% (from 24.4 to 28.0 cases) among men 25–29 years during 2012–2013 (Figures 36 and 38, Table 35). This marks the sixth consecutive year (2008–2013) that the rate of P&S syphilis among men has been highest among men aged 20–29 years (Table 35). During 2008–2013, the rate has increased among men aged 20–24 years by 60.1% (from 17.3 to 27.7 cases) and among men aged 25–29 years by 65.7% (from 16.9 to 28.0 cases). These data indicate a shift since 2006, when the rate was highest in men aged 35–39 years.

P&S Syphilis by Race/Ethnicity

In 2013, among the 48 jurisdictions (47 states and the District of Columbia) that submitted data in race and ethnicity categories according to the current Office of Management and Budget (OMB) standards, rates of P&S syphilis remained highest among blacks (16.8 cases per 100,000 population) (Table 36B). The rate among blacks was 5.6 times the rate among whites (3.0 cases per 100,000 population). The rate among American Indians/Alaska Natives (4.6) was 1.5 times that of whites, the rate among Native Hawaiians/Other Pacific Islanders (8.6) was 2.9 times that of whites, the rate among Hispanics (6.3) was 2.1 times that of whites, and the rate among Asians (2.5) was 0.8 times that of whites (Table 36B).

During 2009–2013, among the 40 jurisdictions (39 states and the District of Columbia) that submitted data in race and ethnic categories according to the current OMB standards for all five years during that period, the rate of P&S syphilis increased 65.3% among Hispanics (from 3.9 to 6.5 cases per 100,000 population), 42.5% among non-Hispanic whites (from 2.2 to 3.1 cases per 100,000 population), 77.2% among American Indians/Alaska Natives (from 2.8 to 5.0 cases per 100,000 population), 83.5% among Asians (from 1.4 to 2.7 cases per 100,000 population), 102.3% among Native Hawaiians/Other Pacific Islanders (from 4.8 to 9.6 cases per 100,000 population), and 113.8% among multirace individuals (from 0.9 to 1.8 cases per 100,000 population) (Figure 39). The rate decreased 7.4% among non-Hispanic blacks (from 18.7 to 17.3 cases per 100,000 population). Non-Hispanic blacks, non-Hispanic whites, and Hispanics comprised 95.0% of reported cases in 2009 and 92.3% of reported cases in 2013.

P&S Syphilis by Race/Ethnicity and Sex

In 2013, among the 48 jurisdictions (47 states and the District of Columbia) that submitted data in the race and ethnic categories according to OMB standards, rates of P&S syphilis among men were highest among non-Hispanic black men (30.2 cases per 100,000 population), followed by Native Hawaiian/Other Pacific Islander (15.8 cases per 100,000 population), Hispanic (11.6 cases per 100,000 population), American Indian/Alaska Native (7.1 cases per 100,000 population), non-Hispanic white (5.7 cases per 100,000 population), Asian (4.9 cases per 100,000 population) and multirace (3.4 cases per 100,000 population) men (Figure R, Table 36B).

Rates of P&S syphilis among women were highest among non-Hispanic black women (4.5 cases per 100,000 population), followed by American Indian/Alaska Native (2.1 cases per 100,000 population), Native Hawaiian/Other Pacific Islander (1.2 cases per 100,000 population), Hispanic (0.8 cases per 100,000 population), non-Hispanic white (0.3 cases per 100,000 population), multirace (0.3 cases per 100,000 population) and Asian (0.2 cases per 100,000 population) women (Figure R, Table 36B).

P&S Syphilis by Sex, Sex Behavior, and Race/Ethnicity

The male-to-female rate ratio for P&S syphilis rates rose steeply during 2000–2003 (from 1.5 to 5.3), and again during 2008–2013 (from 5.0 to 11.3), reflecting higher rates in men than women (Figure 32). In 2013, this ratio was more than double the ratio of 2003, and 7.5 times the ratio of 2000.

In 2005, CDC began collecting information on the sex of sex partners of patients with P&S syphilis. In 2013, this information was available for 83% of male cases. A higher proportion of MSW were reported with primary syphilis (39.3%) compared to women (20.7%) and MSM (29.4%) (Figure 40).

In 2013, most women with P&S syphilis were black (57.9%), while others were white (20.2%), Hispanic (14.0%), or of other races/ethnicities (4.1%). Most MSW were also black (52.6%), while others were white (20.9%), Hispanic (20.2%), or of other races/ethnicities (3.2%). MSM with P&S syphilis were of greater racial and ethnic diversity: 38.2% were white, 32.8% were black, 21.2% were Hispanic, and 4.9% were of other races/ethnicities (Figure 41).

During 2007–2013, 33 areas (32 states and Washington, D.C.) reported sex of partner data for at least 70% of cases each year during this time period (Figure 31). In these areas, increases in cases of P&S syphilis occurred among all individuals (women, men having sex with women only (MSW), and MSM) during 2007–2008. Among heterosexual individuals, cases decreased during 2008–2011 (18.4% among women and 25.9% among MSW), but increased during 2011–2013 (2.9% among women and 14.4% among MSW). Among MSM, cases increased annually during 2007–2013 (75%).

In 2013, 31 areas (30 states and District of Columbia) reported both sex of partner and human immunodeficiency virus (HIV) status (HIV-positive or HIV-negative) for 70% or more of reported cases of P&S syphilis. Among individuals with P&S syphilis, a higher proportion of MSM were HIV-positive (51.6%) compared to MSW (9.9%) or women (5.2%) (Figure 42).

P&S Syphilis by Race/Ethnicity, Age, and Sex

In 2013, among the 48 jurisdictions (47 states and the District of Columbia) that submitted data in the new race and ethnicity categories according to OMB standards, the rate of P&S syphilis among non-Hispanic blacks remained highest among women aged 20–24 years (17.0 cases per 100,000 women) and among men aged 20–24 years and 25–29 years (96.4 and 97.2 cases per 100,000 men, respectively). For Hispanics, the rate was highest among women aged 20–24 years and 25–29 years (2.5 and 2.1 cases per 100,000 women, respectively), and among men aged 20–24 years and 25–29 years (27.2 and 28.4 cases per 100,000 men, respectively). For non-Hispanic whites, the rate was highest among women aged 20–24 years (1.2 cases per 100,000 women) and among men aged 25–29 years and 30–34 years (12.6 and 11.8 cases per 100,000 men, respectively) (Table 36B).

For Asians, the rate was highest among women aged 20–24 years (1.0 cases per 100,000 women) and among men aged 20–24 years (13.1 cases per 100,000 men). For American Indians/Alaska Natives, the rate was highest among women aged 20–24 years (9.0 cases per 100,000 women) and among men aged 20–24 years and 25–29 years (18.3 and 16.7 cases per 100,000 men, respectively). For Native Hawaiians/Other Pacific Islanders, the rate was highest among women aged 15–19 and 35–39 years (5.3 cases and 5.6 cases per 100,000 women, respectively) and among men aged 25–29 years (59.7 cases per 100,000 men). For multirace individuals, rates were highest among women aged 30–34 years (1.2 cases per 100,000 women) and among men aged 25–29 years (10.4 cases per 100,000 men) (Table 36B).

In some age groups, particularly young men aged 20–24 years and 25–29 years, wide racial and ethnic disparities in rates of P&S syphilis have occurred in recent years.[9,12] In 2013, rates among men aged 20–24 years and 25–29 years remained highest among blacks (96.4 cases and 97.2 cases per 100,000 population, respectively). These rates were 8.9 and 7.7 times (respectively) the rates of white men of the same age groups. Large disparities were also seen with Native Hawaiian/Other Pacific Islander and Hispanic men, compared to white men. The 2013 rates among Native Hawaiian/Other Pacific Islander men aged 20–24 years and 25–29 years were 3.0 and 4.7 times the rates of white men of the same age groups. Likewise, 2013 rates among Hispanic men aged 20–24 years and 25–29 years were 2.5 and 2.3 times, respectively, the rates of white men of the same age group.

Racial and ethnic disparities in rates among men and women 15–19 years were also present in 2013. Rates among black men aged 15–19 years were 11.7 times the rate for white men and 3.2 times the rate for Hispanic men of the same age, and 2013 rates for black women aged 15–19 years were 18.2 times and 8.3 times the rate for white and Hispanic women of the same ages, respectively (Table 36B). The disparities in rates of P&S syphilis among young men are of particular concern given data indicating increasing HIV incidence among young MSM.[13]

P&S Syphilis by Reporting Source

In 1990, 25.6% of P&S syphilis cases were reported from sources other than STD clinics; this figure increased to 39.2% in 1998. During 1998–2013, the proportion of cases reported from sources other than STD clinics increased from 39.2% to 73.6% (Figure 43, Table A2). During 2004–2013, the number of cases among males reported from non-STD clinic sources increased steadily, while the number reported from STD clinics increased only slightly by comparison (Figure 43).

In 2013, patients with P&S syphilis were usually diagnosed by private physicians or STD clinics. Similar proportions of cases among MSM were reported from private physicians and STD clinics, while more cases among MSW were reported from STD clinics than from private physicians, and more cases among women were reported from private physicians than STD clinics (Figure 44).

Congenital Syphilis—United States and by Region

For the first time since 2008, the rate of congenital syphilis increased, from 8.4 (in 2012) to 8.7 (in 2013) cases per 100,000 live births (4%) (Table 1 and Table 42). This recent increase in the rate of congenital syphilis was largely driven by rate increases in the West (Table 42). This increase coincided with the increased rate of P&S syphilis in the West among females during 2010–2013 (Table 28).

Syphilis among Special Populations

More information about syphilis and congenital syphilis in racial and ethnic minority populations, adolescents, MSM, and other populations at higher risk can be found in the Special Focus Profiles.

Syphilis Summary

In recent years, the highest rates of P&S syphilis have occurred among young men. According to information reported from 49 states and the District of Columbia, 75% of P&S syphilis cases are among MSM. Although the majority of U.S. syphilis cases have occurred among MSM, transmission among MSW and women continues to occur in certain jurisdictions.

1 Ingraham NR. The value of penicillin alone in the prevention and treatment of congenital syphilis. Acta Derm Venereol. 1951:31(Suppl 24):60-88.

2 Centers for Disease Control and Prevention. The national plan to eliminate syphilis from the United States. Atlanta: U.S. Department of Health and Human Services; 2006.

3 Centers for Disease Control and Prevention. Resurgent bacterial sexually transmitted disease among men who have sex with men — King County, Washington, 1997–1999. MMWR Morb Mortal Wkly Rep. 1999;48:773-7.

4 Centers for Disease Control and Prevention. Outbreak of syphilis among men who have sex with men — Southern California, 2000. MMWR Morb Mortal Wkly Rep. 2001;50(7):117-20.

5 Centers for Disease Control and Prevention. Primary and secondary syphilis among men who have sex with men — New York City, 2001. MMWR Morb Mortal Wkly Rep. 2002;51: 853-6.

6 Chen SY, Gibson S, Katz MH, Klausner JD, Dilley JW, Schwarcz SK, et al. Continuing increases in sexual risk behavior and sexually transmitted diseases among men who have sex with men: San Francisco, California, 1999–2001 [Letter] Am J Public Health. 2002;92:1387-8.

7 D'Souza G, Lee JH, Paffel JM. Outbreak of syphilis among men who have sex with men in Houston, Texas. Sex Transm Dis. 2003;30:872-3.

8 Centers for Disease Control and Prevention. Primary and secondary syphilis — United States, 2003–2004. MMWR Morb Mortal Wkly Rep. 2006;55:269-73.

9 Heffelfinger JD, Swint EB, Berman SM, Weinstock HS. Trends in primary and secondary syphilis among men who have sex with men in the United States. Am J Public Health. 2007;97:1076-83.

10 Peterman TA, Kahn RH, Ciesielski CA, Ortiz-Rios E, Furness BW, Blank S, et al. Misclassification of the stages of syphilis: implications for surveillance. Sex Transm Dis. 2005;32(3):144-9.

11 Centers for Disease Control and Prevention. Primary and secondary syphilis--United States, 2005–2013. MMWR Morb Mortal Wkly Rep. 2014 May 9;63(18):402-6.

12 Su JR, Beltrami JF, Zaidi AA, Weinstock HS. Primary and secondary syphilis among black and Hispanic men who have sex with men: case report data from 27 States. Ann Intern Med. 2011;155(3):145-51.

13 Centers for Disease Control and Prevention. Estimated HIV incidence in the United States, 2007–2010. HIV Surveillance Supplemental Report 2012;17(No. 4). Published December 2012.

Figure 30. Syphilis — Reported Cases by Stage of Infection, United States, 1941–2013

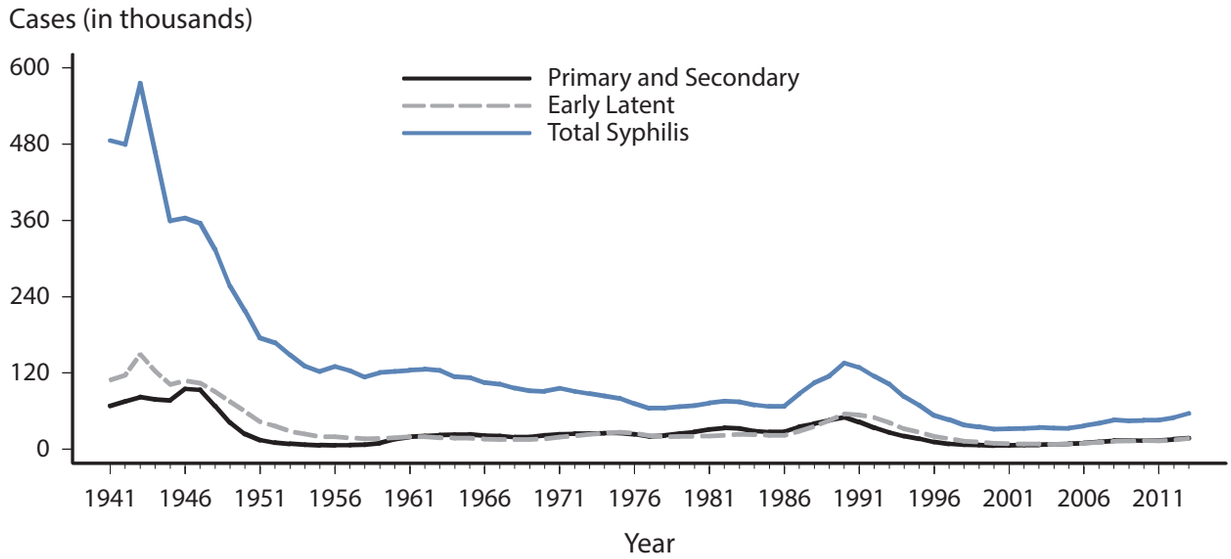
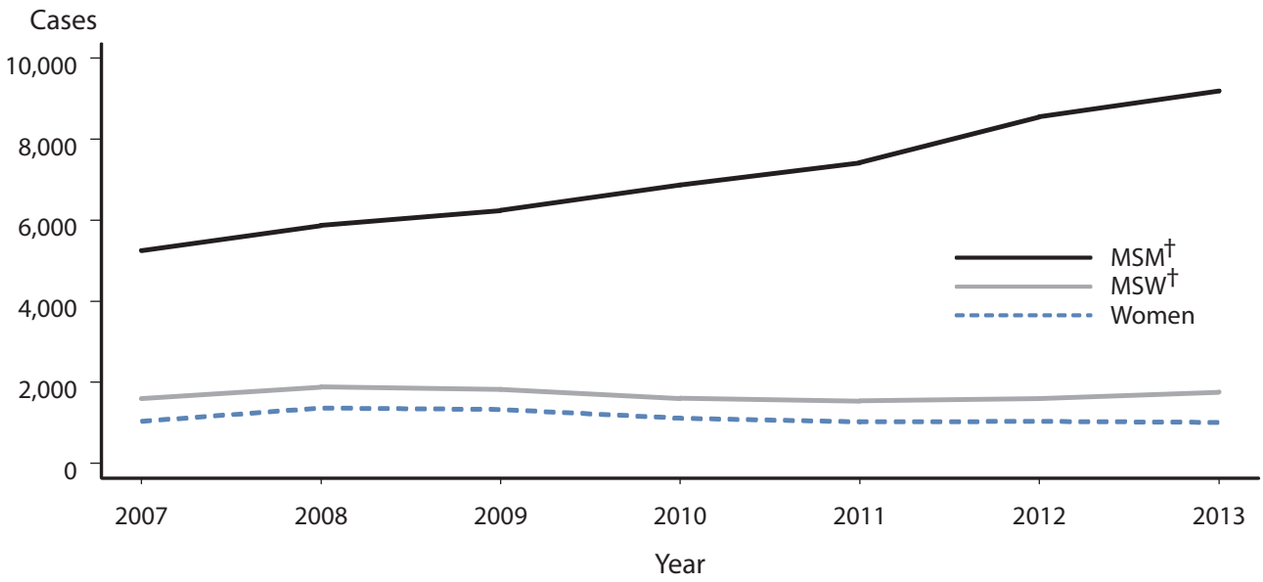


Figure 31. Primary and Secondary Syphilis — Reported Cases by Sex and Sexual Behavior, 33 areas*, 2007–2013



* 32 states and Washington, DC reported sex of partner data for ≥70% of reported cases of P&S syphilis for each year during 2007–2013.
† MSM = men who have sex with men; MSW = men who have sex with women only.

Figure 32. Primary and Secondary Syphilis — Rates of Reported Cases by Sex and Male-to-Female Rate Ratios, United States, 1990–2013

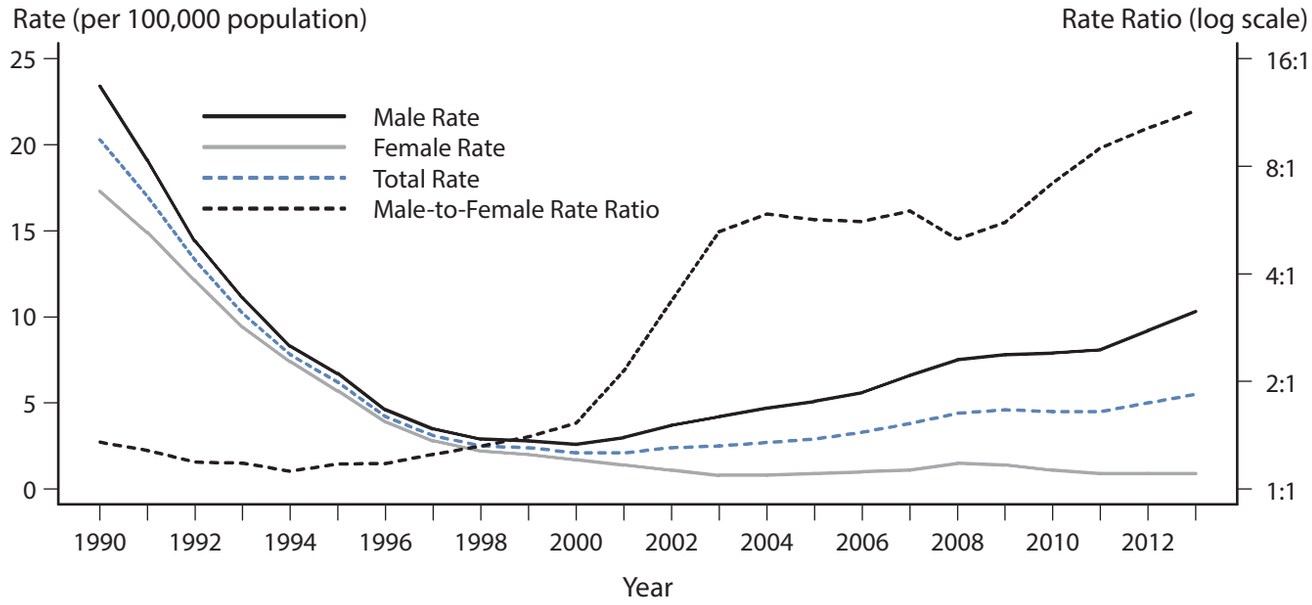


Figure 33. Primary and Secondary Syphilis — Rates of Reported Cases by Region, United States, 2004–2013

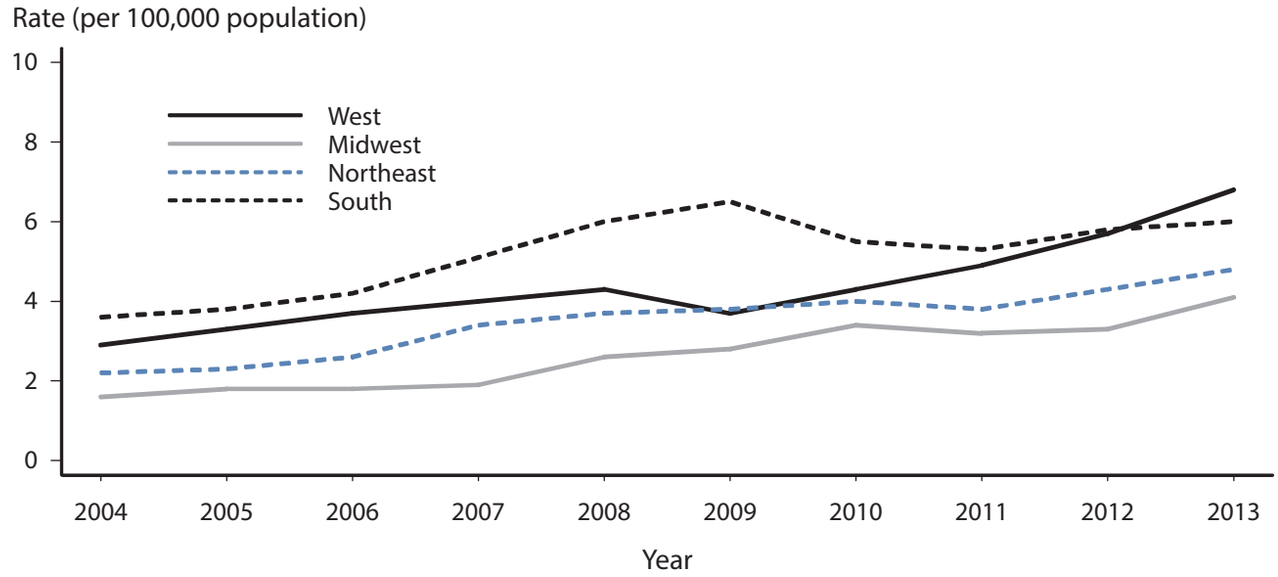
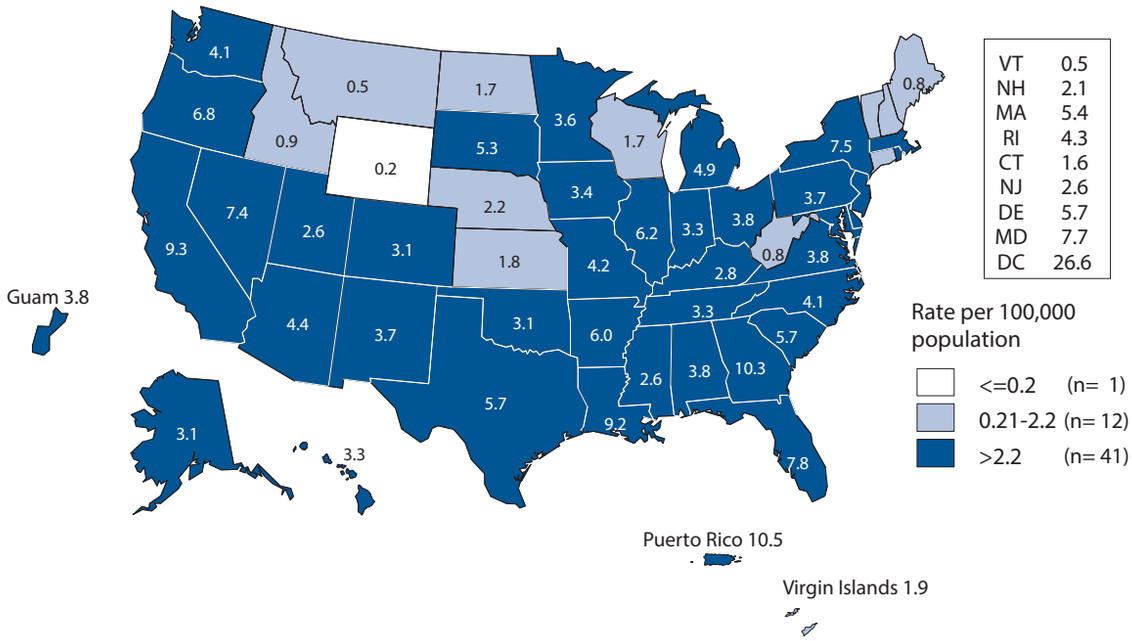
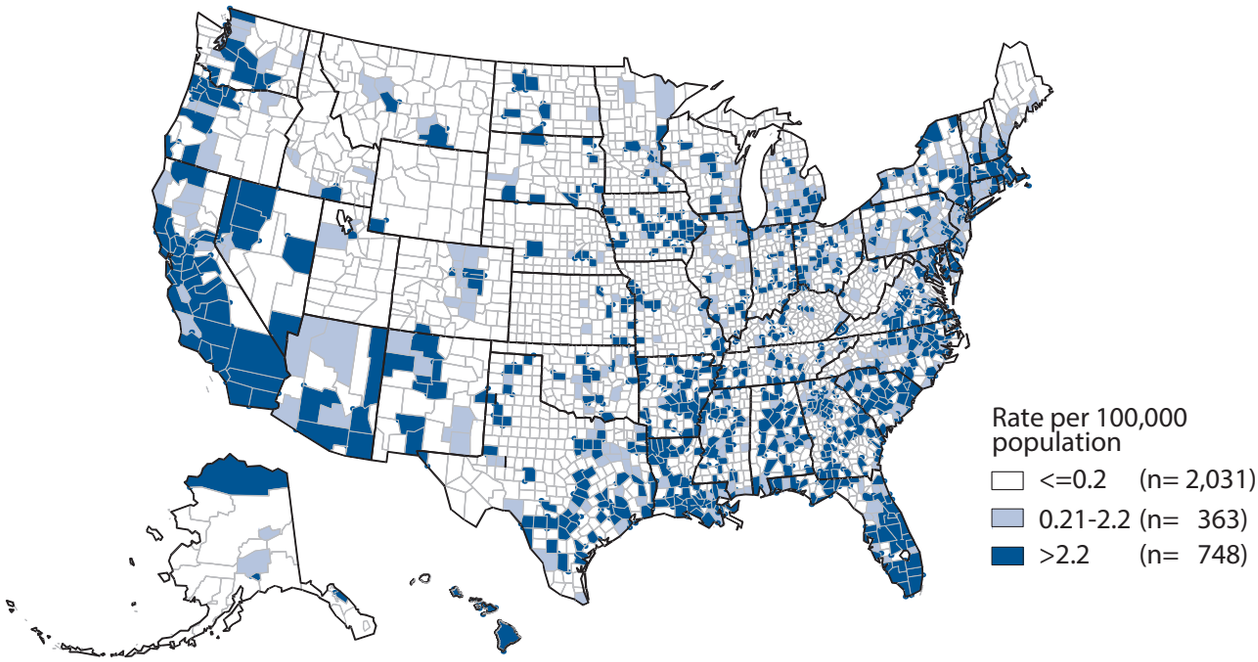


Figure 34. Primary and Secondary Syphilis — Rates of Reported Cases by State, United States and Outlying Areas, 2013



NOTE: The total rate of primary and secondary syphilis for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 5.6 per 100,000 population.

Figure 35. Primary and Secondary Syphilis — Rates of Reported Cases by County, United States, 2013



NOTE: In 2013, 2,029 (64.6%) of 3,142 counties in the United States reported no cases of primary and secondary syphilis.

Figure 36. Primary and Secondary Syphilis — Rates of Reported Cases by Age and Sex, United States, 2013

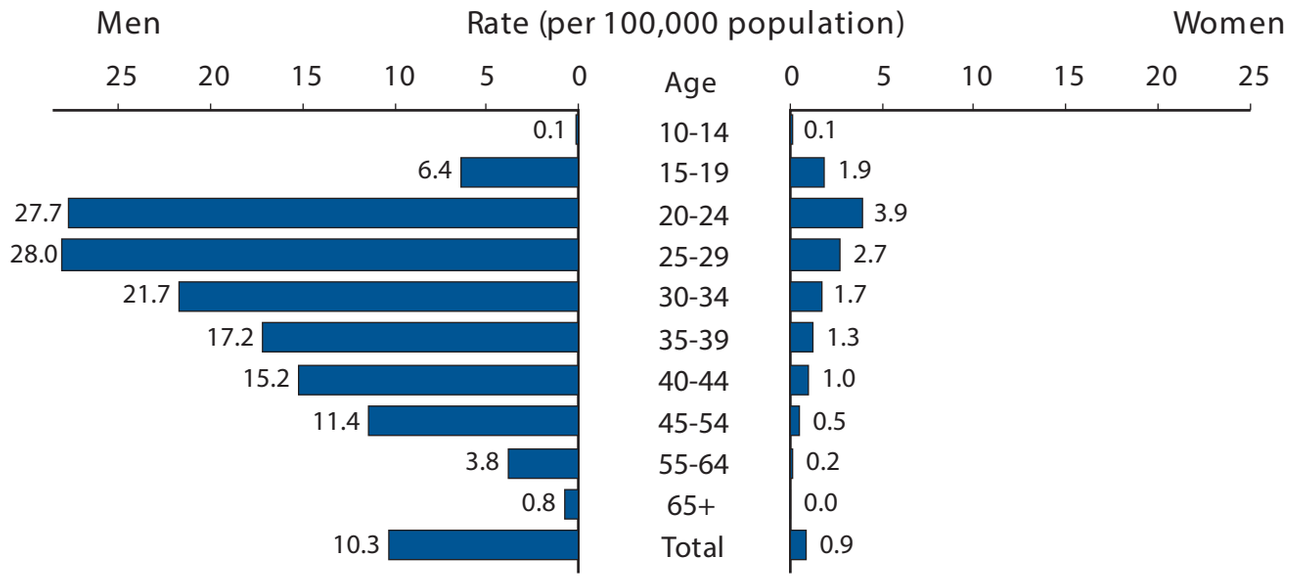


Figure 37. Primary and Secondary Syphilis — Rates of Reported Cases Among Women Aged 15–44 Years, by Age, United States, 2004–2013

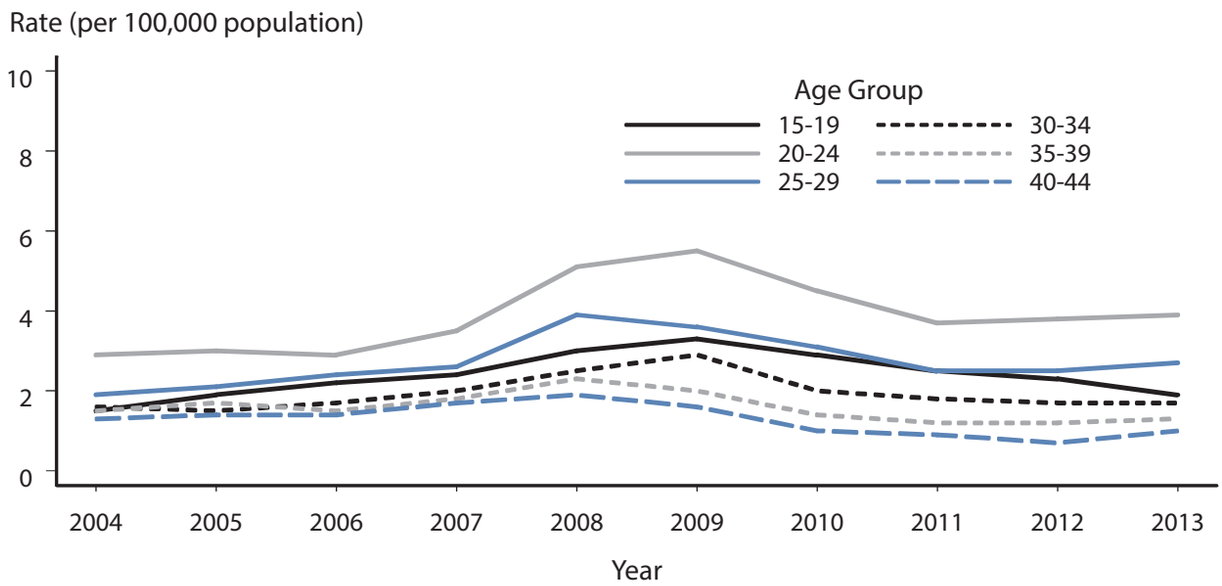


Figure 38. Primary and Secondary Syphilis — Rates of Reported Cases Among Men Aged 15–44 Years, by Age, United States, 2004–2013

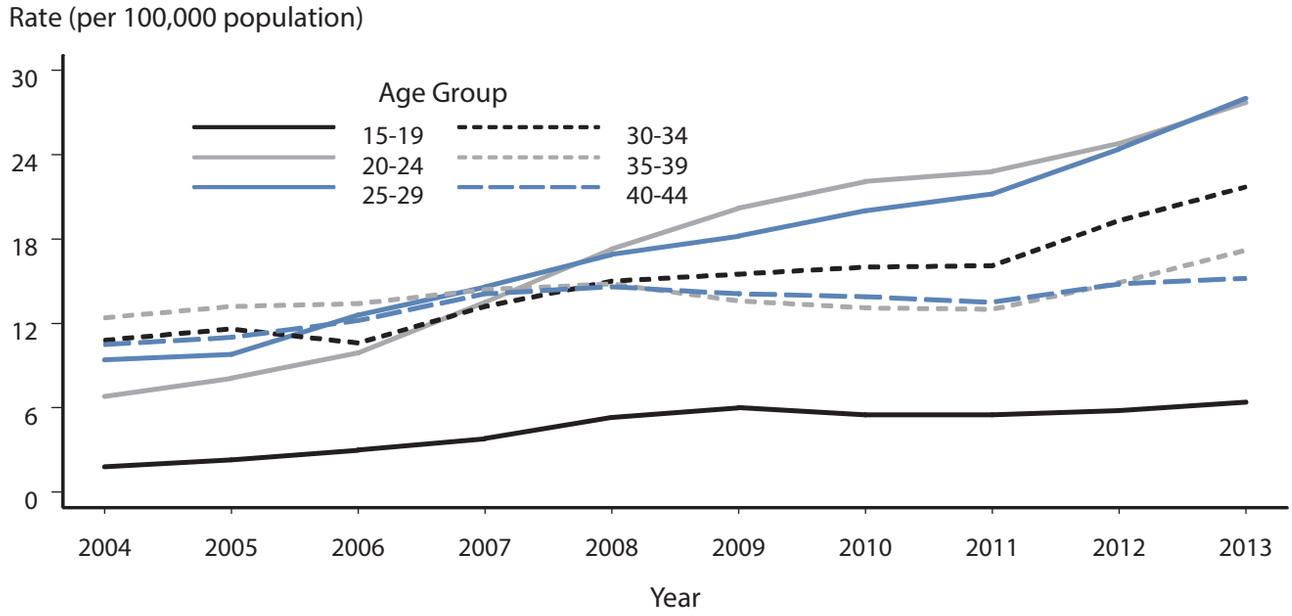
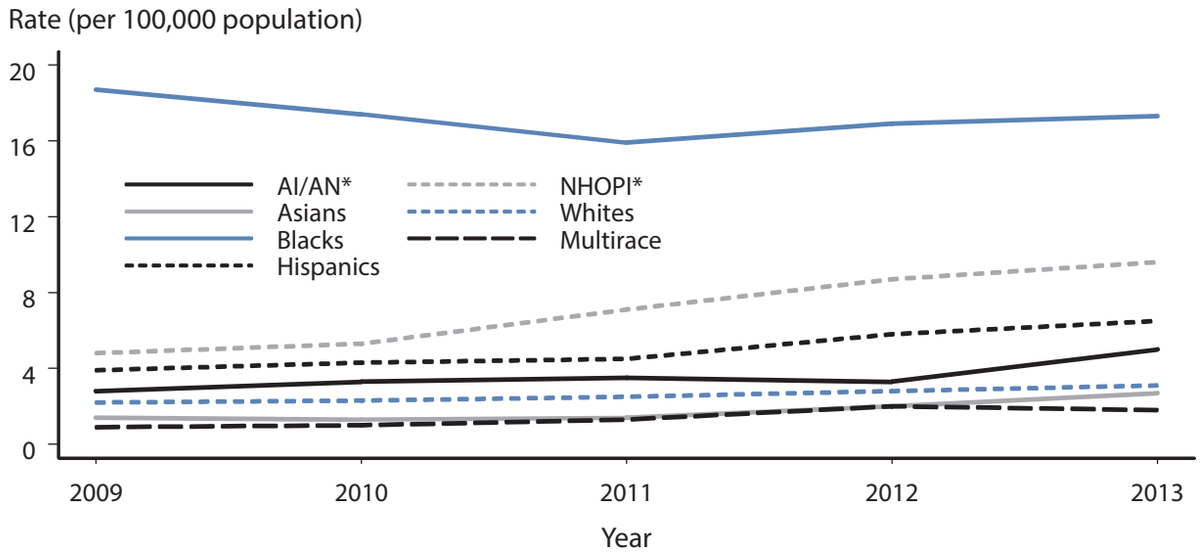
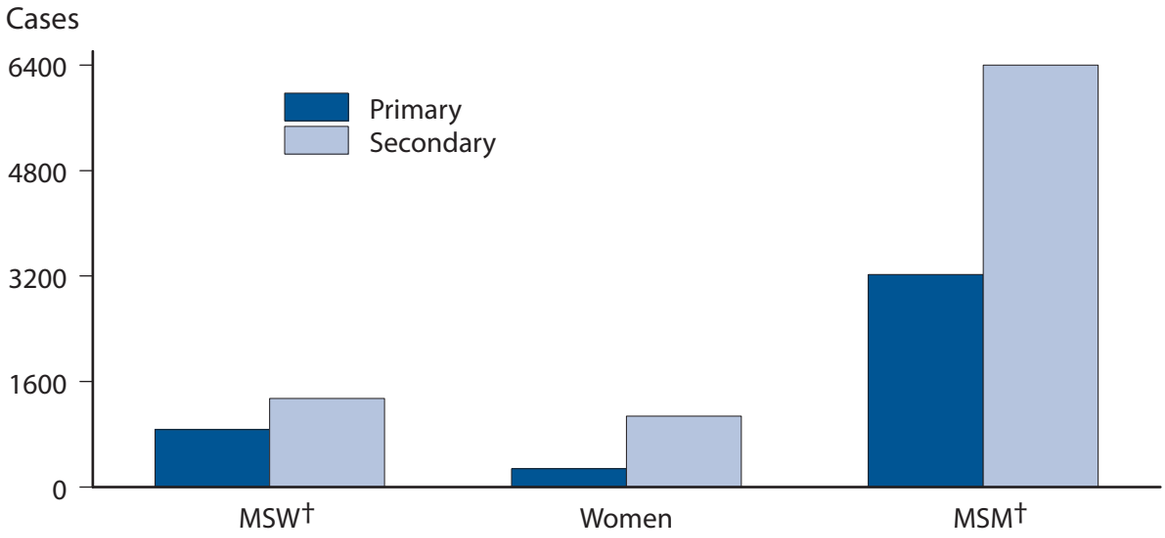


Figure 39. Primary and Secondary Syphilis — Rates of Reported Cases by Race/Ethnicity, United States, 2009–2013



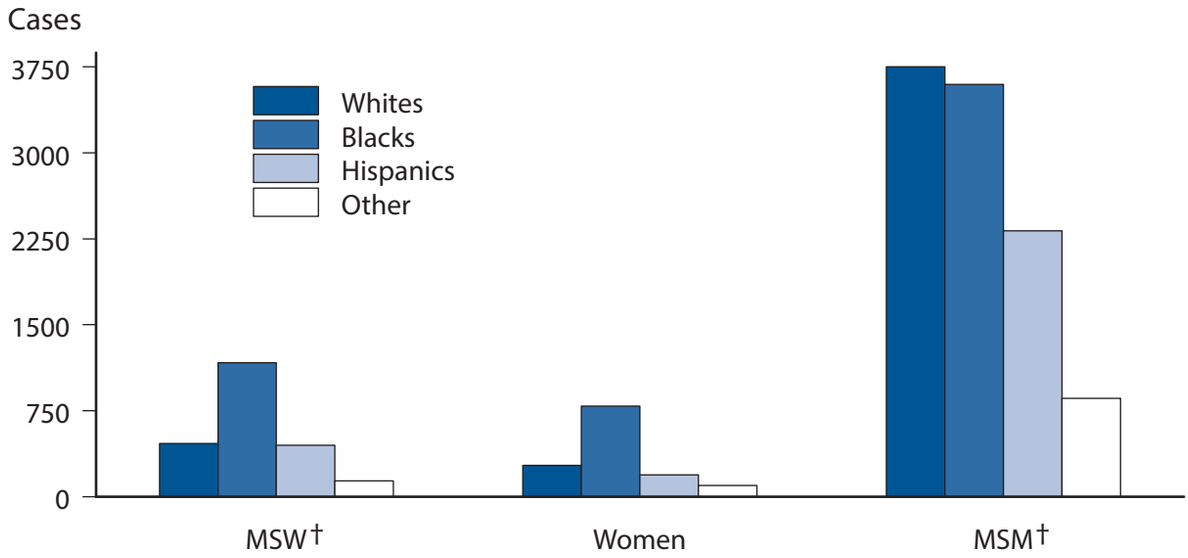
* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 39 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats during 2009–2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure 40. Primary and Secondary Syphilis — Reported Cases* by Stage, Sex, and Sexual Behavior, 2013



* Of the reported male cases of primary and secondary syphilis, 16.9% were missing sex of sex partner information.
† MSW = men who have sex with women only; MSM = men who have sex with men.

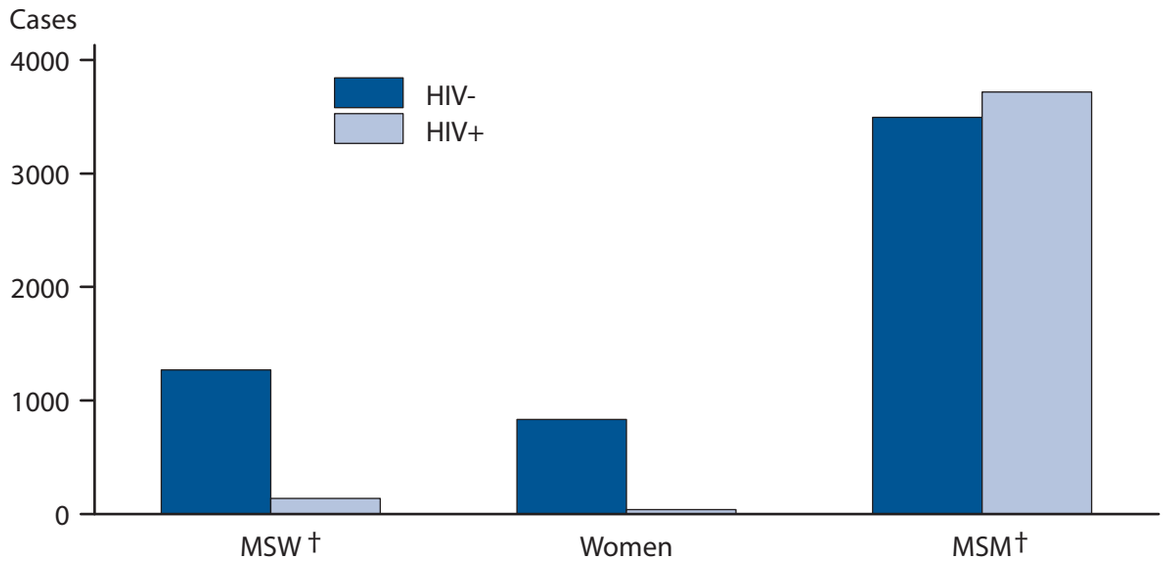
Figure 41. Primary and Secondary Syphilis — Reported Cases* by Sex, Sexual Behavior, and Race/Ethnicity, United States, 2013



* Of the reported male cases of primary and secondary syphilis, 16.9% were missing sex of sex partner information; 2.9% of reported male cases with sex of sex partner data were missing race/ethnicity data.

† MSW = men who have sex with women only; MSM = men who have sex with men.

Figure 42. Primary and Secondary Syphilis — Reported Cases by Sex, Sexual Behavior, and HIV status (positive or negative), 31 areas*, 2013



* 30 states and Washington, D.C. reported both sex of partner and HIV status for 70% or more cases during 2013.
† MSW = men who have sex with women only; MSM = men who have sex with men.

Figure 43. Primary and Secondary Syphilis — Reported Cases by Reporting Source and Sex, United States, 2004–2013

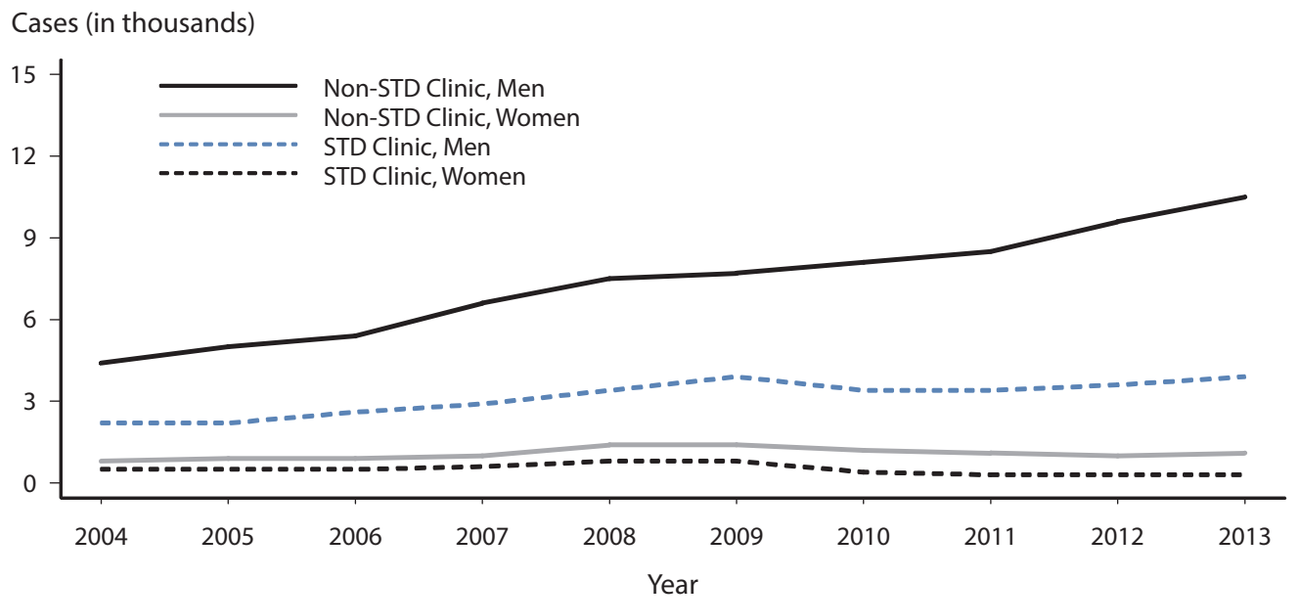
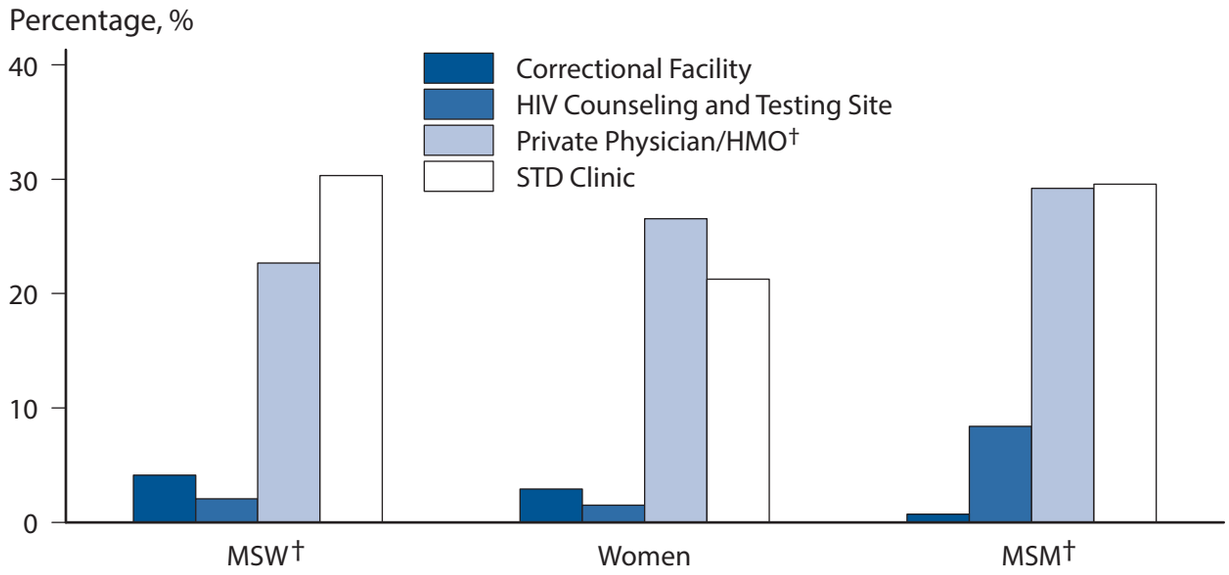
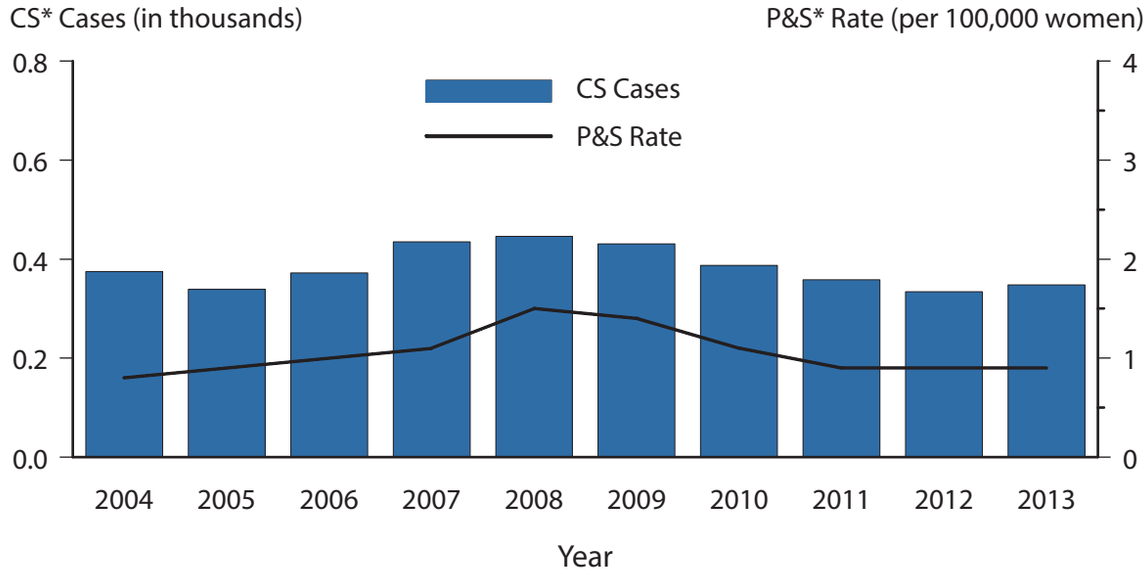


Figure 44. Primary and Secondary Syphilis — Percentage of Reported Cases* by Sex, Sexual Behavior, and Selected Reporting Sources, 2013



* Of all cases, 5.6% had a missing or unknown reporting source. Among cases with a known reporting source the categories presented represent 74.0% of cases; 26.0% were reported from sources other than those shown.
† HMO = health maintenance organization; MSM = men who have sex with men; MSW = men who have sex with women only.

Figure 45. Congenital Syphilis — Reported Cases Among Infants by Year of Birth and Rates of Primary and Secondary Syphilis Among Women, United States, 2004–2013



* CS = congenital syphilis; P&S = primary and secondary syphilis.

Other Sexually Transmitted Diseases

Chancroid

Reported cases of chancroid declined steadily between 1987 and 2001. Since then, the number of reported cases has fluctuated (Figure 46, Table 1). In 2013, a total of 10 cases of chancroid were reported in the United States. Only 4 states reported one or more cases of chancroid in 2013 (Table 44).

Although the overall decline in reported chancroid cases most likely reflects a decline in the incidence of this disease, these data should be interpreted with caution because *Haemophilus ducreyi*, the causative organism of chancroid, is difficult to culture; as a result, this condition may be substantially underdiagnosed.[1,2]

Human Papillomavirus

Human papillomavirus (HPV) is the most common sexually transmitted infection.[3] Over 40 distinct types can infect the genital tract;[4] about 90% of infections are asymptomatic and resolve spontaneously within 2 years.[5] However, persistent infection with some HPV types can cause cancer and other benign diseases. Of the 13 HPV types designated as human carcinogens, types 16 and 18 account for 70% of cervical cancers worldwide.[6,7] Among non-carcinogenic types, types, HPV 6 and 11 are responsible for 90% of genital warts.[8,9]

A quadrivalent HPV vaccine that targets HPV 6, 11, 16 and 18 has been licensed in the United States for use in females aged 9–26 years since June 2006,[10] and in males aged 9–26 years since October 2009.[11] In October 2009, a bivalent HPV vaccine against HPV 16 and 18 was licensed for use in females aged 10–25 years.[12] Routine vaccination with either vaccine is recommended for females aged 11 or 12 years, and through age 26 years for those not previously vaccinated.[12] The quadrivalent vaccine is recommended for routine use in males aged 11 or 12 years and through age 21 years for those not previously vaccinated.[13]

HPV vaccine uptake in the U.S. remains lower than the Healthy People 2020 goal of 80% coverage.[14] In 2013, a national survey found that 57% of girls aged 13–17 years had received at least 1 dose of the HPV vaccine series, but only 38% had received all 3 doses in the series.[15] Vaccine uptake is much lower among boys.[15]

National population-based data were obtained from the National Health and Nutrition Examination Survey (NHANES) to examine the prevalence of HPV vaccine types in the civilian, non-institutionalized female population during 2003–2006. HPV detection and typing were performed on self-collected cervicovaginal swab samples using the Research Use Only Linear Array genotyping assay (Roche Diagnostics). In the pre-vaccine era (2003–2006), the overall prevalence of any HPV was 42.5% (95% CI: 40.3–44.7) among females aged 14–59 years.[16] Prevalence varied significantly by age, peaking in young women 20–24 years of age (Figure 47).

Despite low vaccine coverage in the U.S., prevalence of quadrivalent HPV vaccine types 6, 11, 16, and/or 18 in cervicovaginal specimens decreased from 11.5% (95% CI: 9.2–14.4) in the prevaccine era (2003–2006) to 5.1% (95% CI: 3.8–6.6) in the vaccine era (2007–2010) among females aged 14–19 years, the age group most likely to benefit from HPV vaccination (Figure 48). Among other age groups, vaccine-type HPV prevalence did not differ significantly between the 2 time periods.[17]

Data from the National Disease and Therapeutic Index (NDTI) suggest that cases of genital warts (Figure 49, Table 45), as measured by initial visits to physicians' offices, may have increased during the late 1990s through 2011. Although the number of cases appears to have decreased in 2012 and 2013, compared to 2011, more years of data are needed to discern whether genital warts are declining, particularly since 2013 cases exceed those reported in 2012. Prevalence of genital warts in a large U.S. cohort of individuals with private health insurance significantly declined in 2007 through 2010 among girls aged 15–19 years.[18] Among women aged 20–24 years, genital wart prevalence, which had been increasing from 2003 through 2007, was stable from 2007 to 2009 and then decreased in 2010. Prevalence in women aged 25–29 increased through 2009, but decreases in genital warts were also observed for this group in 2010 (Figure 50).[18] These declines are what would be expected several years after initiating routine HPV vaccination for girls aged 11 to 12 years, with catch-up vaccination through age 26 years. Although genital wart prevalence in women aged 30–34 and 35–39 years did not continue to increase between 2009 and 2010, more years of data are needed to interpret these observations, as well as the observed decline in prevalence in 2010 for men aged 20–24 years. NHANES data for 1999–2004 indicated that 5.6% (95% CI: 4.9–6.4) of sexually active adults aged 18–59 years self-reported a history of a genital wart diagnosis.[19]

For data reported in Figures 51 and 52, enhanced

behavioral and demographic information on patients who presented for care in 2013 at the 42 clinics participating in the STD Surveillance Network (SSuN) was used. Genital warts were identified by provider diagnosis or by documentation from the physical examination. Gay, bisexual, and other men who have sex with men (collectively referred to as MSM) and men who have sex with women only (MSW) were defined by self-report or by sex of reported sex partners. For more detailed information about SSuN methodology, see the Appendix. Between 2010 and 2013, 57,974 (4.6%) patients aged 12–82 years in the SSuN clinics were diagnosed with genital warts; among those patients, 17.0% were women, 20.5% were MSM and 62.5% were MSW. In 2013, the prevalence of diagnosed genital warts among MSM was 3.0 times that of women and the prevalence among MSW was 4.0 times that of women, with similar male:female ratios for all years (Figure 51). MSW had a higher prevalence of genital warts compared to MSM across all years; during this time period, prevalence among MSW increased (6.8% to 7.4%), while prevalence among MSM decreased (6.3% to 5.5%). The proportion of women diagnosed with genital warts decreased slightly over time, from 1.9% in 2010 to 1.6% in 2013 (Figure 51). The prevalence of genital warts in 2013 is presented separately for MSM, MSW, and women by SSuN site in Figure 52. Among women the median prevalence of genital warts was 1.4% (range 0.4 to 2.7) across all sites, compared to 3.8% (range 1.2 to 5.8) for MSM and 5.0% (range 1.9 to 8.5) for MSW.

Pelvic Inflammatory Disease

For data on pelvic inflammatory disease, see Special Focus Profiles, STDs in Women and Infants.

Herpes Simplex Virus

Case reporting data for genital herpes simplex virus (HSV) are not available. Data on initial visits to physicians' offices for this condition are available from NDTI (Figure 53, Table 45).

National trend data on the gender-specific seroprevalence of HSV-2 among those aged 14–49 years from NHANES were compared across survey years 1988–1994, 1999–2002, 2003–2006, and 2007–2010 (Figure 54). Overall, HSV-2 seroprevalence decreased between 1988–1994 and 2007–2010, from 21.2% to 15.5%.[20] Among non-Hispanic white females, HSV-2 seroprevalence decreased from 19.5% (1988–1994) to 15.3% (2007–2010; P<0.001); HSV-2 seroprevalence remained stable among non-Hispanic black or African American (hereinafter referred to as black) females, from 52.5% (1988–1994) to 49.9% (2007–2010; P=0.1). These data, along with data from NHANES survey years 1976–1980,[21] indicate that blacks had higher seroprevalence than whites for each survey period and age group.

Although HSV-2 seroprevalence is decreasing, most persons with HSV-2 have not received a diagnosis. The overall percentage of HSV-2 seropositive NHANES participants who reported never being told by a doctor or health care professional that they had genital herpes did not change significantly between 1988–1994 and 2007–2010, and remained high (90.7% and 87.4%, respectively).[20] However, an overall increase in the number of visits for genital herpes over time, as suggested by NDTI data, may indicate increased recognition of infection.

Neonatal HSV Infections, although relatively rare, cause significant morbidity and mortality. An examination of inpatient records of infants aged 60 days or younger at admission using the Healthcare Cost and Utilization Project Kid's Inpatient Database showed an overall incidence of 9.6 cases per 100,000 live births in 2006.[22] Rates did not vary significantly by region or race/ethnicity, however prevalence was significantly higher among cases for which the expected primary payer was Medicaid (15.1 per 100,000; 95% CI: 12.1–18.1) compared with private insurance or managed health care (5.4 per 100,000; 95% CI: 4.0-6.8).

Trichomoniasis

Trend data for this infection are limited to estimates of initial physician office visits from the NDTI (Figure 55, Table 45). NHANES data from 2001–2004 indicated an overall trichomoniasis prevalence of 3.1% (95% CI: 2.3–4.3), with the highest prevalence observed among blacks (13.3%; 95% CI: 10.0-17.7).[23]

[1] Schulte JM, Martich FA, Schmid GP. Chancroid in the United States, 1981–1990: evidence for underreporting of cases. MMWR Morb Mortal Wkly Rep. 1992;41(SS-3):57–61.

[2] Mertz KJ, Trees D, Levine WC, Lewis JS, Litchfield B, Pettus KS, et al. Etiology of genital ulcers and prevalence of human immunodeficiency virus coinfection in 10 US cities. J Infect Dis. 1998;178(6):1795–8.

[3] Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Banez Ocefemia MC, et al. Sexually transmitted infections among US women and men: prevalence and incidence estimates, 2008. Sex Transm Dis. 2013;40(3):187–93.

[4] Bouvard V, Baan R, Straif K, Grosse Y, Secretan B, El Ghissassi F, et al. A review of human carcinogens — part B: biological agents. Lancet Oncol. 2009;10:321–2.

[5] Ho GYF, Bierman R, Beardsley L, Chang CJ, Burk RD. Natural history of cervicovaginal papillomavirus infection in young women. N Engl J Med. 1998;338(7);423–8.

[6] Clifford GM, Smith JS, Plummer M, Munoz N, Franceschi S. Human papillomavirus types in invasive cervical cancer worldwide: a meta-analysis. Br J Cancer. 2003;88(1):63–73.

[7] Bosch FX, Manos MM, Munoz N, Sherman M, Jansen AM, Peto J, et al. Prevalence of human papillomavirus in cervical cancer: a worldwide perspective. J Natl Cancer Inst. 1995;87(11):796–802.

[8] Garland SM, Steben M, Sings HL, James M, Lu S, Railkar R, et al. Natural history of genital warts: analysis of the placebo arm of 2 randomized phase III trials of a quadrivalent human papillomavirus (types 6, 11, 16, and 18) vaccine. J Infect Dis. 2009;199(6):805–14.

[9] Gissmann L, Wolnik L, Ikenberg H, Koldovsky U, Schnurch HG, zur Hausen H. Human papillomavirus types 6 and 11 DNA sequences in genital and laryngeal papillomas and in some cervical cancers. Proc Natl Acad Sci USA. 1983;80(2):560–3.

[10] Markowitz LE, Dunne EF, Saraiya M, Lawson HW, Chesson H, Unger ER. Quadrivalent human papillomavirus vaccine. Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep. 2007;56(RR02):1–24.

[11] Centers for Disease Control and Prevention. FDA licensure of quadrivalent human papillomavirus vaccine (HPV4, Gardasil) for use in males and guidance from the Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep. 2010;59(20):630–2.

[12] Centers for Disease Control and Prevention. FDA licensure of bivalent human papillomavirus vaccine (HPV2, Cervarix) for use in females and updated HPV vaccination recommendations from the Advisory Committeee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep. 2010;59(20):626–9.

[13] Centers for Disease Control and Prevention. Recommendations on the use of quadrivalent human papillomavirus vaccine in males — Advisory Committee on Immunization Practices (ACIP), 2011. MMWR Morb Mortal Wkly Rep. 2011;60(50):1705–8.

[14] HealthyPeople.gov. 2020 Topics & Objectives. Immunization and Infectious Diseases. Objectives. IID-11.4. Increase the vaccination coverage level of 3 doses of human papillomavirus (HPV) vaccine for females by age 13 to 15 years. http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=23, Accessed May 15, 2014 .

[15] Stokley S, Jeyarajah J, Yankey D, Cano M, Gee J, Roark J, et al. Human papillomavirus vaccination coverage among adolescents, 2007–2013, and postlicensure vaccine safety monitoring, 2006–2014 — United States. MMWR Morb Mortal Wkly Rep. 2014;63(29):620–4.

[16] Hariri S, Unger ER, Sternberg M, Dunne EF, Swan D, Patel S, et al. Prevalence of genital human papillomavirus among females in the United States, the National Health and Nutrition Examination Survey, 2003–2006. J Infect Dis. 2011;204(4):566–73.

[17] Markowitz LE, Hariri S, Lin C, Dunne EF, Steinau M, McQuillan G, et al. Reduction in human papillomavirus (HPV) prevalence among young women following HPV vaccine introduction in the United States, National Health and Nutrition Examination Surveys, 2003–2010. J Infect Dis. 2013;208(3):385–93.

[18] Flagg EW, Schwartz R, Weinstock H. Prevalence of anogenital warts among participants in private health plans in the United States, 2003–2010: potential impact of human papillomavirus vaccination. Am J Public Health. 2013;103(8):1428–35.

[19] Dinh TH, Sternberg M, Dunne EF, Markowitz LE. Genital warts among 18- to 59-year-olds in the United States, National Health and Nutrition Examination Survey, 1999–2004. Sex Transm Dis. 2008;35(4):357–60.

[20] Fanfair RN, Zaidi A, Taylor LD, Xu F, Gottlieb S, Markowitz L. Trends in seroprevalence of herpes simplex virus type 2 among non-Hispanic blacks and non-Hispanic whites aged 14 to 49 years — United States, 1988 to 2010. Sex Transm Dis. 2013;40(11):860–4.

[21] Xu F, Sternberg MR, Kottiri BJ, McQuillan GM, Lee FK, Nahmias AJ, et al. Trends in herpes simplex virus type 1 and type 2 seroprevalence in the United States. JAMA. 2006;296(8):964–73.

[22] Flagg EW, Weinstock H. Incidence of neonatal herpes simplex virus infections in the United States, 2006. Pediatrics 2011;172(1):e1–8.

[23] Sutton M, Sternberg M, Koumans EH, McQuillan G, Berman S, Markowitz L. The prevalence of *Trichomonas vaginalis* infection among reproductive-age women in the United States, 2001–2004. Clin Infect Dis. 2007;45(10):1319–26.

Figure 46. Chancroid — Reported Cases by Year, United States, 1981–2013

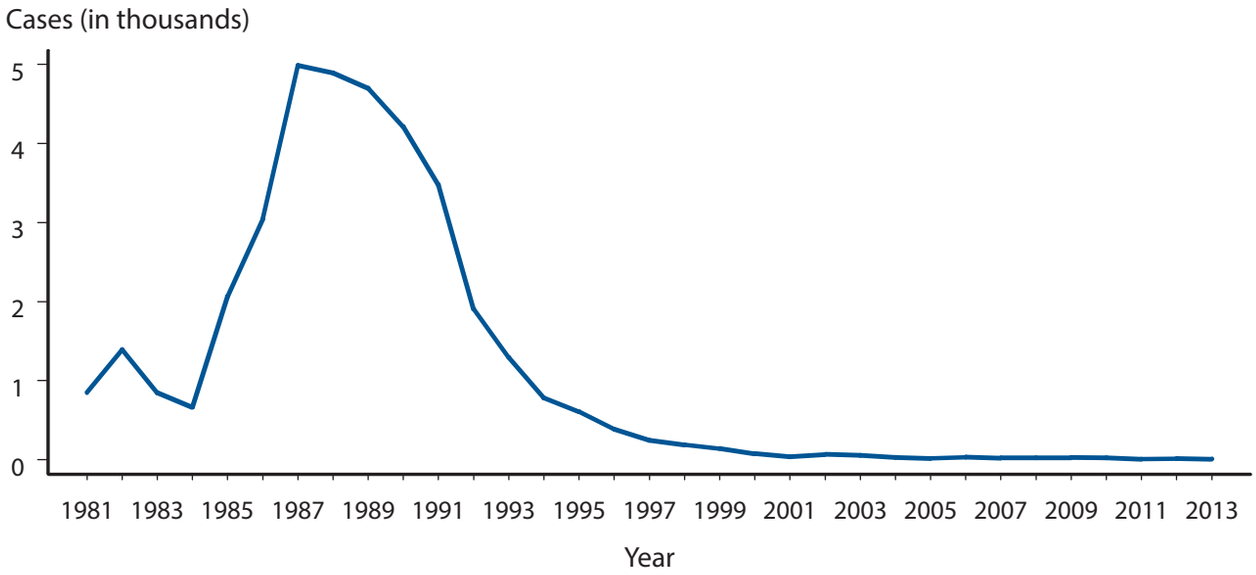
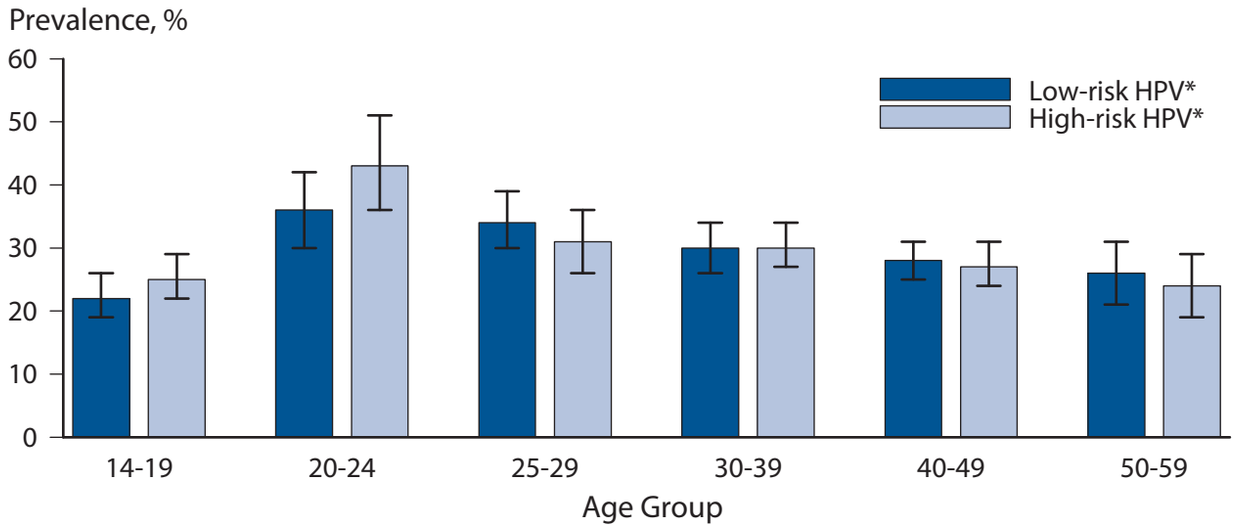
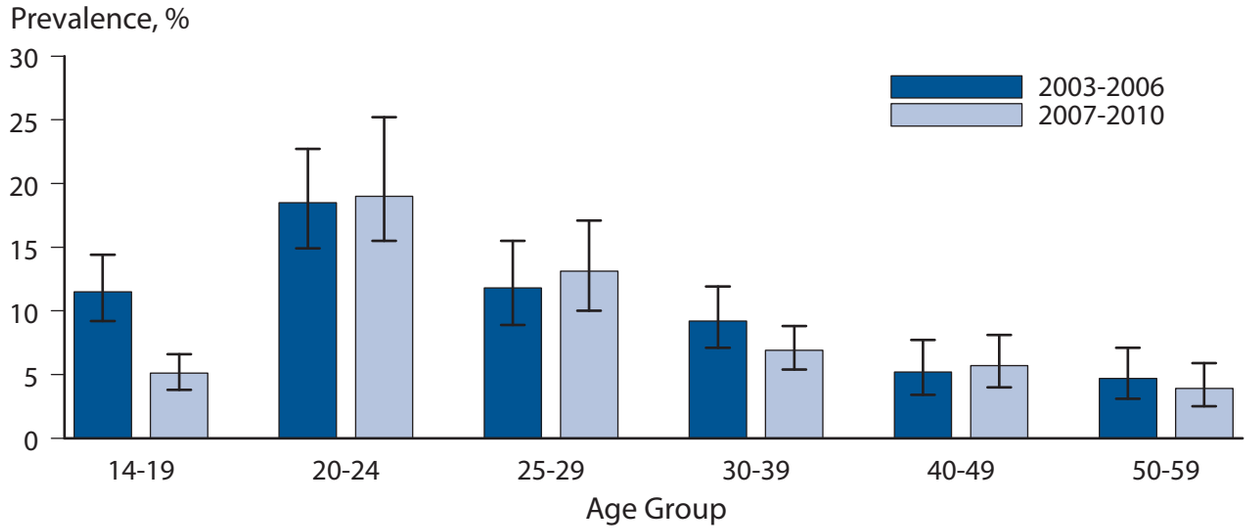


Figure 47. Human Papillomavirus — Cervicovaginal Prevalence of High-risk and Low-risk Types Among Women Aged 14–59 Years by Age Group, National Health and Nutrition Examination Survey, 2003–2006



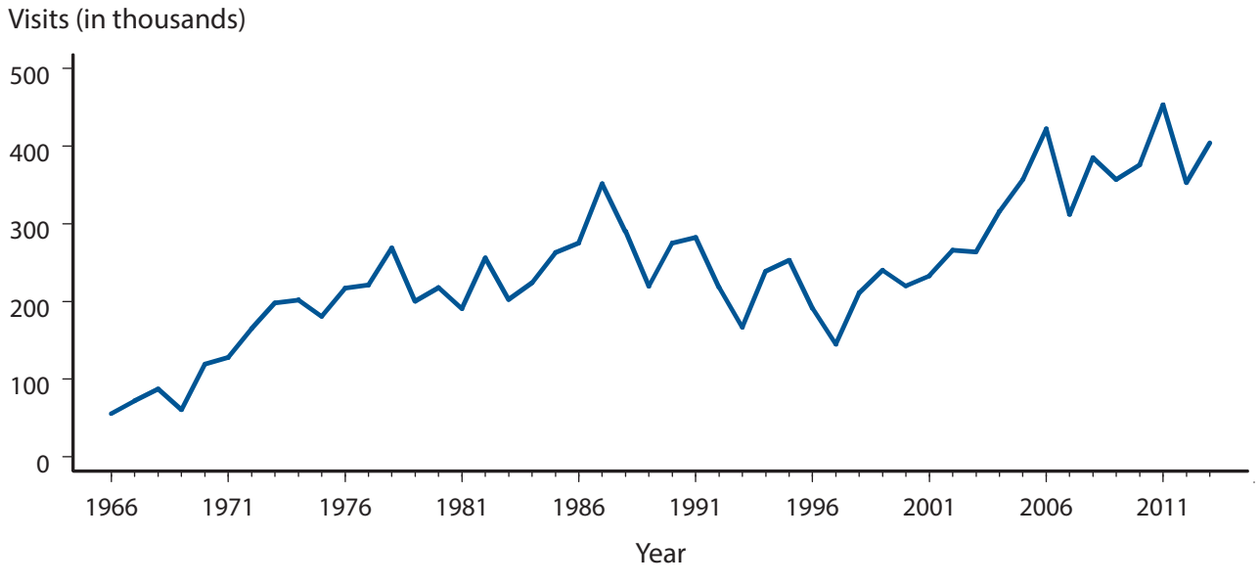
* HPV = human papillomavirus.
NOTE: Error bars indicate 95% confidence interval. Both high-risk and low-risk HPV types were detected in some females.
SOURCE: Hariri S, Unger ER, Sternberg M, Dunne EF, Swan D, Patel S, et al. Prevalence of genital human papillomavirus among females in the United States, the National Health and Nutrition Examination Survey, 2003–2006. J Infect Dis. 2011;204(4):566–73.

Figure 48. Human Papillomavirus — Cervicovaginal Prevalence of Types 6, 11, 16, and 18 Among Women Aged 14–59 Years by Age Group and Time Period, National Health and Nutrition Examination Survey, 2003–2006 and 2007–2010



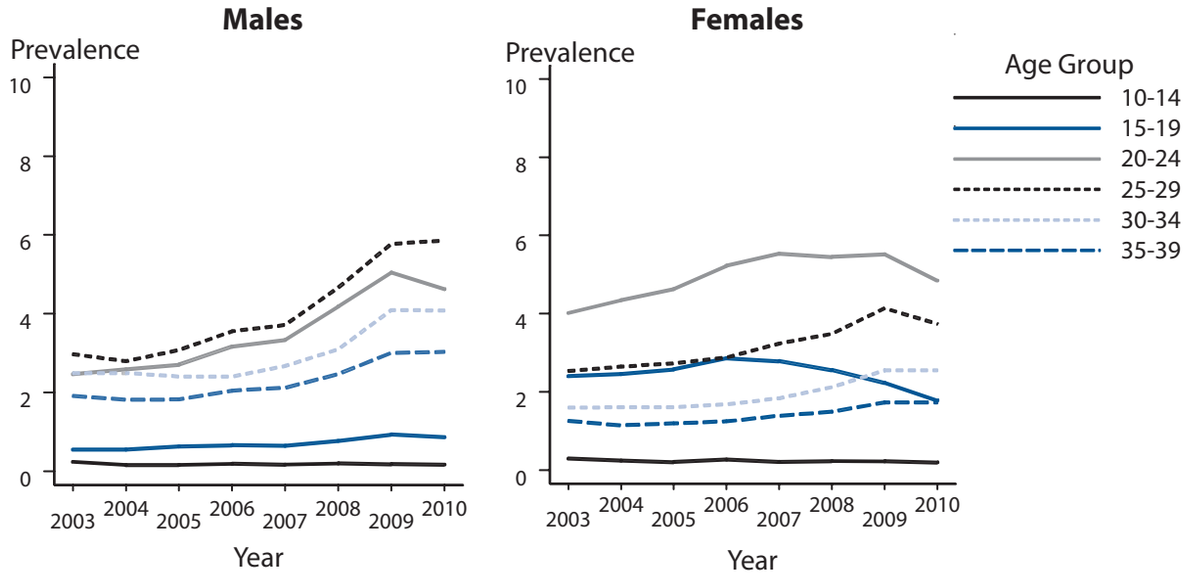
NOTE: Error bars indicate 95% confidence interval.
SOURCE: Markowitz LE, Hariri S, Lin C, Dunne EF, Steinau M, McQuillan G, et al. Reduction in human papillomavirus (HPV) prevalence among young women following HPV vaccine introduction in the United States, National Health and Nutrition Examination Surveys, 2003–2010. J Infect Dis. 2013;208(3):385–93.

Figure 49. Genital Warts — Initial Visits to Physicians' Offices, United States, 1966–2013



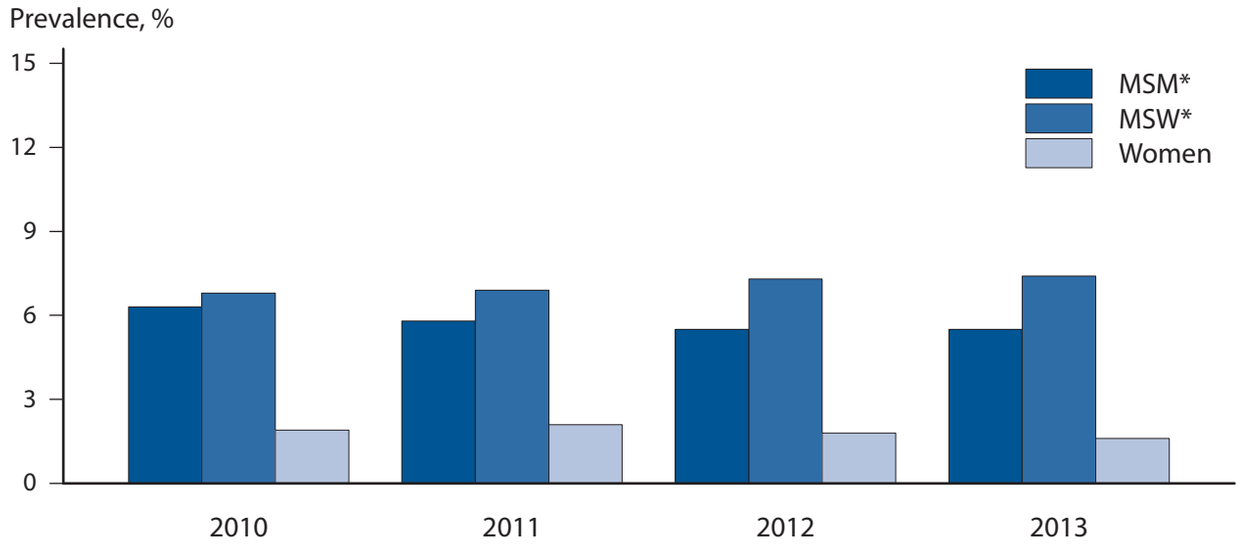
NOTE: The relative standard errors for genital warts estimates of more than 100,000 range from 18% to 23%. See Other Surveillance Data Sources in the Appendix and Table 45.
SOURCE: IMS Health, Integrated Promotional Services™. IMS Health Report, 1966–2013.

Figure 50. Genital Warts — Prevalence per 1000 Person-Years Among Participants in Private Health Plans Aged 10–39 Years by Sex, Age Group, and Year, 2003–2010



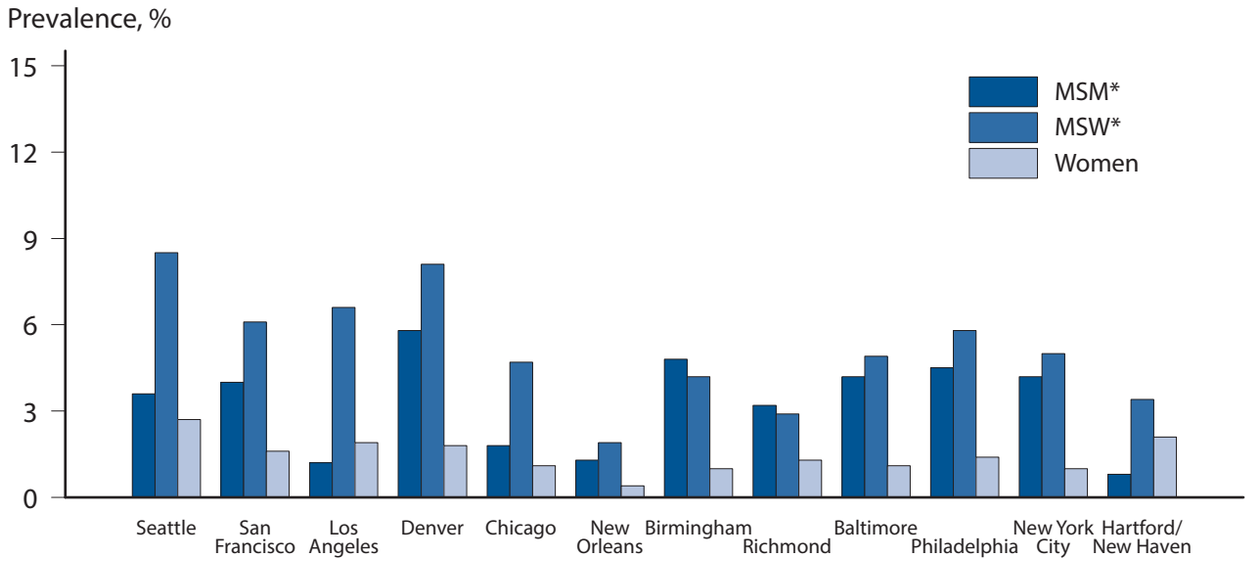
SOURCE: Flagg EW, Schwartz R, Weinstock H. Prevalence of anogenital warts among participants in private health plans in the United States, 2003–2010: potential impact of human papillomavirus vaccination. Am J Public Health. 2013;103(8):1428–35.

Figure 51. Genital Warts — Prevalence Among STD Clinic Patients by Sex, Sex of Partners, and Year, STD Surveillance Network (SSuN), 2010-2013



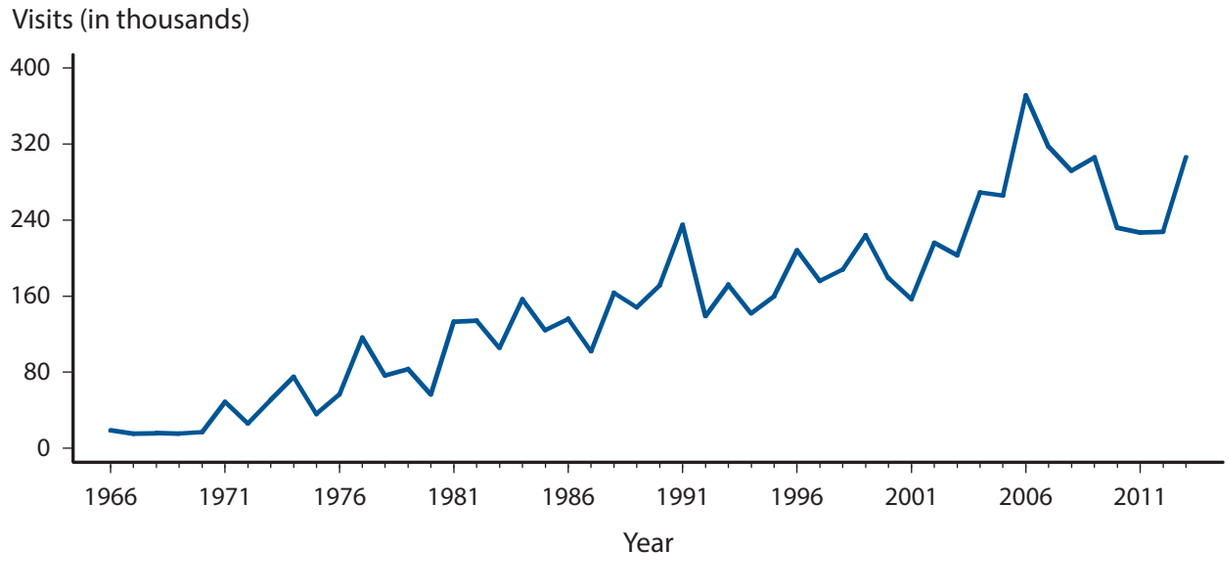
* MSM = men who have sex with men; MSW = men who have sex with women only.
NOTE: In 2013, six jurisdictions (Birmingham, Chicago, Denver, Hartford/New Haven, New Orleans, and Richmond) contributed data from January through June 2013 and the remaining jurisdictions (Baltimore, Los Angeles, New York City, Philadelphia, San Francisco and Seattle) contributed data for all of 2013.

Figure 52. Genital Warts — Prevalence Among STD Clinic Patients by Sex, Sex of Partners, and Site, STD Surveillance Network (SSuN), 2013



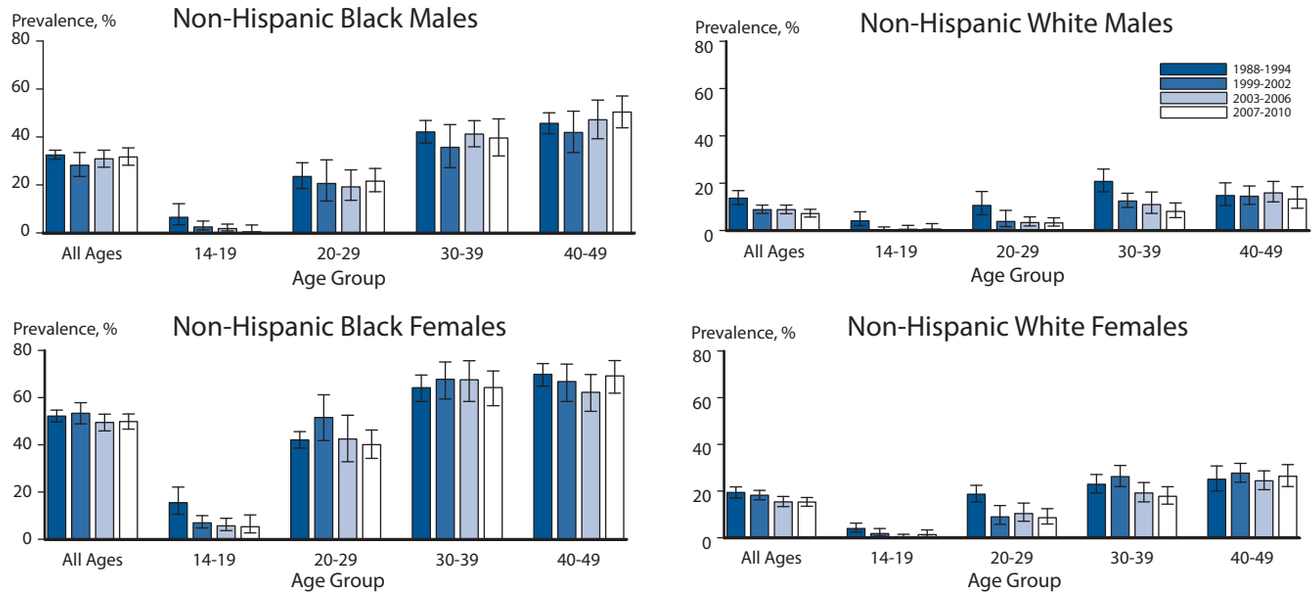
* MSM = men who have sex with men; MSW = men who have sex with women only.
NOTE: In 2013, six jurisdictions (Birmingham, Chicago, Denver, Hartford/New Haven, New Orleans, and Richmond) contributed data from January through June 2013 and the remaining jurisdictions (Baltimore, Los Angeles, New York City, Philadelphia, San Francisco and Seattle) contributed data for all of 2013.

Figure 53. Genital Herpes — Initial Visits to Physicians' Offices, United States, 1966–2013



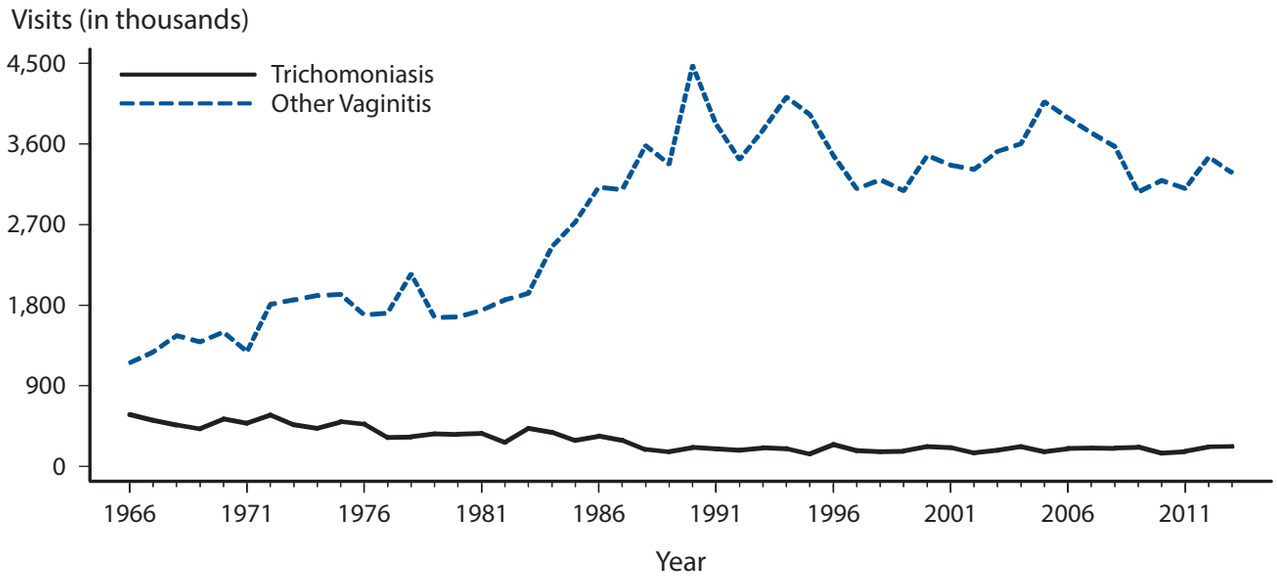
NOTE: The relative standard errors for genital herpes estimates of more than 100,000 range from 19% to 23%. See Other Surveillance Data Sources in the Appendix and Table 45.
SOURCE: IMS Health, Integrated Promotional Services™. IMS Health Report, 1966–2013.

Figure 54. Herpes Simplex Virus Type 2 — Seroprevalence Among Non-Hispanic Whites and Non-Hispanic Blacks by Sex and Age Group, National Health and Nutrition Examination Surveys, 1988–1994, 1999–2002, 2003–2006, and 2007–2010



NOTE: Error bars indicate 95% confidence interval.
SOURCE: Fanfair RN, Zaidi A, Taylor LD, Xu F, Gottlieb S, Markowitz L. Trends in seroprevalence of herpes simplex virus type 2 among non-Hispanic blacks and non-Hispanic whites aged 14 to 49 years — United States, 1988 to 2010. Sex Transm Dis. 2013;40(11):860–4.

Figure 55. Trichomoniasis and Other Vaginal Infections Among Women — Initial Visits to Physicians' Offices, United States, 1966–2013



NOTE: The relative standard errors for trichomoniasis estimates range from 16% to 21% and for other vaginitis estimates range from 8% to 13%. See Other Surveillance Data Sources in the Appendix and Table 45.
SOURCE: IMS Health, Integrated Promotional Services™, IMS Health Report, 1966–2013.

SPECIAL FOCUS PROFILES

SPECIAL FOCUS PROFILES

Special Focus Profiles

The Special Focus Profiles highlight trends and distribution of STDs in populations of particular interest to STD and HIV prevention programs in state and local health departments: women and infants, adolescents and young adults, racial and ethnic minority groups, and gay and bisexual men and other men who have sex with men (MSM). These populations are most vulnerable to STDs and their consequences and often lack adequate access to healthcare services. In 2013, in the U.S., age was strongly associated with having health insurance. Older adults (65 years and older) and children (19 years and under) were most likely to have health insurance. Working adults (19 years to 64 years) had higher uninsured rates. The rates of non-insured for whites, blacks, and Hispanics were: 9.8%, 15.9%, and 24.3% respectively.[1] The Patient Protection and Affordable Care Act (ACA) aims to increase access to sexual and reproductive health services through reforms based on the U.S. Preventive Services Task Force recommendations that include: chlamydia and gonorrhea screening (for sexually active women under 25 and all higher risk women), HIV screening (everyone 15–65 years old, pregnant, and higher risk), STD counseling (for all sexually active adolescents and higher-risk adults), and syphilis screening (for pregnant women and adults at higher risk).[2] However, although health insurance coverage has been expanded for most groups, including both men and women, and for most race and ethnic groups, evidence suggests that disparities in health insurance coverage and access to STD services remain.[3-4]

[1] Smith, J and Medalia, Carla. U.S. Census Bureau, Current Population Reports, P60-250, Health Insurance Coverage in the United States: 2013, U.S. Government Printing Office, Washington, DC, 2014.

[2] Oglesby, WH. Perceptions of and preferences for federally-funded family planning clinics. Reproductive Health 2014; 11(50)1-9. http://www.reproductive-health-journal.com/content/11/1/50

[3] O'Hara, B and Brault, MW. The disparate impact of the ACA-dependent expansion across population subgroups. Health Serv Res. 2013 Oct;48(5):1581-92.

[4] Drainoni, M, Sullivan, M, Sequeira, S, Bacic, J, and Hsu, K. Health reform and shifts in funding for sexually transmitted infection services. Sexually Transmitted Diseases 41(7), July 2014, p 455–460.

STDs in Women and Infants

Public Health Impact

Women and infants bear significant long-term consequences of STDs. In addition to biological and social factors such as poverty and access to quality STD services, a woman's inability to negotiate safer sexual practices, such as condom use, can significantly affect her sexual health and subsequently the health of her unborn baby.[1,2] A woman's relationship status with her male partner, in particular, has been identified as an important predictor of her sexual health.[3] For example, a perceived shortage of available men in a community can cause women to be more accepting of their partners' concurrent sexual relationships, and partner concurrency is a factor associated with increased risk for STDs.[4] A number of studies have found significant associations between condom use and socio-demographic characteristics, including age, income, education, and acculturation.[5] Because it may be the behavior of her male partner, rather than the woman's own behavior that increases a woman's risk for STDs, even a woman who has only one partner may be obliged to practice safer sex such as using condoms.[6]

Women infected with *C. trachomatis* or *N. gonorrhoeae* can develop pelvic inflammatory disease (PID), which, in turn, can lead to reproductive morbidity such as ectopic pregnancy and tubal factor infertility. An estimated 10%–20% of women with chlamydia or gonorrhea may develop PID if they do not receive adequate treatment.[7,8] Among women with PID, tubal scarring can cause infertility in 8% of women, ectopic pregnancy in 9%, and chronic pelvic pain in 18%.[9]

About 80%–90% of chlamydial infections[10] and up to 80% of gonococcal infections[11] in women are asymptomatic. These infections are detected primarily through screening. Because the symptoms associated with PID can be nonspecific, up to 85% of women with PID delay seeking medical care, thereby increasing the risk for infertility and ectopic pregnancy.[12] Data from two randomized controlled trials of chlamydia screening suggest that such screening programs reduce PID incidence. [13,14]

HPV infections are highly prevalent in the United States, especially among young sexually active women. Although most HPV infections in women resolve within 2 years, they are a major concern because persistent infection with specific types of the virus are causally related to cervical cancer; these types also cause Papanicolaou (Pap) smear abnormalities. Other types cause genital warts, low-grade Pap smear abnormalities, and, rarely, recurrent respiratory papillomatosis in infants born to infected mothers.[15]

Direct Impact on Pregnancy

Chlamydia and gonorrhea can result in adverse outcomes of pregnancy, including neonatal ophthalmia and, in the case of chlamydia, neonatal pneumonia. Although topical prophylaxis of infants at delivery is effective for prevention of gonococcal ophthalmia neonatorum, prevention of neonatal pneumonia requires prenatal detection and treatment.

Genital infections with HSV are extremely common, can cause painful outbreaks, and can have serious consequences for pregnant women and their infants.[16]

When a woman has a syphilis infection during pregnancy, she can transmit the infection to the fetus in utero. Transmission can result in fetal death or an infant born with physical and mental developmental disabilities. Most cases of congenital syphilis are easily preventable if women are screened for syphilis and treated early during prenatal care.[17]

Observations

Chlamydia—United States

Chlamydial infections in women are usually asymptomatic and screening is necessary to identify most infections.[18] Routine chlamydia screening of sexually-active young women has been recommended by CDC since 1993.[19] Rates of reported cases among women increased steadily from the early 1990s until 2011, which likely reflect expanded screening coverage and use of more sensitive diagnostic tests (Figure 1). During 2011–2012, reported case rates among women decreased slightly (0.7%) from 643.4 cases to 638.7 cases per 100,000 females. During 2012–2013, rates decreased 2.4% to 623.1 cases per 100,000 females (Table 4).

Chlamydia rates are highest among young women, the population targeted for screening (Figure 5, Table 10). During 2012–2013, rates of reported chlamydia decreased 8.7% among females aged 15–19 years and decreased 0.3% among females aged 20–24 years. Regionally, chlamydia case rates are highest among women in the South, with a rate of 690.5 per 100,000 females in 2013 (Table 4). During 2012–2013, rates of reported chlamydia among women decreased in all regions (Table 4). Rates of reported chlamydia exceeded gonorrhea rates among women in all regions (Figures A and B, Tables 4 and 15).

Gonorrhea—United States

Like chlamydia, gonorrhea is often asymptomatic in women. Thus, gonorrhea screening is an important strategy for the identification of gonorrhea among women. Large-scale screening programs for gonorrhea in women began in the 1970s. After an initial increase in cases detected through screening, rates of reported gonorrhea cases for both women and men declined steadily throughout the 1980s and early 1990s and then declined more gradually in the late 1990s and the 2000s (Figure 11). After reaching a 40-year low in 2009 (104.5 cases per 100,000 females), the gonorrhea rate for women increased slightly each year during 2009–2011, and plateaued at 107.9 cases per 100,000 females in 2012. In 2013, the gonorrhea rate among women decreased to 102.4 cases per 100,000 females (Figure 12, Table 15).

The gonorrhea rate among women was slightly higher than the rate among men during 2001–2012, but the rate among men surpassed the rate among women in 2013 (Figure 12, Tables 15 and 16). Gonorrhea rates are highest among young women (Figure 16, Table 21). Among young women and adolescents, rates were highest in 2013 among 19-year old females (685.6 per 100,000 females) (Table 23).

Positivity in Selected Populations

During the mid-1990s to 2011, chlamydia and gonorrhea positivity among young women screened in prenatal care clinics participating in infertility prevention activities were reported to CDC to monitor chlamydia and gonorrhea prevalence in women. As the national infertility prevention program expanded, these data became difficult to interpret as trends were influenced by changes in screening coverage, screening criteria, and test technologies, as well as demographic changes in patients attending clinics reporting data to CDC. These issues could not be addressed with the limited variables that were collected at the national level. Positivity data continue to be useful locally to inform clinic-based screening recommendations and to identify at-risk populations in need of prevention interventions, but are no longer collected to monitor national trends in chlamydia and gonorrhea.

Congenital Syphilis

Trends in congenital syphilis usually follow trends in primary and secondary syphilis among women, with a lag of 1–2 years (Figure 45). The rate of P&S syphilis among women declined 95.4% (from 17.3 to 0.8 cases per 100,000 females) during 1990–2004 (Figure 32). The rate of congenital syphilis declined by 92.4% (from a peak of 107.6 cases to 8.2 cases per 100,000 live births) during 1991–2005 (Table 1). Rates of both female P&S and congenital syphilis increased during 2005–2008. During 2008–2012, rates of both female P&S and congenital syphilis declined (from 1.5 to 0.9 cases per 100,000 population and from 10.5 to 8.4 cases per 100,000 live births, respectively). Rates of female P&S remained unchanged (0.9 cases) but rates of congenital syphilis increased (to 8.7 cases) during 2013 (Tables 28 and 42).

The highest rates of P&S syphilis among women and congenital syphilis were observed in the South (Figures C and D, Table 42). However, the West was the only region with increased rates of congenital syphilis in 2013, and rates of P&S syphilis among women in the West have increased each year during 2010–2013.

Although most cases of congenital syphilis occur among infants whose mothers have had some prenatal care, late or limited prenatal care has been associated with congenital syphilis. Failure of health care providers to adhere to maternal syphilis screening recommendations also contributes to the occurrence of congenital syphilis.[20]

Pelvic Inflammatory Disease

Accurate estimates of PID and tubal factor infertility resulting from chlamydial and gonococcal infections are difficult to obtain, in part because definitive diagnoses of these conditions can be complex. Published data suggest overall declining rates of women diagnosed with PID in the United States in both hospital and ambulatory settings.[21-23] The National Disease and Therapeutic Index (NDTI) provides estimates of initial visits to office-based, private physicians for PID. NDTI estimated that from 2003–2012 the number of visits to such physicians for PID among women aged 15–44 decreased (39.8%) from 123,000 to 88,000 visits (Figure F). Several suggestions have been put forth as factors that could influence PID rates, including increases in chlamydia and gonorrhea screening coverage, more sensitive diagnostic technologies, and availability of single-dose therapies that increase adherence to treatment.[22-24] While PID is declining nationally, it still causes an enormous amount of unnecessary and expensive morbidity.

Differences in PID diagnoses or treatment by race/ethnicity have been observed in earlier research.[21] Using data from the National Survey of Family Growth, the overall proportion of sexually experienced women who have been treated for PID declined from 8.6% in 1995 to 5.7% in 2002 and leveled off to 5.0% in 2006–2010 (Figure E).[25] While this pattern was observed across all racial/ethnic groups, the proportion who had received PID treatment was higher among non-Hispanic blacks than those among Hispanics or non-Hispanic whites. These disparities are consistent

with the marked racial disparities observed for chlamydia and gonorrhea. However, because of the subjective methods by which PID is diagnosed, racial disparity data should be interpreted with caution.

Ectopic Pregnancy

Ectopic pregnancy (EP) is a potentially life-threatening adverse pregnancy outcome that requires prompt evaluation and treatment, and an important cause of pregnancy related mortality. Past studies have found that it affects 1–2% of all pregnancies.[26-27] Fallopian tube pathology is the most common etiology of EP.[28] Tubal damage can result from tubal surgery, previous EP, untreated STDs and PID, in utero diethylstilbestrol exposure, and other conditions. [29–33]

In the past, the National Hospital Discharge Survey, which collects information on discharged hospital inpatients in the United States, was used to estimate trends in the rate of EP. However, medical and surgical treatment of EP is currently provided in both inpatient and outpatient settings, making the task of tracking reliable estimates at the national level difficult.[34] More recent attempts to estimate EP incidence use data from surveys or administrative databases of public and private insurance and managed care systems.[35] Data from a large administrative claims database suggests the rate of EP increases with age among pregnancies in girls and women aged 15–44 years during the period of 2002 to 2012 (Figure G). In 2012, EP rates were highest among women aged 35–44 years. During 2002–2012, the EP rate increased slightly in certain age groups: the EP rate increased 5.7% among those aged 20–24, 11.3% among those aged 25–29 years, 4.3% among those aged 35–39 years, and 6.4% among those aged 40–44 years. Rates remained the same for women of all other age groups.

1 Pulerwitz J, Amaro H, De Jong W, Gortmaker SL, Rudd R. Relationship power, condom use and HIV risk among women in the USA. AIDS Care. 2002;14(6):789-800.

2 McCree DH, Rompalo A. Biological and behavioral risk factors associated with STDs/HIV in women: implications for behavioral interventions, In: Aral SO, Douglas JM,Lipshutz JA (editors). Behavioral Interventions for Prevention and Control of Sexually Transmitted Diseases (p. 310-324). New York, NY: Springer.

3 El-Bassel N, Gilbert L, Krishnan S, Schilling R, Gaeta T, Purpura S, et al. Partner violence and sexual HIV-Risk behaviors among women in an inner-city emergency department. Violence Vict. 1998;13(4):377-393.

4 Hogben M, Leichliter JS. Social determinants and sexually transmitted disease disparities. Sex Transm Dis. 35(12) S13 S18.

5 Manderson L, Chang T, Tye LC, Rajanayagam K. Condom use in heterosexual sex: a review of research, 1985–1994. In: Catalan J, Sherr L, Hedge B (editors). *The impact of AIDS: psychological and social aspects of HIV Infection.* p. 1-26. The Netherlands: Harwood Academic Publishers.

6 O'Leary A. A woman's risk for HIV from a primary partner: balancing risk and intimacy. Annu Rev Sex Res. 2000; 11:191 234.

7 Paavonen J, Westrom L, Eschenbach. Pelvic Inflammatory Disease. In: Holmes KK, Sparling PF, Stamm WE, Piot P, Wasserheit JN, Corey L, Cohen, MS, Watts DH, (editors). Sex Transm Dis. 4th ed. New York: McGraw-Hill; 2008:1017-1050.

8 Hook EW III, Handsfield HH. Gonococcal infections in the adult. In: Holmes KK, Sparling PF, Stamm WE, Piot P, Wasserheit JN, Corey L, et al, (editors). Sex Transm Dis. 4th ed. New York: McGraw-Hill; 2008:627-45.

9 Westrom L, Joesoef R, Reynolds G, Hagdu A, Thompson SE. Pelvic inflammatory disease and fertility: a cohort study of 1,844 women with laparoscopically verified disease and 657 control women with normal laparoscopy. Sex Transm Dis. 1992;9:185-92.

10 Stamm WE. *Chlamydia trachomatis* infections in the adult. In: Holmes KK, Sparling PF, Stamm WE, Piot P, Wasserheit JN, Corey L, et al, (editors). Sex Transm Dis. 4th ed. New York: McGraw-Hill; 2008:575-93.

11 Marrazzo JM, Handsfield HH, Sparling PF. *Neisseria gonorrhoeae* In: Mandell GL, Bennett JE, Dolin R (editors). Principles and practice of Infectious Diseases, 7th ed. Philadelphia, PA: Churchill Livingstone; 2010: 2753-2770.

12 Hillis SD, Joesoef R, Marchbanks PA, Wasserheit JN, Cates W Jr, Westrom L. Delayed care of pelvic inflammatory disease as a risk factor for impaired fertility. Am J Obstet Gynecol. 1993;168:1503-9.

13 Scholes D, Stergachis A, Heidrich FE, Andrilla H, Holmes KK, Stamm WE. Prevention of pelvic inflammatory disease by screening for cervical chlamydial infection. N Engl J Med. 1996;34(21):1362-6.

14 Oakeschott, P, Kerry S, Aghaizu A, Atherton H, Hay S, et al. Randomised controlled trial of screening for *Chlamydia trachomatis* to prevent pelvic inflammatory disease: the POPI (prevention of pelvic infection) trial. BMJ. 2010;340:c1642.

15 Centers for Disease Control and Prevention. Prevention of genital HPV infection and sequelae: report of an external consultants' meeting. Atlanta: U.S. Department of Health and Human Services; 1999.

16 Kimberlin DW. Herpes simplex virus infections of the newborn. Semin Perinatol. 2007;31(1):19-25.

17 Centers for Disease Control and Prevention. Guidelines for prevention and control of congenital syphilis. MMWR Morb Mortal Wkly Rep. 1988;37(No. SS-1).

18 Farley TA, Cohen DA, Elkins W. Asymptomatic sexually transmitted diseases: the case for screening. preventive medicine. 2003;36:502-9.

[19] Centers for Disease Control and Prevention. Recommendations for the prevention and management of *Chlamydia trachomatis* infections. 1993 Aug 6;42(RR-12):1-39.

[20] Centers for Disease Control and Prevention. Congenital syphilis — United States, 2003–2008. MMWR Morb Mortal Wkly Rep. 2010;59:413-17.

[21] Sutton MY, Sternberg M, Zaidi A, St. Louis ME, Markowitz LE. Trends in pelvic inflammatory disease hospital discharges and ambulatory visits, United States, 1985–2001. Sex Transm Dis. 2005;32(12)778-84.

[22] Bohm MK, Newman L, Satterwhite CL, et al. Pelvic inflammatory disease among privately insured women, United States, 2001–2005. Sex Transm Dis 2010;37:131–136.

[23] Whiteman MK, Kuklina E, Jamieson DJ, et al. Inpatient hospitalization for gynecologic disorders in the United States. Am J Obstet Gynecol 2010;202:541 e1–6.

[24] Owusu-Edusei, Kwame Jr. Bohm, Michele K. Chesson, Harrell W. Kent, Charlotte K. Chlamydia screening and pelvic inflammatory disease: Insights from exploratory time-series analyses. Am J Prev Med. 2010;38(6):652-7.

[25] Leichliter JS. Chandra A. Aral SO. Correlates of self-reported pelvic inflammatory disease treatment in sexually experienced reproductive-aged women in the United States, 1995 and 2006-2010. Sex Transm Dis. 2013;40(5):413-8.

[26] Ectopic pregnancy–United States, 1990–1992. MMWR Morb Mortal Wkly Rep 1995;44:46–8.

[27] Van Den Eeden SK, Shan J, Bruce C, Glasser M. Ectopic pregnancy rate and treatment utilization in a large managed care organization. Obstet Gynecol 2005;105:1052–7.

[28] Medical management of ectopic pregnancy. ACOG Practice Bulletin No. 94. American College of Obstetricians and Gynecologists.Obstet Gynecol 2008;111:1479–85.

[29] Ankum WM, Mol BW, Van der Veen F, Bossuyt PM. Risk factors for ectopic pregnancy: a meta-analysis. Fertil Steril 1996;65:1093–9.

[30] Barnhart KT, Sammel MD, Gracia CR, Chittams J, Hummel AC, Shaunik A. Risk factors for ectopic pregnancy in women with symptomatic first-trimester pregnancies. Fertil Steril 2006;86:36–43.

[31] Marchbanks PA, Annegers JF, Coulam CB, Strathy JH, Kurland LT. Risk factors for ectopic pregnancy. A population-based study. JAMA 1988;259:1823–7.

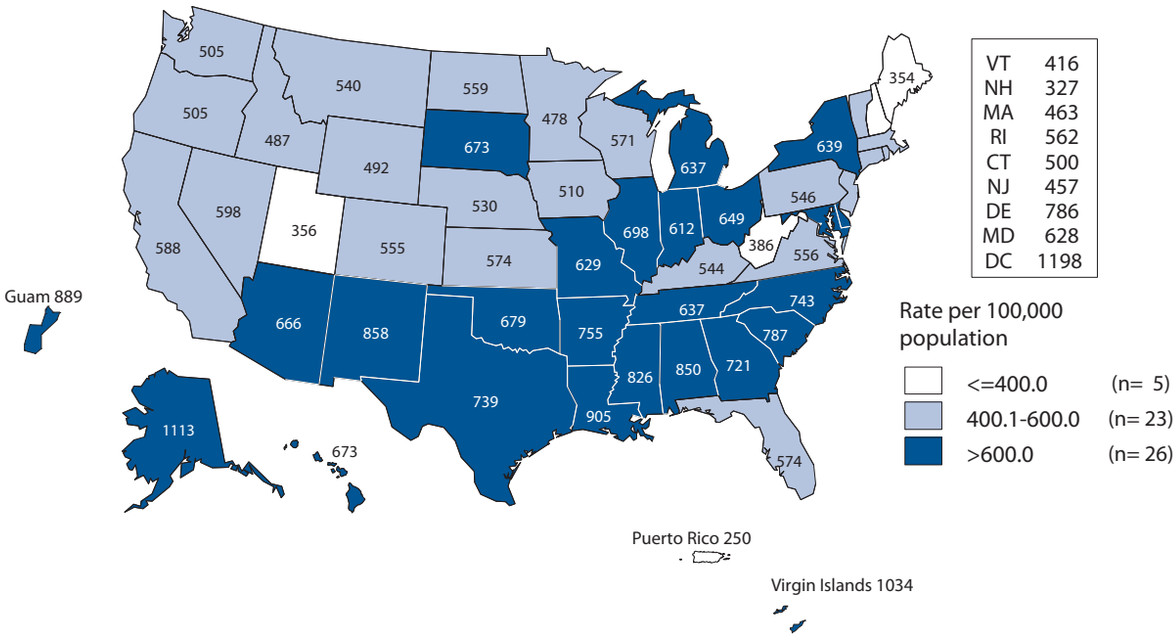
[32] Centers for Disease Control and Prevention. DES update home. Available at http://www.cdc.gov/DES/. Retrieved August 5, 2014.

[33] Clayton HB, Schieve LA, Peterson HB, Jamieson DJ, Reynolds MA, Wright VC. Ectopic pregnancy risk with assisted reproductive technology procedures. Obstet Gynecol 2006;107: 595–604.

[34] Zane SB, Kieke BA Jr, Kendrick JS, Bruce C. Surveillance in a time of changing health care practices: estimating ectopic pregnancy incidence in the United States. Matern Child Health J 2002;6:227–36..

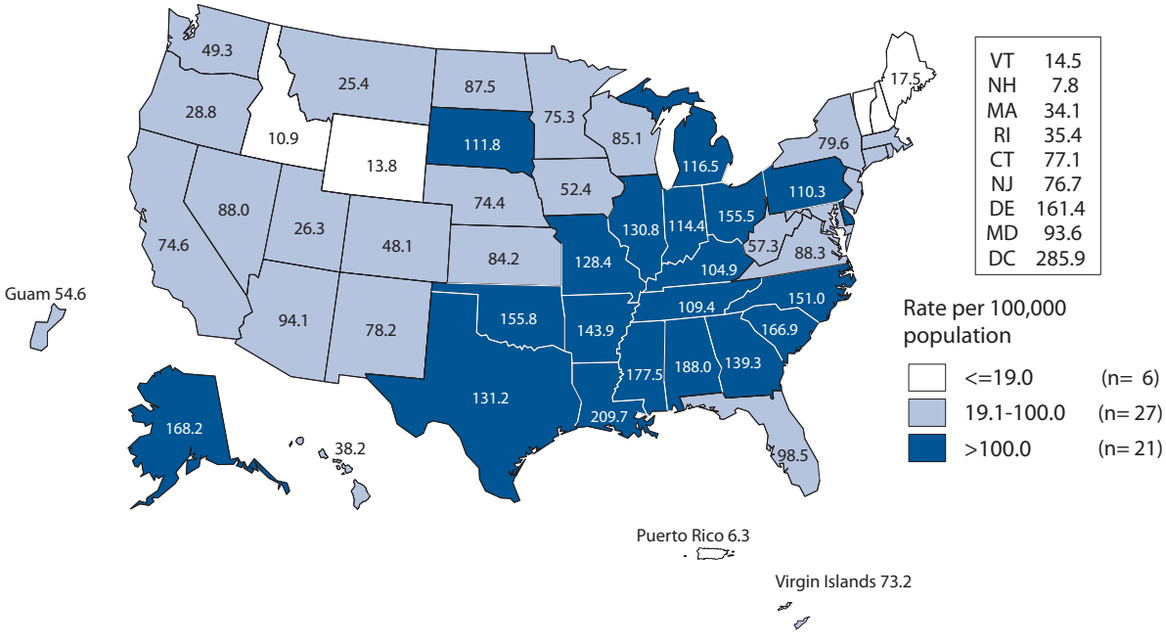
[35] Hoover KW, Tao G, Kent CK. Trends in the diagnosis and treatment of ectopic pregnancy in the United States. Obstet Gynecol. 2010;3(115):495-502.

Figure A. Chlamydia — Rates of Reported Cases Among Women by State, United States and Outlying Areas, 2013



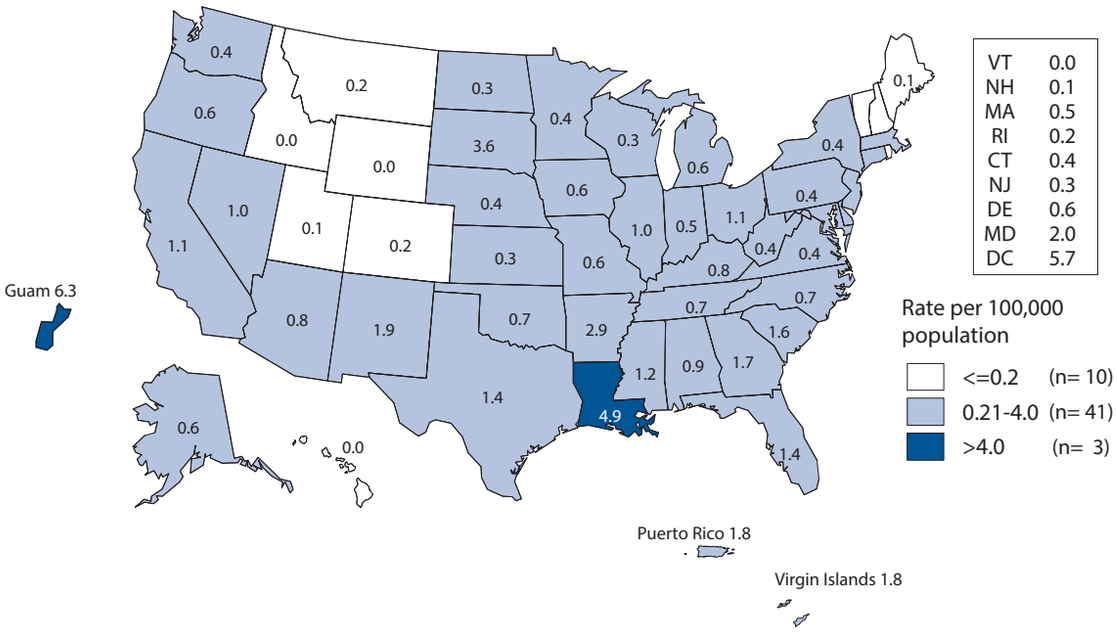
NOTE: The total rate of reported cases of chlamydia among women in the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 618.9 per100,000 female population.

Figure B. Gonorrhea — Rates of Reported Cases Among Women by State, United States and Outlying Areas, 2013



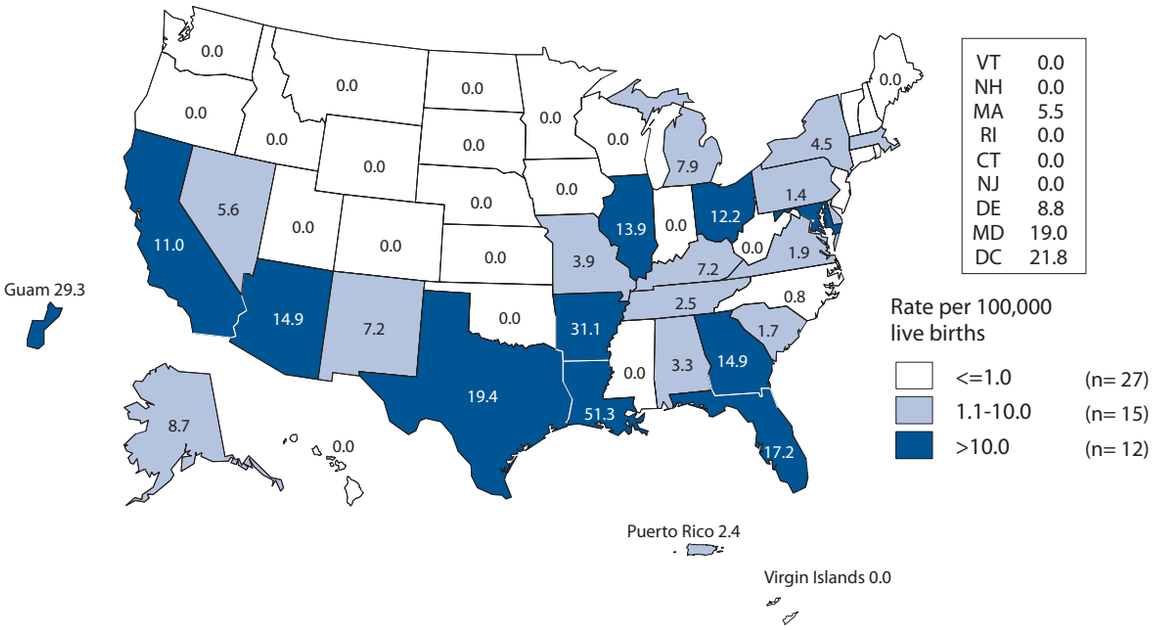
NOTE: The total rate of reported cases of gonorrhea among women in the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 101.2 per 100,000 female population.

Figure C. Primary and Secondary Syphilis — Rates of Reported Cases Among Women by State, United States and Outlying Areas, 2013



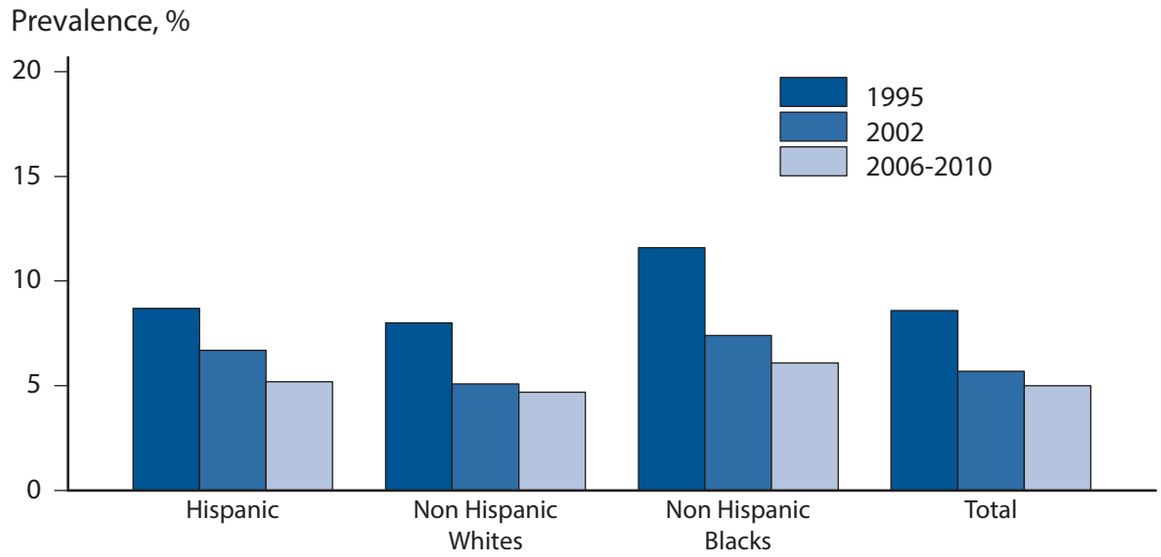
NOTE: The total rate of primary and secondary syphilis among women in the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 1.0 per 100,000 females.

Figure D. Congenital Syphilis — Rates of Reported Cases Among Infants by Year of Birth and State, United States and Outlying Areas, 2013



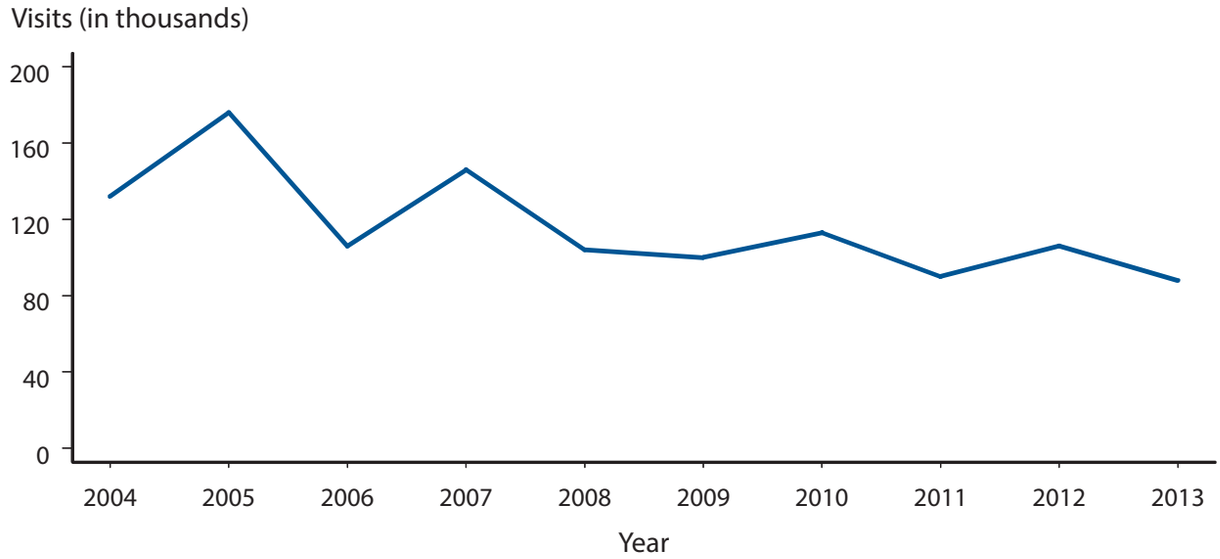
NOTE: The total rate of congenital syphilis for infants by year of birth for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 8.6 per 100,000 live births.

Figure E. Pelvic Inflammatory Disease — Trends in Lifetime Prevalence of Treatment Among Sexually Experienced Women Aged 15-44 Years by Race/Ethnicity, National Survey of Family Growth, 1995, 2002, 2006–2010



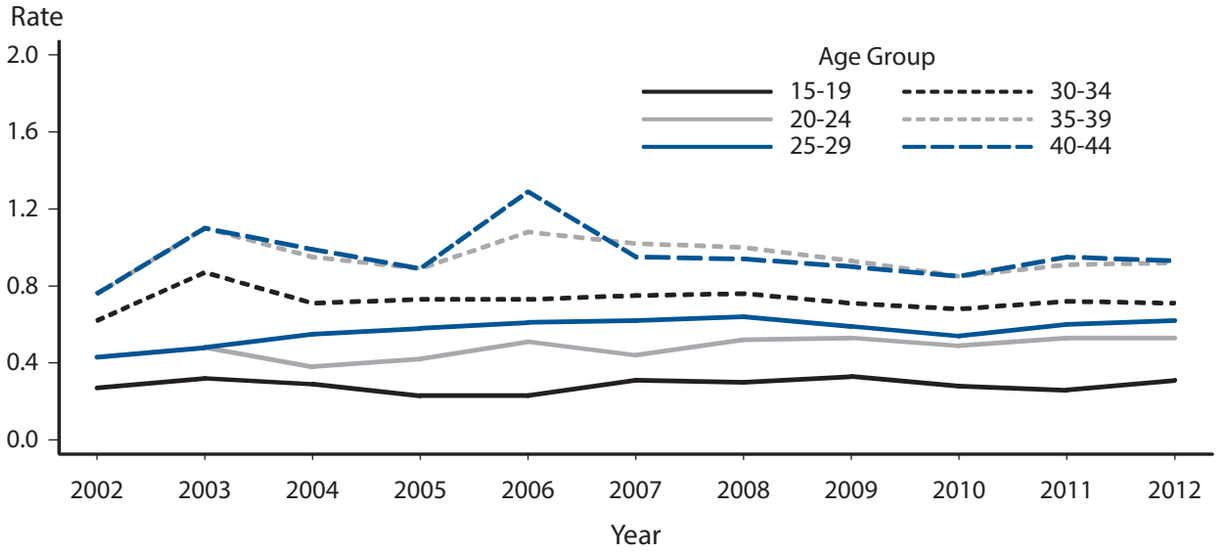
SOURCE: Leichliter, Jami, Chandra Anjani, Aral SO**.** Correlates of Self-Reported Pelvic Inflammatory Disease Treatment in Sexually Experienced Reproductive-Aged Women in the United States, 1995, 2002, 2006–2010. Sex Transm Dis. 2013;40(5):413-418.

Figure F. Pelvic Inflammatory Disease — Initial Visits to Physicians' Offices Among Women Aged 15–44 Years, United States, 2004–2013



NOTE: The relative standard errors for these estimates are 16%–23%. See Other Data Sources in the Appendix and Table 45.
SOURCE: IMS Health, Integrated Promotional Services™. IMS Health Report, 1966 – 2013.

Figure G. Ectopic Pregnancy — Rates Among Commercially Insured Pregnant Women Aged 15-44 years by Age, 2002-2012



SOURCE: MarketScan Commercial Claims and Encounters Database, Truven Health Analytics, Ann Arbor, MI, 2002-2012.

STDs in Adolescents and Young Adults

Public Health Impact

Prevalence estimates suggest that young people aged 15–24 years acquire half of all new STDs[1] and that 1 in 4 sexually active adolescent females have an STD, such as chlamydia or human papillomavirus (HPV).[2] Compared with older adults, sexually active adolescents aged 15–19 years and young adults aged 20–24 years are at higher risk of acquiring STDs for a combination of behavioral, biological, and cultural reasons. For some STDs, such as chlamydia, adolescent females may have increased susceptibility to infection because of increased cervical ectopy. The higher prevalence of STDs among adolescents also may reflect multiple barriers to accessing quality STD prevention services, including ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality. Traditionally, intervention efforts have targeted individual-level factors associated with STD risk which do not address higher-level factors (e.g., peer norms and media influences) that may also influence behaviors.[3] Interventions for at-risk adolescents and young adults that address underlying aspects of the social and cultural conditions that affect sexual risk-taking behaviors are needed, as are strategies designed to improve the underlying social conditions themselves.[4,5]

Observations

Chlamydia

In 2013, 949,270 cases of chlamydial infection were reported among persons aged 15–24 years of age, representing 68% of all reported chlamydia cases. Among those aged 15–19 years, the rate of reported cases of chlamydia increased 6.4% during 2009–2011, decreased 4.4% during 2011–2012, and decreased 8.7% during 2012–2013 (Table 10). Among those aged 20–24 years, the rate increased 16.1% during 2009–2011 and remained stable during 2011–2013 (Table 10).

Among women aged 15–24 years of age, the population targeted for chlamydia screening, the overall rate of reported cases of chlamydia was 3,340.8 per 100,000 females. Rates varied by state, with highest reported case rates in the South (Figure H).

15- to 19-Year Old Women—In 2013, the chlamydia case rate among women aged 15–19 years was 3,043.3 cases per 100,000 females, a 8.7% decrease from the 2012 rate of 3,331.7 cases per 100,000 females (Table 10). Decreases in rates of reported cases were largest among 15-, 16-, and 17-year old females (Table 12).

20- to 24-Year Old Women—In 2013, women aged 20–24 years had the highest rate of chlamydia (3,621.1 cases per 100,000 females) compared with any other age and sex group (Figure 5). The overall chlamydia case rate among women in this age group remained stable during 2012–2013 (Table 10); however, rates of reported chlamydia increased among 23- and 24- year old females (Table 12).

15- to 19-Year Old Men—The chlamydia case rate for men aged 15–19 years decreased 9.0% from 785.8 cases per 100,000 males in 2011 to 715.2 cases per 100,000 males in 2013 (Table 10).

20- to 24-Year Old Men—In 2013, as in previous years, men aged 20–24 years had the highest rate of chlamydia among men (1,325.6 cases per 100,000 males). The chlamydia rate for men in this age group remained stable during 2012–2013 (Table 10).

Gonorrhea

During 2012–2013, the rate of reported gonorrhea cases decreased 11.6% for persons aged 15–19 years and decreased 1.9% for persons aged 20–24 years. Among women aged 15–24 years, the overall rate was 501.6 per 100,000 females. Rates varied by state, with highest reported case rates in the South (Figure I).

15- to 19-Year Old Women—In 2013, women aged 15–19 years had the second highest rate of gonorrhea (459.2 cases per 100,000 females) compared with other females (Figure 16, Table 21). During 2012–2013, the gonorrhea rate for women in this age group decreased 12.9%.

20- to 24-Year Old Women—In 2013, women aged 20–24 years had the highest rate of gonorrhea (541.6 cases per 100,000 females) compared with any other age or sex group (Figure 16, Table 21). During 2012–2013, the gonorrhea rate for women in this age group decreased 4.7%.

15- to 19-Year Old Men—In 2013, the gonorrhea rate among men aged 15–19 years was 220.9 cases per 100,000 males (Figure 16, Table 21). During 2012–2013, the gonorrhea rate for men in this age group decreased 8.9%.

20- to 24-Year Old Men—In 2013, as in previous years, men aged 20–24 years had the highest rate of gonorrhea (459.4 cases per 100,000 males) compared with other males

(Figure 16, Table 21). During 2012–2013, the gonorrhea rate for men in this age group increased 1.3%.

Primary and Secondary Syphilis

15- to 19-Year Old Women—The rate of P&S syphilis among women aged 15–19 years increased annually during 2004–2009 (from 1.5 cases to 3.3 cases per 100,000 females), but decreased every year since 2010 to 1.9 cases in 2013 (Figures 36 and 37).

20- to 24-Year Old Women—The rate among women aged 20–24 years increased annually during 2006–2009 (from 2.9 to 5.5 cases per 100,000 females). The rate decreased from 5.5 to 3.7 cases during 2009–2011, then increased slightly (from 3.7 to 3.9 cases) during 2011–2013 (Figures 36 and 37, Table 35).

15- to 19-Year Old Men—The rate among men aged 15–19 years increased annually during 2002–2009 (from 1.3 to 6.0 cases per 100,000 males). The rate decreased to 5.5 cases in 2010 and 2011, then increased to 5.8 cases (in 2012) and 6.4 cases (in 2013) (Figures 36 and 38, Table 35). In 2013, the rate among men aged 15–19 years was the highest reported since 1995.

20- to 24-Year Old Men—The rate among men aged 20–24 years increased annually during 2000–2013 (from 4.3 to 27.7 cases per 100,000 males) (Figures 36 and 38, Table 35). Men aged 20–24 years had the highest rate of P&S syphilis among men of any age group during 2008–2012, barely surpassed by men 25–29 years in 2013 (28.0 cases) (Figure 38, Table 35). In 2013, the rate among men aged 20–24 years was the highest reported since 1992.

Positivity in Selected Populations

During the mid-1990s to 2011, chlamydia and gonorrhea positivity among young women screened in clinics and juvenile correctional facilities participating in infertility prevention activities were reported to CDC to monitor chlamydia prevalence. As the national infertility prevention program expanded, these data became difficult to interpret as trends were influenced by changes in screening coverage, screening criteria, and test technologies, as well as demographic changes in patients attending clinics reporting data to CDC. Variables available at the national level limited the ability to address these issues. Positivity data continue to be useful locally to inform clinic-based screening recommendations and to identify at-risk populations in need of prevention interventions, but are no longer collected to monitor national trends in chlamydia and gonorrhea.

National Job Training Program

The National Job Training Program (NJTP) is an educational program for socioeconomically disadvantaged youth aged 16–24 years and is administered at more than 100 sites throughout the country. The NJTP screens participants for chlamydia and gonorrhea within two days of entry to the program. All of NJTP's chlamydia screening tests and the majority of gonorrhea screening tests are conducted by a single national contract laboratory*, which provides these data to CDC. 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.

Among women entering the program in 40 states, the District of Columbia, and Puerto Rico, the median state-specific chlamydia prevalence in 2013 was 11.7% (range: 4.1% to 19.0%) (Figure J). Among men entering the program in 47 states, the District of Columbia, and Puerto Rico, the median state-specific chlamydia prevalence was 7.4% (range: 1.8% to 14.6%) (Figure K).

Among women entering the program in 39 states and Puerto Rico, the median state-specific gonorrhea prevalence in 2013 was 2.1% (range: 0.0% to 5.6%) (Figure L). Among men entering the program in 36 states and Puerto Rico, the median state-specific gonorrhea prevalence was 0.7% (range: 0.0% to 2.6%) (Figure M).

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* Laboratory data are provided by the Center for Disease Detection, LLC San Antonio, Texas.

[1] Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Ocfemia MC, et al. Sexually transmitted infections among US women and men: prevalence and incidence estimates, 2008. Sex Transm Dis. 2013;40(3):187-93.

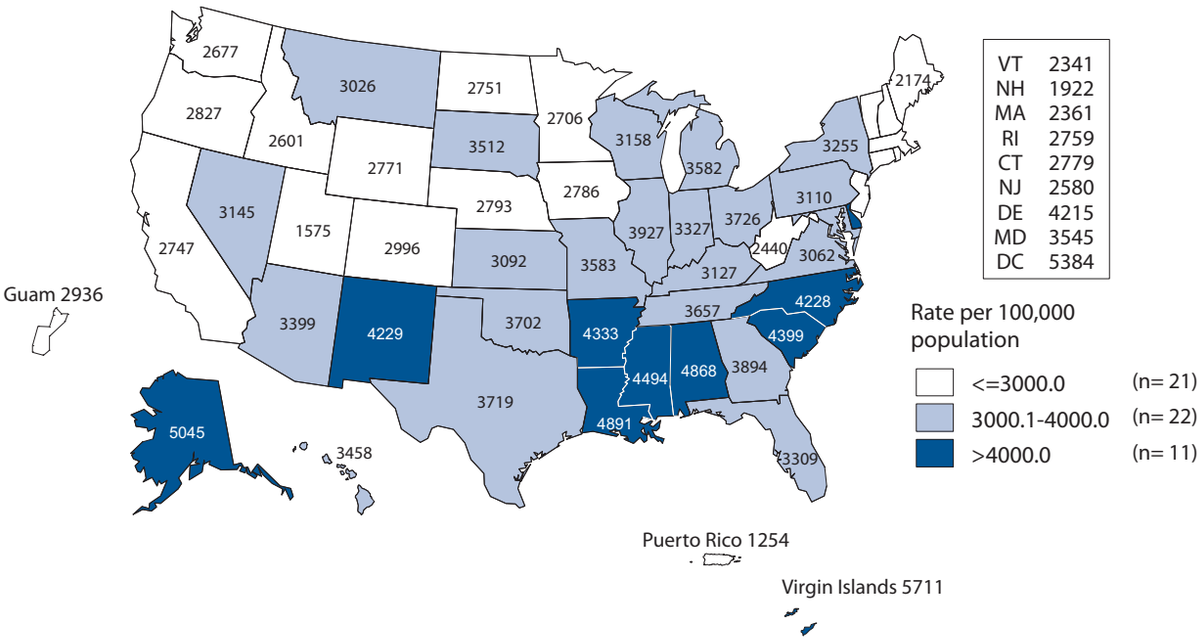
[2] Forhan SE, Gottlieb SL, Sternberg MR, Xu F, Datta SD, McQuillan GM, et al. Prevalence of sexually transmitted infections among female adolescents aged 14 to 19 in the United States. Pediatrics. 2009;124(6):1505-12 doi: 10.1542/peds.2009-0674. Epub 2009 Nov 23.

[3] DiClemente RJ, Salazar LF, Crosby RA. A review of STD/HIV preventive interventions for adolescents: sustaining effects using an ecological approach. J. Pediatr. Psychol. 2007;32 (8): 888-906.

[4] Sieving RE, Bernat DH, Resnick MD, Oliphant J, Pettingell S, Plowman S, et al. A clinic-based youth development program to reduce sexual risk behaviors among adolescent girls: prime time pilot study. Health Promot Pract. 2012;13(4):462-71.

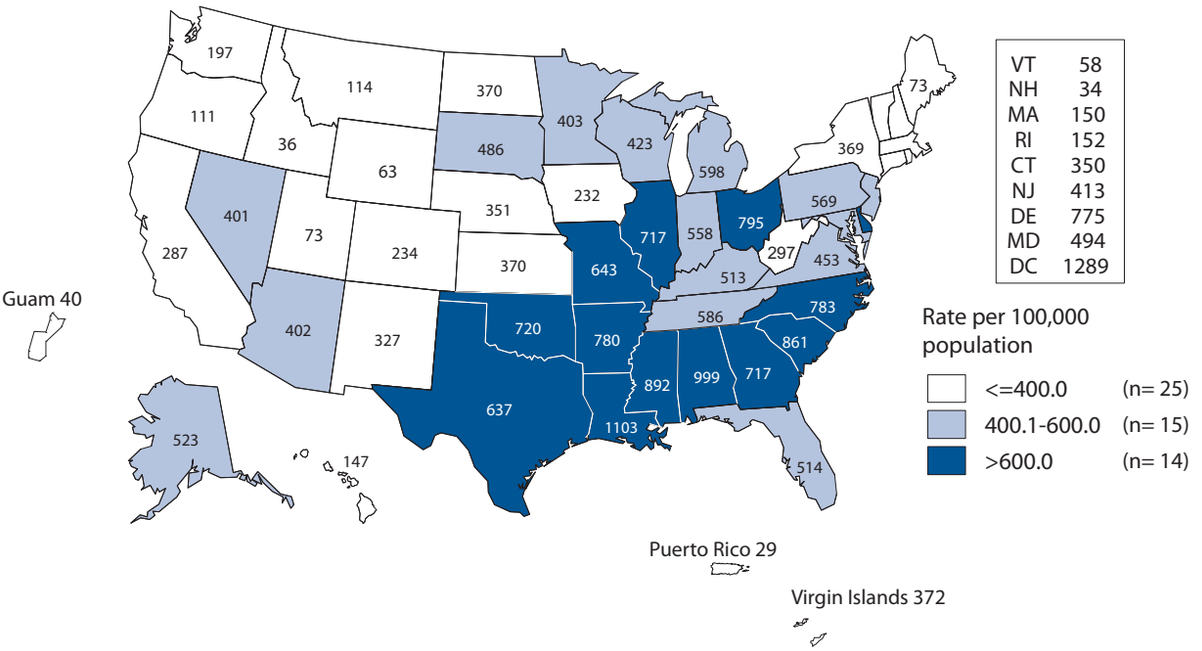
[5] Upchurch DM, Mason W, Kusunoki Y, Kriechbaum MJ. Social and behavioral determinants of self-reported STD among adolescents. Perspect Sex Reprod Health. 2004;36(6):276-287.

Figure H. Chlamydia — Rates of Reported Cases Among Women 15–24 Years of Age by State, United States and Outlying Areas, 2013



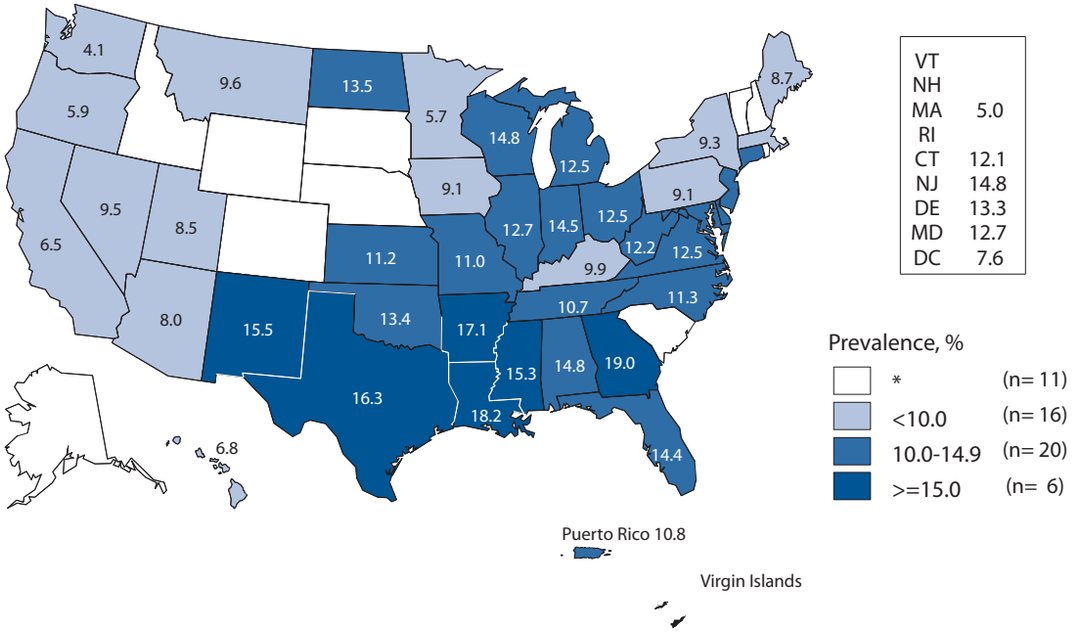
NOTE: Rates for Guam and the Virgin Islands were calculated by using the 2010 population estimates (see Population Denominators and Rate Calculations in the Appendix).

Figure I. Gonorrhea — Rates of Reported Cases Among Women 15–24 Years of Age by State, United States and Outlying Areas, 2013



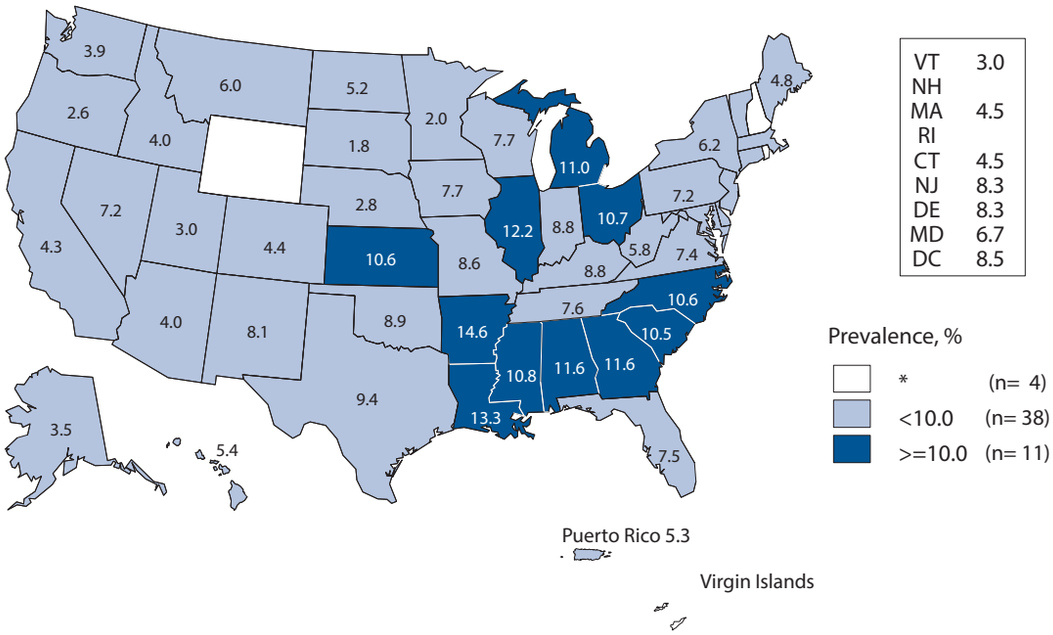
NOTE: Rates for Guam and the Virgin Islands were calculated by using the 2010 population estimates (see Population Denominators and Rate Calculations in the Appendix).

Figure J. Chlamydia — Prevalence Among Women Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Outlying Areas, 2013



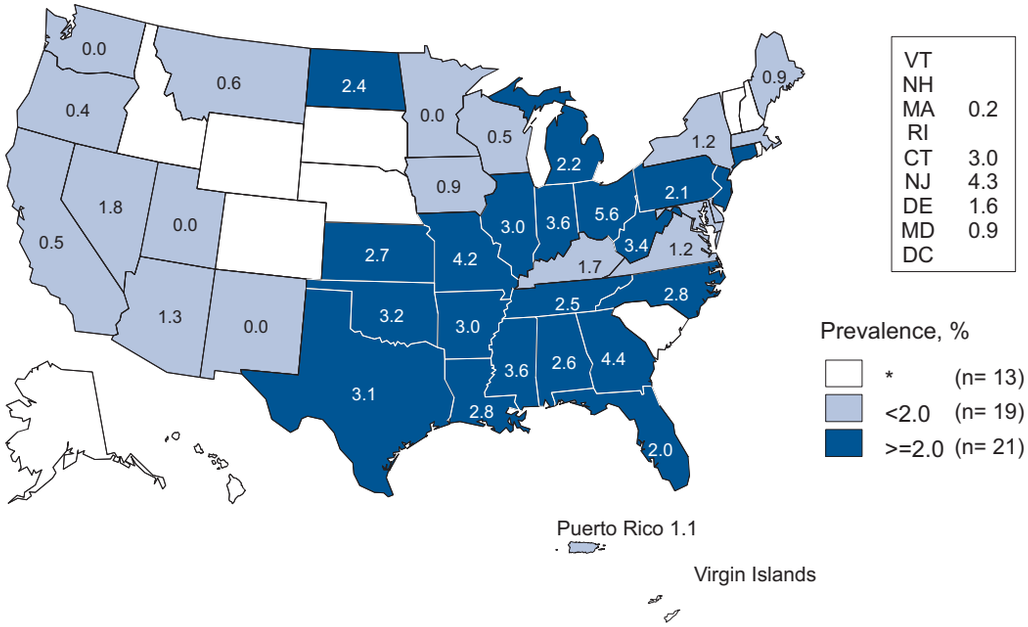
* Fewer than 100 women who resided in these states/areas and entered the National Job Training Program were screened for chlamydia in 2013.

Figure K. Chlamydia — Prevalence Among Men Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Outlying Areas, 2013



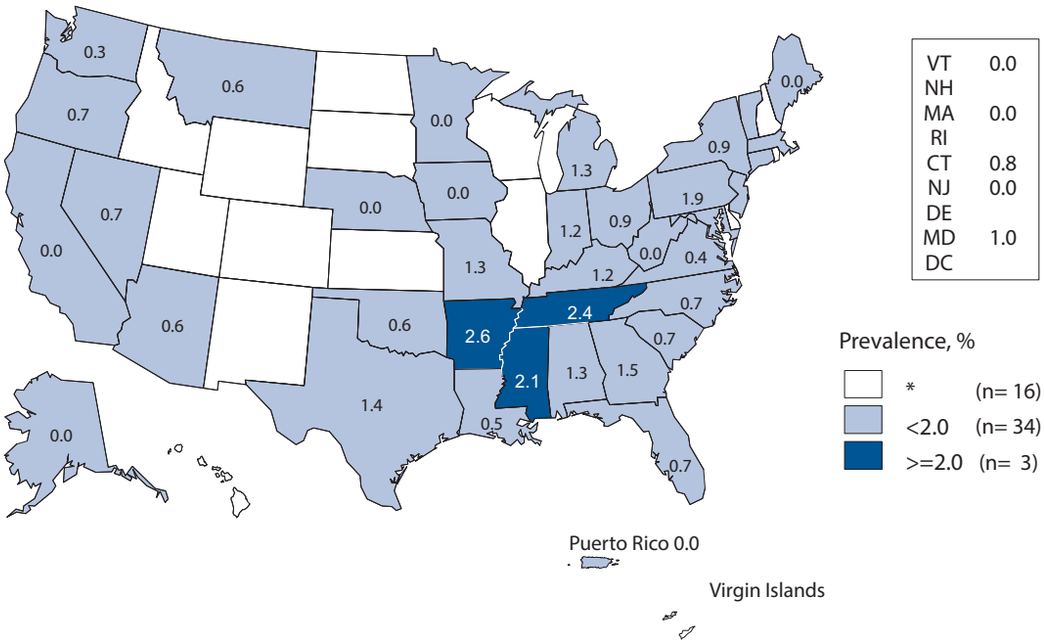
* Fewer than 100 men who resided in these states/areas and entered the National Job Training Program were screened for chlamydia in 2013.

Figure L. Gonorrhea — Prevalence Among Women Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Outlying Areas, 2013



* Fewer than 100 women who resided in these states/areas and entered the National Job Training Program were screened for gonorrhea in 2013.
NOTE: Many training centers use local laboratories to test female students for gonorrhea; these results are not available to CDC. For this map, gonorrhea test results for students at centers that submitted specimens to the national contract laboratory were included if the numbers of gonorrhea tests submitted was greater than the 90% of the number of chlamydia tests submitted.

Figure M. Gonorrhea — Prevalence Among Men Aged 16–24 Years Entering the National Job Training Program by State of Residence, United States and Outlying Areas, 2013



* Fewer than 100 men who resided in these states/areas and entered the National Job Training Program were screened for gonorrhea in 2013.
NOTE: Many training centers use local laboratories to test male students for gonorrhea; these results are not available to CDC. For this map, gonorrhea test results for students at centers that submitted specimens to the national contract laboratory were included if the number of gonorrhea tests submitted was greater than 90% of the number of chlamydia tests submitted.

STDs in Racial and Ethnic Minorities

Public Health Impact

Surveillance data show higher rates of reported STDs among some racial or ethnic minority groups when compared with rates among whites.[1,2] Race and ethnicity in the United States are population characteristics that are correlated with other fundamental determinants of health status such as high rates of poverty, income inequality, unemployment and low educational attainment.[3-5] People who struggle financially are often experiencing life circumstances that potentially increase their risk for STDs.[6]

Those who cannot afford basic necessities may have trouble accessing and affording quality sexual health services.[7] Despite a decline in the overall U.S. poverty rate in 2013, from 15.0 in 2012 to 14.5 in 2013, many Americans continue to face economic challenges. For example, the poverty rate for whites was 9.6%, for blacks it was 27.2%, and for Hispanics it was 23.5%.[3,8] Access to health insurance is often related to employment. People of Hispanic ethnicity may face additional barriers accessing care arising from immigration or undocumented status.[9] Even when health care is available, fear and distrust of health care institutions can negatively affect the health care-seeking experience for many racial/ethnic minorities when there is social discrimination, provider bias, or the perception that these may exist.[10] Moreover, the quality of care may differ substantially for minority patients.[11]These inequities in social and economic conditions are reflected in the profound disparities observed in the incidence of STDs among some racial and ethnic minorities.

In communities where STD prevalence is higher, individuals may have a more difficult time reducing their risk for infection. With each sexual encounter, they face a greater chance of encountering an infected partner than those in lower prevalence settings.[2] Acknowledging the inequity in STD rates by race or ethnicity is one of the first steps in empowering affected communities to organize and focus on this problem.

STD Reporting Practices

Surveillance data are based on cases of STDs reported to state and local health departments (see Interpreting STD Surveillance Data in the Appendix). In many state and local health jurisdictions, reporting from public sources (e.g., STD clinics) is thought to be more complete than reporting from private sources. Because minority populations may use public clinics more than whites, differences in rates between minorities and whites may be increased by this reporting bias.[12] However, prevalence data from population-based surveys, such as NHANES and the National Longitudinal Study of Adolescent Health, confirm the existence of marked STD disparities in some minority populations.[13,14]

Method of Classifying Race & Hispanic Ethnicity

Interpretation of racial and ethnic disparities among persons with STDs is influenced by data collection methods, and by the categories by which these data are displayed. Data on race and Hispanic ethnicity are displayed in this report in compliance with the 1997 Office of Management and Budget (OMB) standards.[15] Forty-seven jurisdictions (46 states and the District of Columbia) collect and report data in formats compliant with these standards as of 2013. One additional jurisdiction reported cases of primary & secondary syphilis by the appropriate standard, but did not report chlamydia and gonorrhea cases by this standard. Many jurisdictions only recently adopted OMB standards and used previous categories to report their case data to CDC in past years. Historical trend and rate data by race and Hispanic ethnicity displayed in figures and interpreted in this report for 2009–2013 include only those jurisdictions (39 states plus the District of Columbia) reporting in the current standard consistently for years 2009 through 2013. Please refer to Interpreting STD Surveillance Data in the Appendix for a complete listing of these jurisdictions.

Completeness of Race/Ethnicity Data

Chlamydia—In 2013, 26.0% of chlamydia case reports were missing race or ethnicity data, ranging by state from 0.4% to 63.5% (Table A1).

Gonorrhea—In 2013, 19.4% of gonorrhea case reports were missing information on race or ethnicity, ranging by state from 0.0% to 46.2% (Table A1).

Syphilis—In 2013, 3.8% of P&S syphilis case reports were missing information on race or ethnicity, ranging from 0.0% to 20.1% among states with 10 or more cases of P&S syphilis (Table A1).

Observations

Chlamydia

Among the 40 jurisdictions (39 states and the District of Columbia) that submitted data on race and Hispanic ethnicity for each year during 2009–2013 according to the OMB standards, rates of reported cases of chlamydia increased during 2009–2013 among all racial and ethnic groups except among Blacks (Figure 6). During 2009–2013, chlamydia rates increased by 23.9% among American Indians/Alaska Natives, 6.4% among Hispanics, 6.6% among Asians, 39.8% among Native Hawaiians/Other Pacific Islanders, and 32.7% among whites. During 2009–2013, rates of reported cases of chlamydia decreased 5.2% among blacks.

In 2013, 47 jurisdictions (46 states and the District of Columbia) submitted data on race and Hispanic ethnicity in 2013 according to the OMB standards. The following data pertain to those jurisdictions:

Blacks—In 2013, the overall rate among blacks in the United States was 1,147.2 cases per 100,000 population (Table 11B). The rate of reported cases of chlamydia among black women was 5.8 times the rate among white women (1,491.7 and 258.5 per 100,000 females, respectively) (Table 11B and Figure N). The chlamydia rate among black men was almost eight times the rate among white men (771.1 and 99.4 cases per 100,000 males, respectively).

Rates of reported cases of chlamydia were highest for blacks aged 15–19 and 20–24 years in 2013 (Table 11B). The chlamydia rate among black females aged 15–19 years was 6,907.6 cases per 100,000 females, which was five times the rate among white females in the same age group (1,383.3 per 100,000 females). The rate among black women aged 20–24 years was 4.1 times the rate among white women in the same age group (Table 11B).

Similar racial disparities in reported chlamydia rates exist among men. Among males aged 15–19 years, the rate among blacks was 9.5 times the rate among whites (Table 11B). The chlamydia rate among black men aged 20–24 years was 5.5 times the rate among white men of the same age group (3,282.5 and 594.0 cases per 100,000 males, respectively).

American Indians/Alaska Natives— In 2013, the chlamydia rate among American Indians/Alaska Natives was 697.9 cases per 100,000 population (Table 11B). Overall, the rate of chlamydia among American Indians/Alaska Natives in the United States was 3.9 times the rate among whites.

Native Hawaiians/Other Pacific Islanders— In 2013, the chlamydia rate among Native Hawaiians/Other Pacific Islanders was 633.3 cases per 100,000 population (Table 11B). The overall rate among Native Hawaiians/Other Pacific Islanders was 3.5 times the rate among whites and 5.7 times the rate among Asians.

Hispanics— In 2013, the chlamydia rate among Hispanics was 377.0 cases per 100,000 population (Table 11B) which is 2.1 times the rate among whites.

Asians— In 2013, the chlamydia rate among Asians was 111.5 cases per 100,000 population (Table 11B). The overall rate among whites is 1.6 times the rate among Asians.

Gonorrhea

During 2009–2013, among the 40 jurisdictions (39 states and the District of Columbia) that submitted data for each year according to the OMB standards, rates of reported gonorrhea cases increased 87.5% among American Indians/Alaska Natives (76.6 to 143.6), 79.3% among Native Hawaiians/Other Pacific Islanders (56.4 to 101.1), 54.8% among whites (23.0 to 35.6), 50.1% among Hispanics (45.5 to 68.3), and 29.4% among Asians (13.6 to 17.6) (Figure 19). The gonorrhea rate decreased 9.1% among blacks (471.6 to 428.5).

In 2013, 47 jurisdictions (46 states and the District of Columbia) submitted data in race and ethnic categories according to the OMB standards. The following data pertain to those jurisdictions:

Blacks—In 2013, 58.4% of reported gonorrhea cases with known race/ethnicity occurred among blacks (excluding cases with missing information on race or ethnicity, and cases whose reported race or ethnicity was other) (Table 22A). The rate of gonorrhea among blacks in 2013 was 426.6 cases per 100,000 population, which was 12.4 times the rate among whites (34.5 per 100,000) (Table 22B). This disparity has decreased slightly in recent years (Figure O). This disparity was similar for black men (12.7 times the rate among white men) and black women (12.0 times the rate among white women) (Figure P, Table 22B).

As in previous years, the disparity in gonorrhea rates for blacks in 2013 was larger in the Midwest and Northeast than in the West or the South (Figure Q).

Considering all racial/ethnic and age categories, gonorrhea rates were highest for blacks aged 20–24 and 15–19 years in 2013 (Table 22B). Black women aged 20–24 had a gonorrhea rate of 1,949.1 cases per 100,000 women. This rate was 10.2 times the rate among white women in the same age group (190.3 per 100,000). Black women aged

15–19 years had a gonorrhea rate of 1,768.5 cases per 100,000 women, which was 13.6 times the rate among white women in the same age group (130.1 per 100,000).

Black men aged 20–24 years had a gonorrhea rate of 1,734.5 cases per 100,000 men, which was 13.0 times the rate among white men in the same age group (133.7 per 100,000). Black men aged 25–29 years had a gonorrhea rate of 1,207.2 cases per 100,000 men, which was 10.4 times the rate among white men in the same age group (116.5 per 100,000).

American Indians/Alaska Natives—In 2013, the gonorrhea rate among American Indians/Alaska Natives was 137.4 cases per 100,000 population, which was 4.0 times the rate among whites (Table 22B). The disparity between gonorrhea rates for American Indians/Alaska Natives and whites was larger for American Indian/Alaska Native women (5.2 times the rate among white women) than for American Indian/Alaska Native men (2.7 times the rate among white men) (Figure P, Table 22 B). The disparity in gonorrhea rates for American Indians/Alaska Natives in 2013 was larger in the Midwest than in the West, Northeast, and South (Figure Q).

Native Hawaiians/Other Pacific Islanders—In 2013, the gonorrhea rate among Native Hawaiians/Other Pacific Islanders was 94.0 cases per 100,00 population, which was 2.7 times the rate among whites (Table 22B). The disparity between gonorrhea rates for Native Hawaiians/Other Pacific Islanders and whites was the similar for Native Hawaiian/Other Pacific Islander women (2.7 times the rate among white women) and Native Hawaiian/Other Pacific Islander men (2.8 times the rate among white men) (Figure P, Table 22B). The disparity in gonorrhea rates for Native Hawaiians/Other Pacific Islanders in 2013 was lower in the West than in the Midwest, Northeast, and South (Figure Q).

Hispanics—In 2013, the gonorrhea rate among Hispanics was 65.8 cases per 100,000 population, which was 1.9 times the rate among whites (Table 22B). This disparity was similar for Hispanic women (1.8 times the rate among white women) and Hispanic men (2.0 times) (Figure P, Table 22B). The disparity in gonorrhea rates for Hispanics was highest in the Northeast and lowest in the West and Midwest (Figure Q).

Asians—In 2013, the gonorrhea rate among Asians was 17.1 cases per 100,000 population, which was lower than (0.5 times) the rate among whites (Table 22B). This difference is larger for Asian women than for Asian men (Figure P, Table 22B). In 2013, rates among Asians were lower than rates among whites in all four regions of the United States (Figure Q).

Primary and Secondary Syphilis

The syphilis epidemic in the late 1980s occurred primarily among men who have sex with women only (MSW), women, and minority populations.[16,17] While the rate of primary and secondary (P&S) syphilis declined among all racial and ethnic groups during the 1990s, rates again began increasing in the early 2000s among gay, bisexual and other men who have sex with men (MSM) in their 30s and 40s of varied racial and ethnic groups.[17] During 2009–2013, 40 jurisdictions (39 states and the District of Columbia) submitted data on race and Hispanic ethnicity for each year according to the OMB standards. Among these areas, rates of reported cases increased among non-Hispanic whites, non-Hispanic blacks, Hispanics, Asians, American Indians/Alaska Natives, and Native Hawaiians/Other Pacific Islanders, and decreased slightly among multirace individuals, during 2013 (Figure 39).

In 2013, 48 jurisdictions (47 states and the District of Columbia) submitted syphilis data by race and Hispanic ethnicity according to the OMB standards. The following data pertain to those jurisdictions:

Blacks — In 2013, 37.3% of all cases reported to CDC were among blacks. The overall 2013 rate for blacks was 5.6 times the rate for whites. In 2013, the rate of P&S syphilis among black men was 5.3 times the rate among white men; the rate among black women was 15 times the rate among white women (Table 36B).

In 2013, rates among both men and women aged 25–29 years remained highest among blacks (97.2 cases and 12.9 cases per 100,000 population, respectively). Rates among both men and women aged 20–24 years remained highest among blacks (96.4 cases and 17.0 cases per 100,000 population, respectively).

American Indians/Alaska Natives — In 2013, 0.6% of all cases reported to CDC were among American Indians/Alaska Natives. The 2013 rate of P&S syphilis for American Indians/Alaska Natives was 4.6 cases per 100,000 population, 1.5 times the rate for whites (Table 36B).

Native Hawaiians/Other Pacific Islanders — In 2013, 0.3% of all cases reported to CDC were among Native Hawaiians/Other Pacific Islanders. The 2013 rate of P&S syphilis for Native Hawaiians/Other Pacific Islanders was 8.6 cases per 100,000 population, which was 2.9 times the rate for whites (Table 36B).

Hispanics — In 2013, 19.9% of all cases reported to CDC were among Hispanics. The 2013 rate of P&S syphilis for Hispanics was 6.3 cases per 100,000 population, which was 2.1 times the rate for whites (Table 36B).

Asians — In 2013, 2.2% of all cases reported to CDC were among Asians. The 2013 rate of P&S syphilis for Asians was 2.5 cases per 100,000 population, which was 0.8 times the rate for whites (Table 36B).

Congenital Syphilis

Race/ethnicity for cases of congenital syphilis is based on the mother's race/ethnicity. In 2013, the rate of congenital syphilis was 29.0 cases per 100,000 live births among blacks and 9.7 cases per 100,000 live births among Hispanics. These rates were 10.4 and 3.5 times, respectively, the rate among whites (2.8 cases per 100,000 live births) (Table 43, Figure U).

[1] Newman LM, Berman SM. Epidemiology of STD Disparities in African American Communities. Sex Transm Dis. 2008;35(12):S4-S12.

[2] Hogben M, Leichliter JS. Social determinants and sexually transmitted disease disparities. Sex Transm Dis. 2008;35(12 Suppl):S13-8.

[3] DeNavas-Walt, Carmen and Bernadette D. Proctor, *U.S. Census bureau, Current Population Reports, P60-249, Income and Poverty in the United States: 2013*, U. S. Government Printing Office, Washington, DC, 2014.

[4] Harling G, Subramanian SV, Barnighausen T, Kawachi I. Socioeconomic disparities in sexually transmitted infections among young adults in the United States: Examining the interaction between Income and race/ethnicity. Sex Transm Dis. 2013;40(7):575-581.

[5] Centers for Disease Control and Prevention. CDC Health Disparities and Inequalities Report - United States 2013 MMWR Morb Mortal Wkly. Rep. 2013;62(Suppl 3).

[6] Laumann EO, Youm Y. Racial/ethinic group differences in the prevalence of sexually transmitted diseases in the United States: a network explanation. Sex Transm Dis. 1999;26(5):250-61.

[7] Institute of Medicine. The Hidden Epidemic: Confronting Sexually Transmitted Diseases. Washington, DC: National Academy Press; 1997.

[8] Bureau of Labor Statistics Report, August 2014 http://www.bls.gov.

[9] Pérez-Escamilla R. Health care access among Latinos: Implications for social and health care r5eform. J Hispanic High Educ. 2010:9(1):43-60.

[10] Berk ML, Schur CL. The effect of fear on access to care among undocumented Latino immigrants. J Immigr Health. 2001;3(3):151-156.

[11] Institute of Medicine. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: National Academies Press; 2002.

[12] Miller WC. Epidemiology of chlamydial infection: are we losing ground? Sex Transm Infect. 2008;84:82-6.

[13] Datta SD, Sternberg M, Johnson RE, Berman S, Papp JR, McQuillan G, et al. Gonorrhea and chlamydia in the United States among persons 14 to 39 years of age, 1999 to 2002. Ann Intern Med. 2007;147(2):89-96.

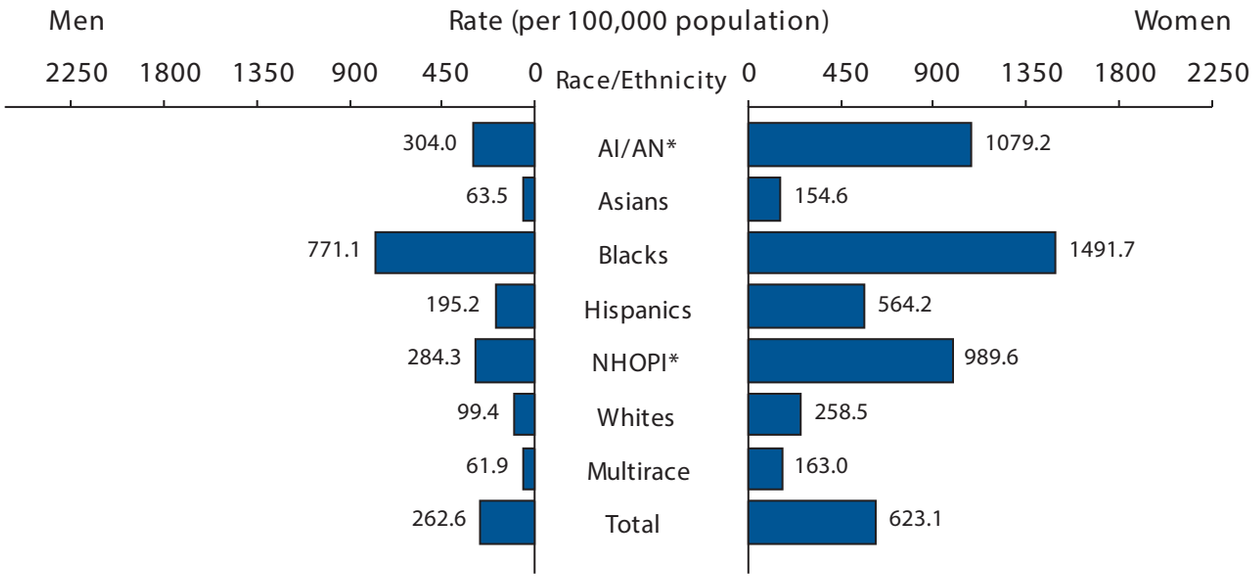
[14] Miller WC, Ford CA, Morris M, Handcock MS, Schmitz JL, Hobbs MM, et al. Prevalence of chlamydial and gonococcal infections among young adults in the United States. JAMA. 2004;291(18):2229-36.

[15] Office of Management and Budget. Provisional guidance on the implementation of the 1997 standards for federal data on race and ethnicity. 1999. [Accessed July 29, 2013]. Available at: http://www.whitehouse.gov/omb/fedreg_1997standards/.

[16] Nakashima AK, Rolfs RT, Flock ML, Kilmarx P, Greenspan JR. Epidemiology of syphilis in the United States, 1941 through 1993. Sex Transm Dis. 1996;23:16-23.

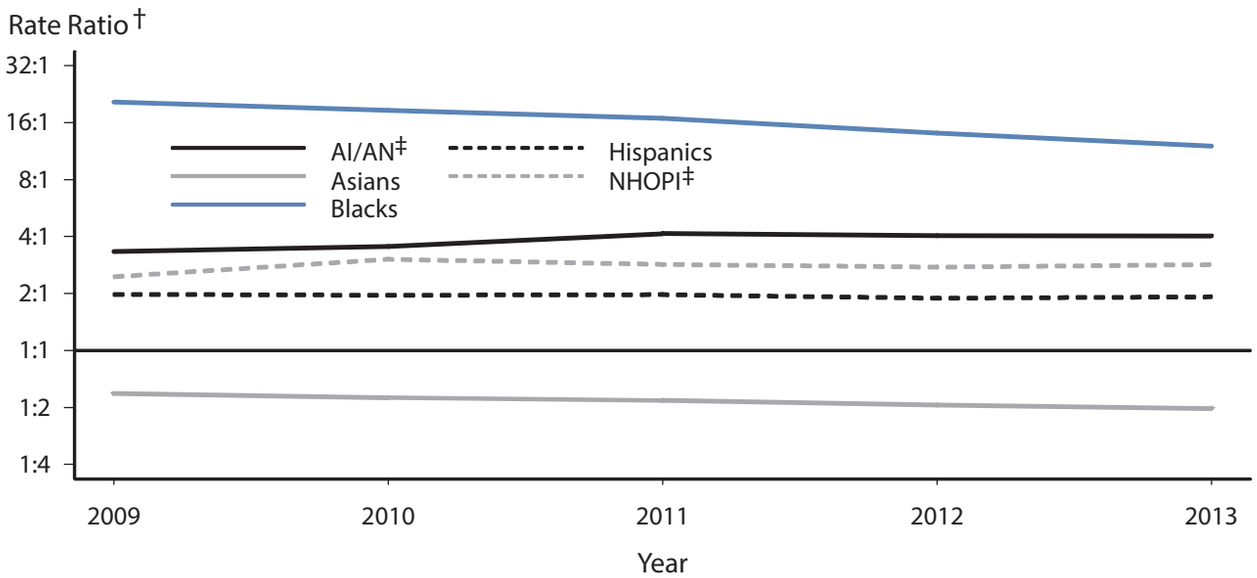
[17] Peterman TA, Heffelfinger JD, Swint EB, Groseclose SL. The changing epidemiology of syphilis. Sex Transm Dis. 2005;32(Suppl 10):S4-10.

Figure N. Chlamydia — Rates of Reported Cases by Race/Ethnicity and Sex, United States, 2013



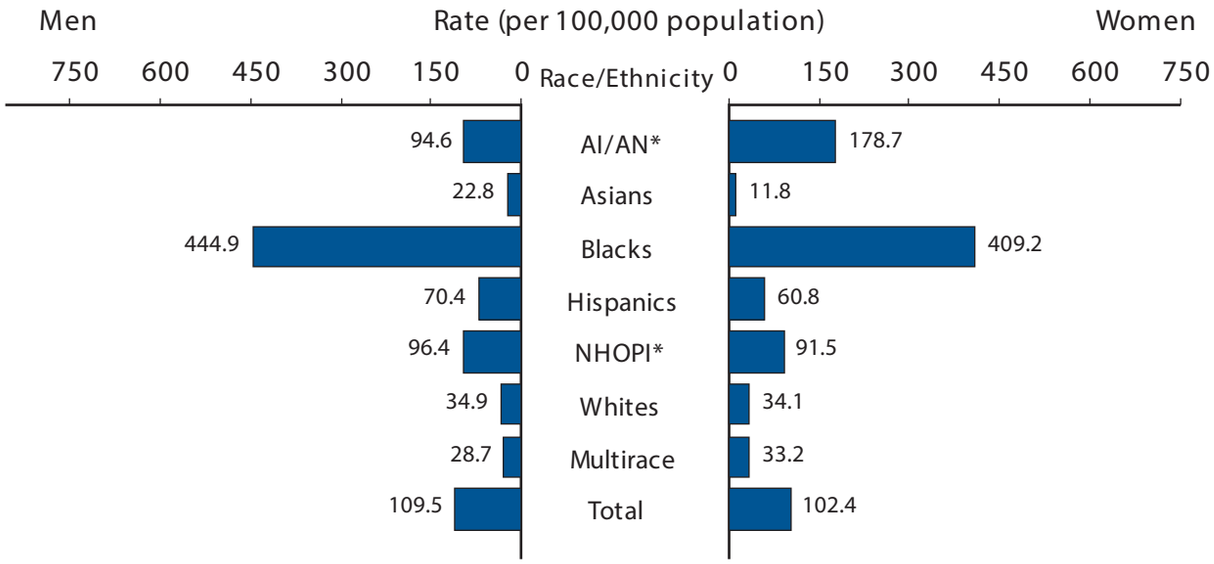
* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 46 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats in 2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure O. Gonorrhea — Rate Ratios* by Race/Ethnicity, United States, 2009–2013



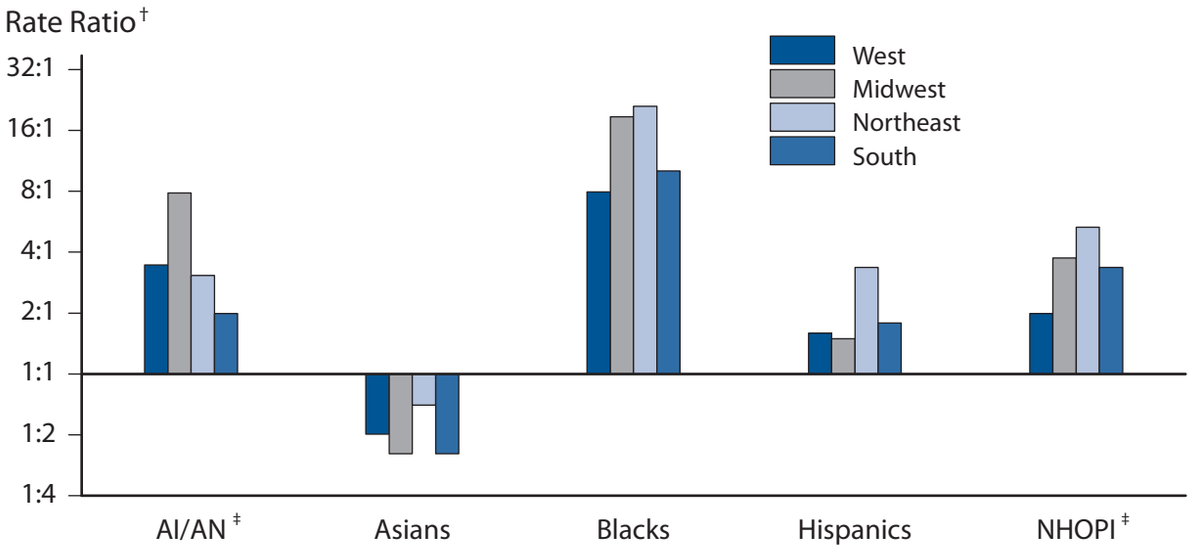
* Rate ratios are calculated as the rate of reported gonorrhea cases per 100,000 population for a given racial or ethnic minority population divided by the rate of reported gonorrhea cases per100,000 population for non-Hispanic whites. Any population with a lower rate of reported cases of gonorrhea than the non-Hispanic white population will have a rate ratio of less than 1:1.
† Y-axis is log scale.
‡ AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 39 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats during 2009–2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure P. Gonorrhea — Rates of Reported Cases by Race/Ethnicity and Sex, United States, 2013



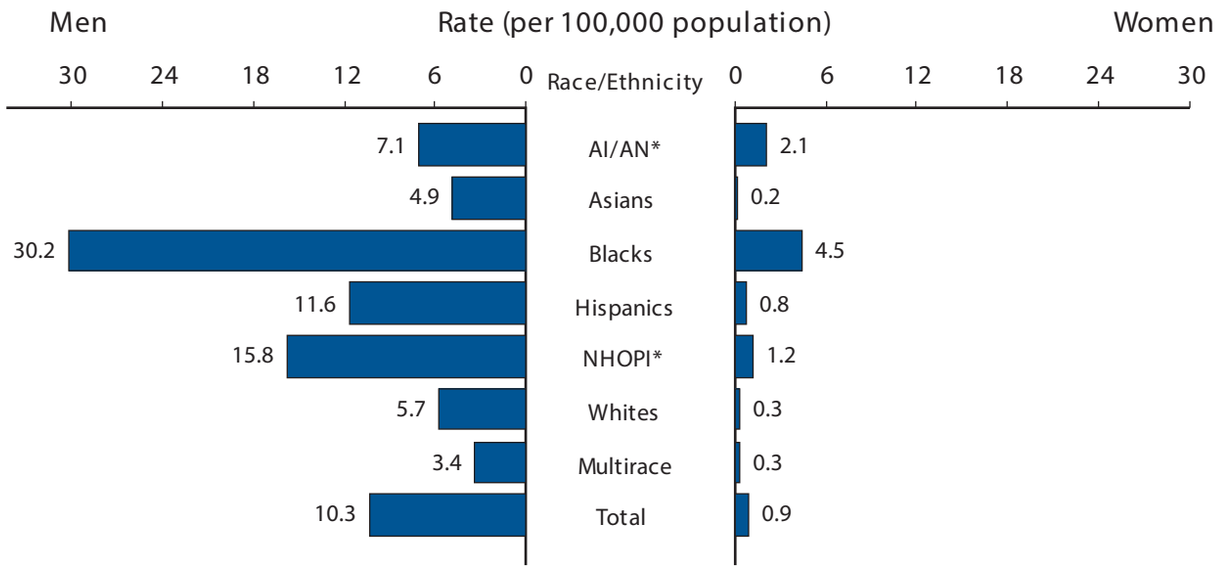
* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 46 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats in 2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure Q. Gonorrhea — Rate Ratios* by Race/Ethnicity and Region, United States, 2013



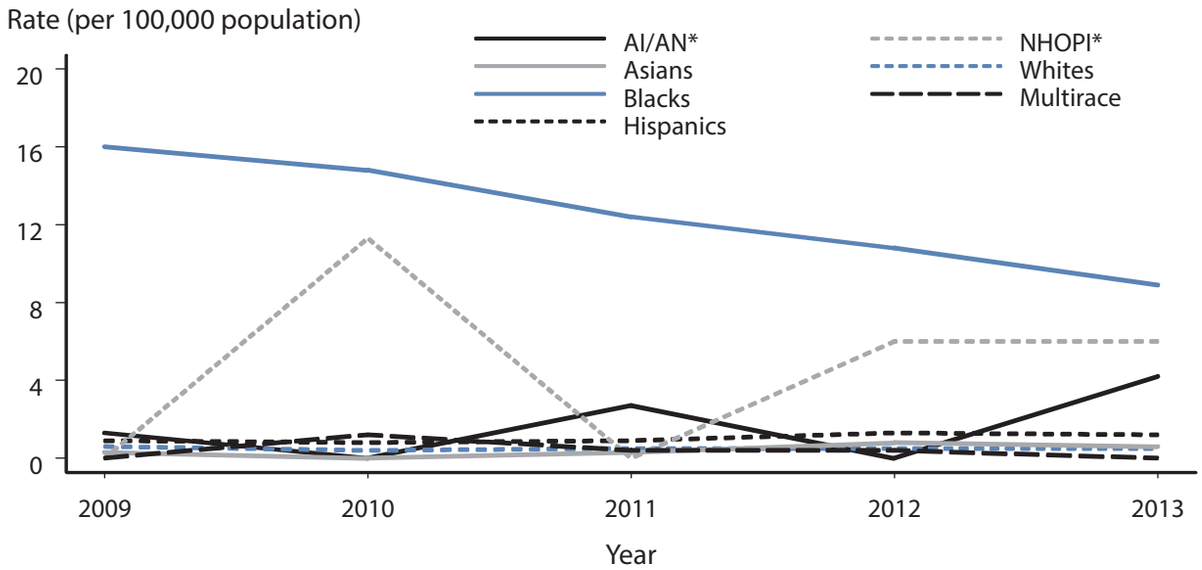
* Rate ratios are calculated as the rate of reported gonorrhea cases per 100,000 population for a given racial or ethnic minority population divided by the rate of reported gonorrhea cases per 100,000 population for non-Hispanic whites. Any population with a lower rate of reported cases of gonorrhea than the non-Hispanic white population will have a rate ratio of less than 1:1.
† Y-axis is log scale.
‡ AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 46 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats in 2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure R. Primary and Secondary Syphilis — Rates of Reported Cases by Race/Ethnicity and Sex, United States, 2013



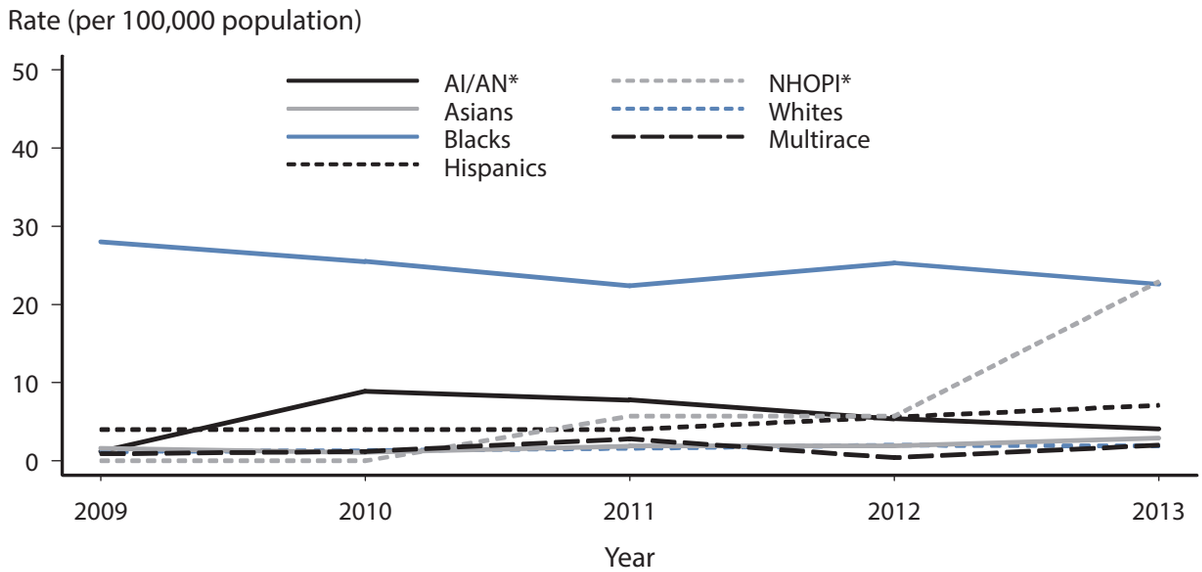
* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 47 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats in 2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure S. Primary and Secondary Syphilis — Rates of Reported Cases Among Females Aged 15–19 Years, by Race/Ethnicity, United States, 2009–2013



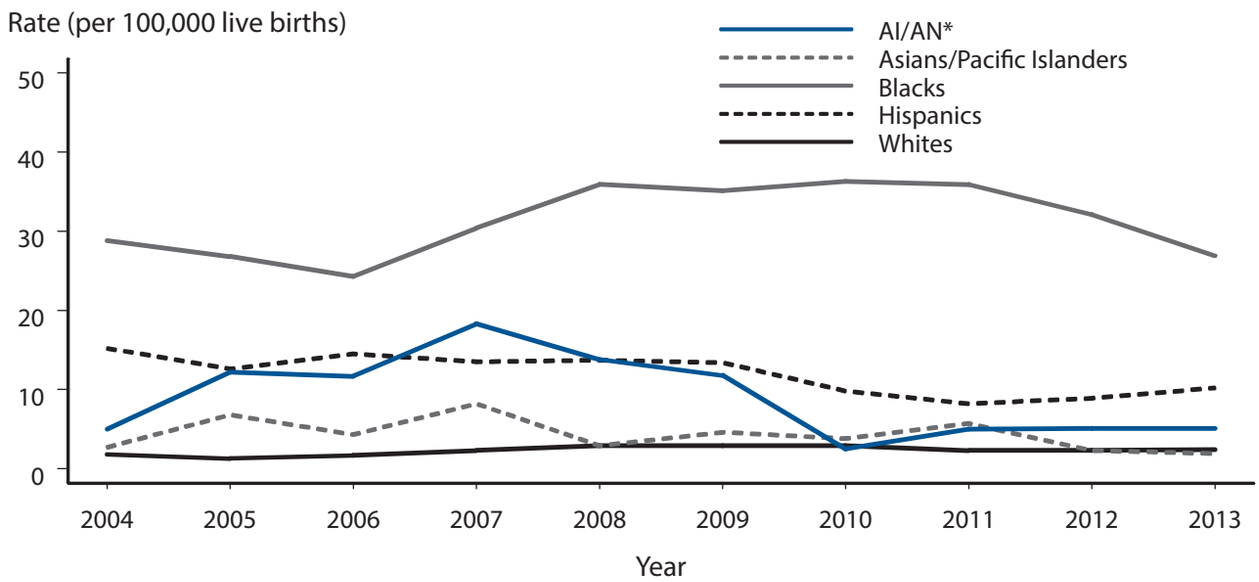
* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 39 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats during 2009–2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure T. Primary and Secondary Syphilis — Rates of Reported Cases Among Males Aged 15–19 Years, by Race/Ethnicity, United States, 2009–2013



* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiians/Other Pacific Islanders.
NOTE: Includes 39 states and the District of Columbia reporting race/ethnicity data in Office of Management and Budget compliant formats during 2009–2013 (see Reporting of Data for Race/Ethnicity in the Appendix).

Figure U. Congenital Syphilis — Rates of Reported Cases Among Infants, by Year of Birth and Mother's Race/Ethnicity, United States, 2004–2013



* AI/AN = American Indians/Alaska Natives.
NOTE: National Center for Health Statistics bridged race categories are presented to allow the display of data across several years. Cases missing maternal race/ethnicity information were excluded (< 1% of cases).

STDs in Men Who Have Sex with Men

Public Health Impact

Compared to women and men who have sex with women only, gay, bisexual, and other men who have sex with men (collectively known as MSM) are at increased risk for STDs and antimicrobial resistance.[1–4] Because STDs and the behaviors associated with acquiring them increase the likelihood of acquiring and transmitting HIV infection,[5] STDs among MSM may be associated with an increase in HIV diagnoses.[6]

Although a number of individual-level risk behaviors (e.g., higher numbers of lifetime sex partners, higher rates of partner change and partner acquisition rates, and unprotected sex) significantly contribute to the ongoing disparities in the sexual health of MSM, other interpersonal and societal-level factors have also been associated with higher rates of sexually transmitted infections, including HIV among MSM.[7] MSM who have lower economic status are particularly vulnerable to poorer health outcomes, especially if they belong to racial and ethnic minority populations.[8, 9] For example, studies show that for black MSM, factors such as emotional and social support can drive sexual risk-taking and, in addition, broader societal factors such as power, privilege, and position in society also play a significant role.[10] Similarly, for Hispanic men, the relationship between individual experiences of oppression (e.g., social discrimination and financial hardship) and risk for sexually transmitted infections in the United States has been documented.[11]

With the exception of reported syphilis cases, most nationally notifiable STD surveillance data do not include information on sexual behaviors; therefore, trends in STDs among MSM in the United States are based on findings from sentinel surveillance systems. Furthermore, testing strategies are often suboptimal for detecting STDs in MSM. Testing for gonorrhea and chlamydia in MSM largely focuses on detecting urethral infections, which are more likely to be symptomatic than pharyngeal or rectal infections.[12] Data from enhanced surveillance projects are presented in this section to provide information on STDs in MSM.

STD Surveillance Network (SSuN) — Monitoring Trends in Prevalence of STDs Among MSM Who Visit STD Clinics, 2012

In 2005, SSuN was established to improve the capacity of national, state, and local STD programs to detect, monitor, and respond rapidly to trends in STDs through enhanced collection, reporting, analysis, visualization, and interpretation of disease information.[13] SSuN is a sentinel surveillance system comprised of 42 STD clinics within 12 collaborating jurisdictions that follow common protocols for data collection and management.[14] For data reported in this section, MSM were defined as men who either reported having a male sex partner or who self-reported as gay/homosexual or bisexual. MSW were defined as men who reported having sex with women only or who did not report the sex of their sex partner, but reported that they considered themselves straight/heterosexual. For more detailed information about SSuN methodology see the STD Surveillance Network (SSuN) in the Appendix.

Gonorrhea and Chlamydial Infection

In 2013, the proportion of MSM who tested positive for gonorrhea and chlamydia at STD clinics varied by SSuN site (Figure V). A larger proportion of MSM who visited SSuN STD clinics tested positive for gonorrhea than tested positive for chlamydia in all cities except Birmingham, Denver, and Hartford/New Haven (where the proportion for chlamydia was higher).

Across the participating sites, 20,955 MSM were tested for gonorrhea and 20,710 MSM were tested for chlamydia. The median site-specific gonorrhea prevalence was 16.9% (range by site: 10.4%–28.1%). The median site-specific chlamydia prevalence was 15.2% (range by site: 7.4%–30.7%). For this report, a person who tested positive for gonorrhea or chlamydia more than one time in a year was counted only once for each infection.

Co-infection of Primary and Secondary (P&S) Syphilis and HIV

Among MSM who presented to seven SSuN clinics with P&S syphilis infection in 2013, the proportion who were also infected with HIV ranged from 15.8% in Los Angeles to 47.4% in Philadelphia (Figure W). The median site-specific proportion of MSM co-infected with HIV (45.5%) was comparable to the proportion of co-infection in MSM observed in 2013 case report data (51.6%). P&S syphilis was identified by provider diagnosis, and HIV was identified by laboratory report, self-report, or provider diagnosis.

HIV status and STDs

Among MSM visiting SSuN STD clinics, prevalence of STDs was higher among HIV-positive MSM than among HIV-negative MSM (Figure X). The prevalence of P&S syphilis was 9.0% among HIV-positive MSM and 2.6% among HIV-negative MSM. Among HIV-positive MSM, urethral gonorrhea positivity was 15.0%, pharyngeal gonorrhea positivity was 10.0%, and rectal gonorrhea positivity was 16.4% (compared to 10.1%, 7.4%, and 8.9%, respectively, among HIV-negative MSM). Among HIV-positive MSM, urethral chlamydia positivity was 7.6% and rectal chlamydia positivity was 22.2% (compared to 7.1% and 11.4%, respectively, among HIV-negative MSM).

Nationally Notifiable Syphilis Surveillance Data

P&S syphilis among MSM has been increasing since at least 2000.[3,15] In 33 areas reporting sex of partner data for 70% or more of cases of P&S syphilis each year during 2007–2013, cases among MSM increased 7% during 2012–2013 (Figure 31). In 2013, MSM accounted for 75% of all P&S syphilis cases in 49 states and the District of Columbia that provided information about sex of sex partners. MSM accounted for more cases than MSW or women in all racial and ethnic groups (Figure 41). More information about syphilis can be found in the Syphilis section of the National Profile.

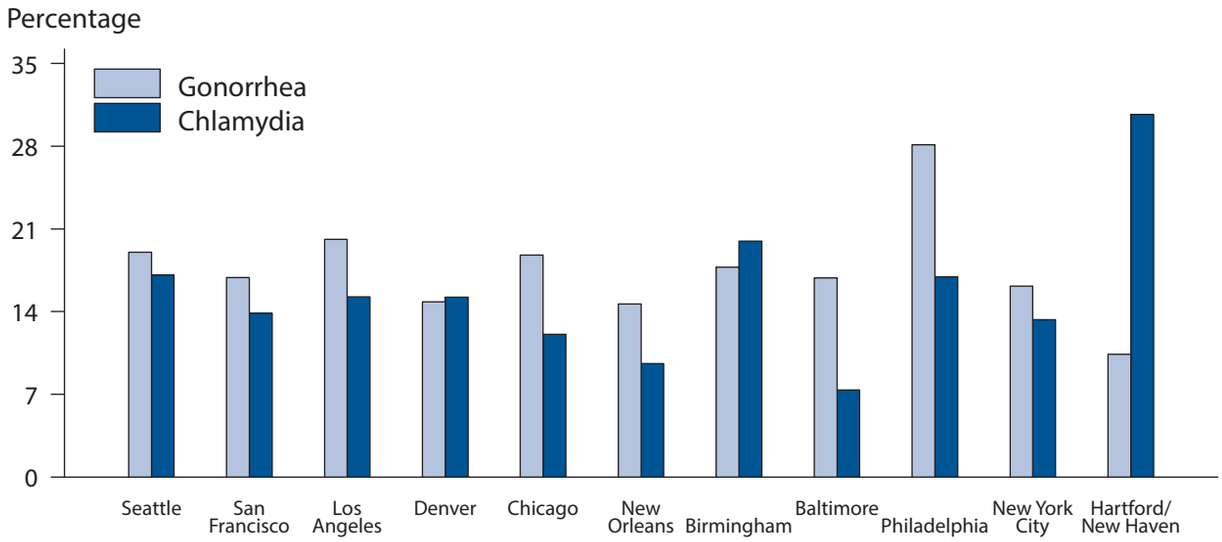
Gonococcal Isolate Surveillance Project

GISP is a national sentinel surveillance system designed to monitor trends in antimicrobial susceptibilities of *N. gonorrhoeae* strains in the United States.[16] Overall, the proportion of isolates from MSM in selected STD clinics from GISP sentinel sites has increased steadily, from 4.6% in 1990 to 35.1% in 2013 (Figure Y). The reason for this increase is unclear, but might reflect changes in the epidemiology of gonorrhea or changes in healthcare seeking behaviors of men infected with gonorrhea. GISP has demonstrated that gonococcal isolates from MSM are more likely to exhibit antimicrobial resistance than isolates from MSW.[4] During 2007–2013, the prevalence of elevated ceftriaxone MICs (≥0.125 μg/ml) was higher in isolates from MSM than from MSW. (Figure Z).

More information on GISP can be found in the Gonorrhea section of the National Profile.

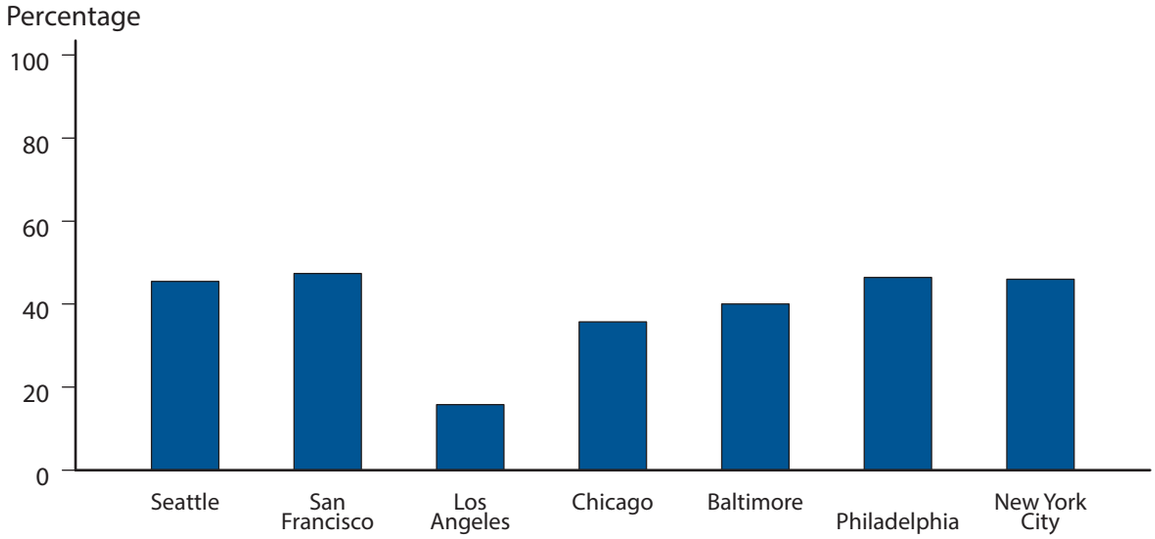
1. Brewer TH, Schillinger J, Lewis FM, Blank S, Pathela P, Jordahl L, et al. Infectious syphilis among adolescent and young adult men: implications for human immunodeficiency virus transmission and public health interventions. Sex Transm Dis. 2011;38(5):367-71.
2. Centers for Disease Control and Prevention. Trends in HIV/AIDS diagnoses among men who have sex with men — 33 States, 2000–2006. MMWR Morb Mortal Wkly Rep. 2008; 57:681–686.
3. Su JR, Beltrami JF, Zaidi AA, Weinstock HS. Primary and secondary syphilis among black and Hispanic men who have sex with men: case report data from 27 States. Ann Intern Med. 2011; 155(3):145-51.
4. Kirkcaldy RD, Zaidi A, Hook EW 3rd, Holmes KK, Soge O, del Rio C, et al. *Neisseria gonorrhoeae* antimicrobial resistance among men who have sex with men and men who have sex exclusively with women: The Gonococcal Isolate Surveillance Project, 2005–2010. Ann Intern Med. 2013; 158(5 Pt 1):321–8.
5. Fleming DT, Wasserheit JN. From epidemiologic synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sex Transm Infect. 1999;75:3-17.
6. Hall HI, Song R, Rhodes P, Prejean J, An Q, Lee LM, et al, for the HIV Incidence Surveillance Group. Estimation of HIV incidence in the United States. JAMA. 2008;6;300(5):520-9.
7. Koblin BA, Husnik MJ, Marla JB, Colfax GC, Huang Y, Madison ME, et al. Risk factors for HIV infection among men who have sex with men. AIDS. 2006;20(5):731-739.
8. Alvy LM , McKirnan DJ, Du Bois SN , Jones K, Ritchie N, Fingerhut D. Health Care Disparities and Behavioral Health Among Men Who Have Sex with Men. J Gay Lesbian Soc Serv. 2011;23(4): 507-522.
9. McKirnan DJ, Du Bois SN, Alvy LM, Jones K. Health Care Access and Health Behaviors Among Men Who Have Sex With Men: The Cost of Health Disparities. Health Educ Behav. 2013;40(1):32-41.
10. Mays VM, Cochran SD, Zamudio A. HIV prevention research: are we meeting the needs of African American men who have sex with men? J Black Psychol. 2004;30:78.
11. Díaz RM, Ayala G, Bein E. Sexual risk as an outcome of social oppression: data from a probability sample of Latino gay men in three U.S. cities. Cultur Divers Ethnic Minor Psychol. 2004;10(3):255-267.
12. Patton ME, Kidd S, Llata E, Stenger M, Braxton J, et al. Extragenital gonorrhea and chlamydia testing and infection among men who have sex with men--STD Surveillance Network, United States, 2010-2012. Clin Infect Dis. 2014;58(11):1564-70.
13. Rietmeijer K, Donnelly J, Bernstein K, Bissette J, Martins S, Pathela P, et al. Here comes the SSuN—early experiences with the STD Surveillance Network. Pub Health Rep. 2009;124(Suppl 2):72-77.
14. Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2011. Atlanta: U.S. Department of Health and Human Services; 2012.
15. Heffelfinger JD, Swint EB, Berman SM, Weinstock HS. Trends in primary and secondary syphilis among men who have sex with men in the United States. Am J Public Health. 2007 Jun;97(6):1076-83.
16. Schwarcz S, Zenilman J, Schnell D, Knapp JS, Hook EW III, Thompson S, et al. National surveillance of antimicrobial resistance in *Neisseria gonorrhoeae*. JAMA. 1990;264(11):1413-7.

Figure V. Gonorrhea and Chlamydia — Proportion of MSM* Attending STD Clinics Testing Positive for Gonorrhea and Chlamydia, STD Surveillance Network (SSuN), 2013



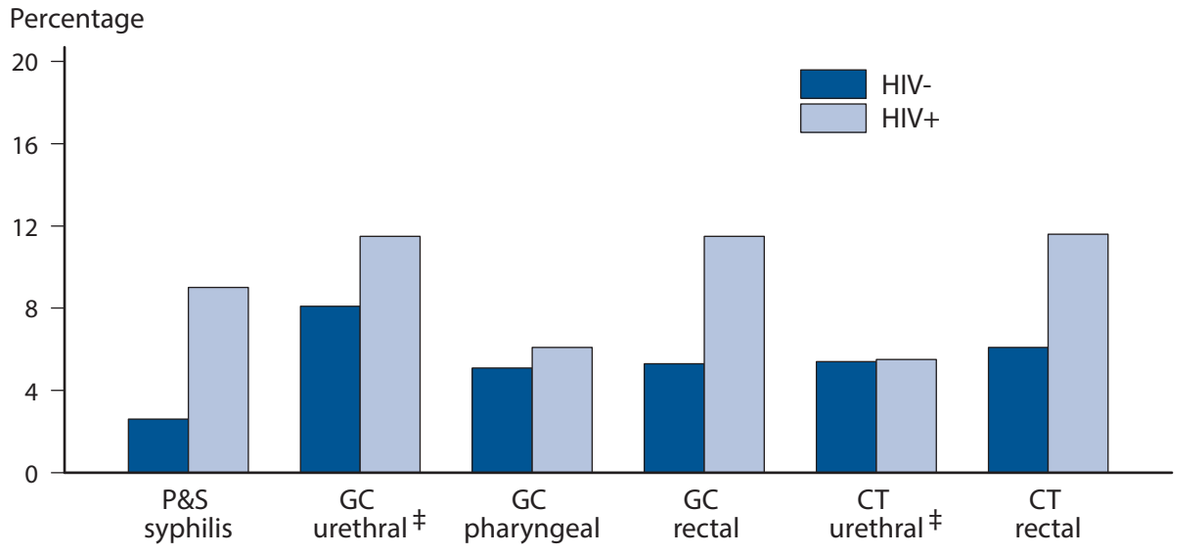
* Among men who have sex with men who were tested for gonorrhea and/or chlamydia
NOTE: Includes jurisdictions that reported data on at least 50 MSM tested for gonorrhea or chlamydia in 2013. Five jurisdictions (Birmingham, Chicago, Denver, Hartford/New Haven, and New Orleans) contributed data from January through June 2013 and the remaining 6 jurisdictions contributed data for all of 2013.

Figure W. Primary and Secondary Syphilis and HIV — Proportion of MSM* Attending STD Clinics with Primary and Secondary Syphilis Who Are Co-infected with HIV, STD Surveillance Network (SSuN), 2013



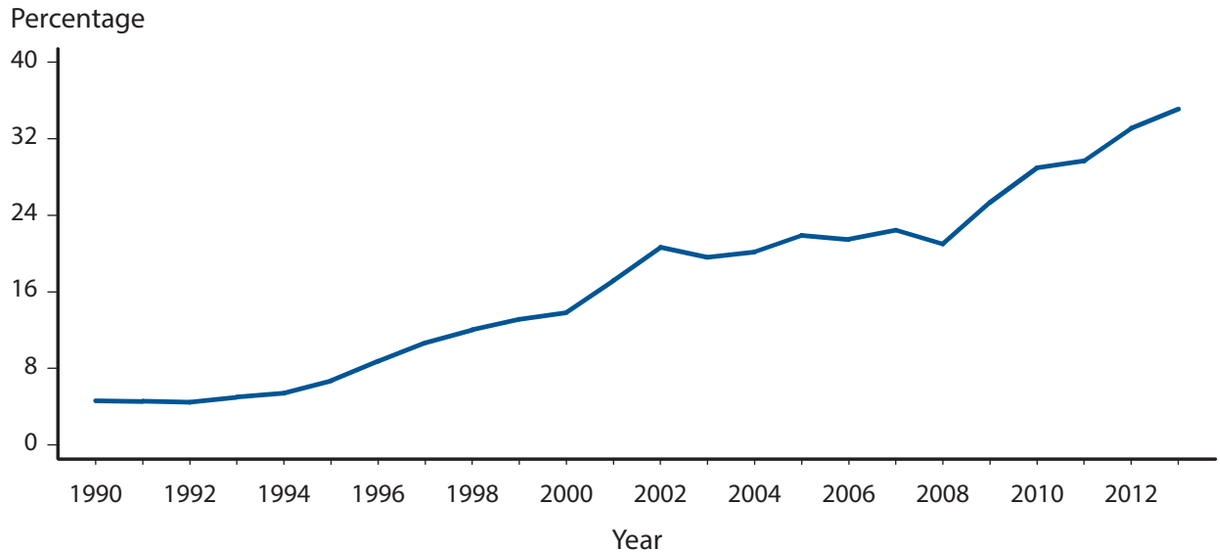
* MSM = men who have sex with men.
NOTE: Includes jurisdictions that reported data on at least 25 MSM with primary and secondary syphilis in 2013. One jurisdiction (Chicago) contributed data from January through June 2013 and the remaining 6 jurisdictions contributed data for all of 2013.

Figure X. Proportion of MSM* Attending STD Clinics with Primary and Secondary Syphilis, Gonorrhea or Chlamydia by HIV Status†, STD Surveillance Network (SSuN), 2013



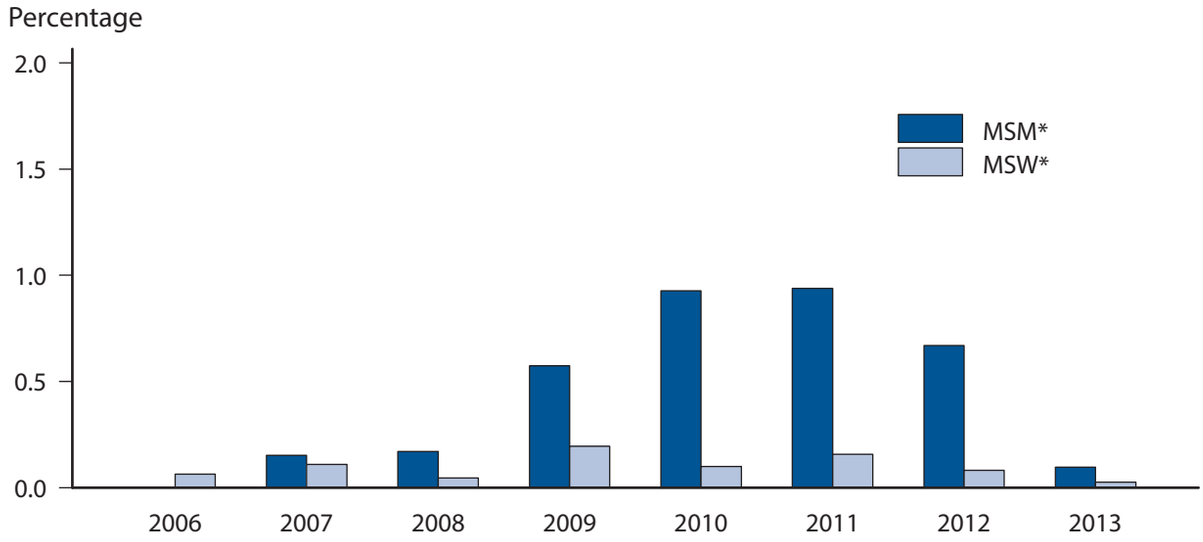
* MSM = men who have sex with men.
† Excludes all persons for whom there was no laboratory documentation or self-report of HIV status.
‡ GC urethral and CT urethral include results from both urethral and urine specimens.
NOTE: Six jurisdictions (Birmingham, Chicago, Denver, Hartford/New Haven, New Orleans, and Richmond) contributed data from January through June 2013 and the remaining jurisdictions (Baltimore, Los Angeles, New York City, Philadelphia, San Francisco and Seattle) contributed data for all of 2013.

Figure Y. *Neisseria gonorrhoeae* — Percentage of Urethral Isolates Obtained from MSM* Attending STD Clinics, Gonococcal Isolate Surveillance Project (GISP), 1990–2013



* MSM = men who have sex with men.

Figure Z. ***Neisseria gonorrhoeae*** **— Percentage of Urethral Isolates with Elevated Ceftriaxone Minimum Inhibitory Concentrations (MICs) (≥0.125 µg/ml) by Reported Sex of Sex Partner, Gonococcal Isolate Surveillance Project (GISP), 2006–2013**



* MSM = men who have sex with men; MSW = men who have sex with women only.

TABLES

TABLES

Table 1. Sexually Transmitted Diseases — Reported Cases and Rates of Reported Cases per 100,000 Population, United States, 1941–2013

	Syphilis															
	All Stages†		Primary and Secondary		Early Latent		Late and Late Latent‡		Congenital		Chlamydia		Gonorrhea		Chancroid	
Year*	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	130,687	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	19,799	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

Table 1. Sexually Transmitted Diseases — Reported Cases and Rates of Reported Cases per 100,000 Population, United States, 1941–2013 (continued)

	Syphilis															
	All Stages†		Primary and Secondary		Early Latent		Late and Late Latent‡		Congenital		Chlamydia		Gonorrhea		Chancroid	
Year*	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate§	Cases	Rate	Cases	Rate	Cases	Rate
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	9.4	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	8.7	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	56,471	18.0	17,375	5.5	16,929	5.4	21,819	7.0	348	8.7	1,401,906	446.6	333,004	106.1	10	0.0

* 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.

‡ Late and late latent syphilis includes late latent syphilis, latent syphilis of unknown duration, neurosyphilis, and late syphilis with clinical manifestations other than 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 June 4, 2014 (see Appendix). The number of cases and the rates shown here supersede those published in previous reports. For more information regarding reporting, reporting, see Interpreting STD Surveillance Data in the Appendix. Cases and rates shown in this table exclude the outlying areas of Guam, Puerto Rico, and Virgin Islands.

Table 2. Chlamydia — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2013

Rank*	State	Cases	Rate per 100,000 Population
1	Alaska	5,774	789.4
2	Louisiana	28,739	624.5
3	Alabama	29,464	611.0
4	New Mexico	12,249	587.3
5	Mississippi	17,464	585.1
6	Delaware	5,213	568.4
7	South Carolina	25,594	541.8
8	Arkansas	15,447	523.8
9	Georgia	51,070	514.8
10	Texas	129,861	498.3
11	North Carolina	48,416	496.5
12	Illinois	63,797	495.5
13	New York	95,803	489.5
14	Oklahoma	18,278	479.1
15	Hawaii	6,640	476.9
16	South Dakota	3,927	471.2
17	Tennessee	30,370	470.4
18	Arizona	30,564	466.4
19	Ohio	53,121	460.2
20	Maryland	26,723	454.1
21	Missouri	27,328	453.8
22	Michigan	44,835	453.6
	U.S. TOTAL†	**1,401,906**	**446.6**
23	California	167,346	439.9
24	Indiana	28,023	428.7
25	Nevada	11,781	427.0
26	North Dakota	2,932	419.1
27	Florida	80,182	415.1
28	Wisconsin	23,572	411.6
29	Rhode Island	4,312	410.6
30	Pennsylvania	52,056	407.8
31	Virginia	33,316	407.0
32	Nebraska	7,301	393.5
33	Colorado	20,386	393.0
34	Kentucky	17,134	391.2
35	Kansas	11,012	381.6
36	Montana	3,818	379.8
37	Oregon	14,181	363.7
38	Washington	24,950	361.8
39	Iowa	10,953	356.3
40	Connecticut	12,775	355.8
41	Massachusetts	23,210	349.2
42	Minnesota	18,742	348.4
43	Wyoming	2,005	347.8
44	Idaho	5,428	340.2
45	New Jersey	28,327	319.6
46	Vermont	1,842	294.2
47	West Virginia	5,139	277.0
48	Utah	7,535	263.9
49	Maine	3,438	258.7
50	New Hampshire	3,119	236.2

* 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 6,414 cases and a rate of 1,014.4, but excludes outlying areas (Guam with 937 cases and rate of 585.9, Puerto Rico with 5,969 cases and rate of 162.8, and Virgin Islands with 775 cases and rate of 736.2).

Table 3. Chlamydia — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	25,929	27,041	29,626	30,621	29,464	550.7	565.7	616.9	635.0	611.0
Alaska	5,166	6,019	5,739	5,462	5,774	739.6	847.5	794.1	746.7	789.4
Arizona	26,002	26,861	29,251	30,444	30,564	394.2	420.2	451.2	464.6	466.4
Arkansas	14,354	15,424	16,052	16,611	15,447	496.8	529.0	546.4	563.3	523.8
California	146,796	150,443	166,773	167,695	167,346	397.2	403.8	442.5	440.8	439.9
Colorado	19,998	19,447	21,811	21,631	20,386	398.0	386.7	426.3	417.0	393.0
Connecticut	12,127	12,649	13,649	13,065	12,775	344.7	353.9	381.2	363.9	355.8
Delaware	4,718	4,464	4,508	4,438	5,213	533.0	497.1	496.9	483.9	568.4
District of Columbia	6,549	5,589	6,585	6,808	6,414	1,092.1	928.8	1,065.5	1,076.7	1,014.4
Florida	72,931	74,744	76,033	77,644	80,182	393.4	397.5	399.0	401.9	415.1
Georgia	39,828	45,147	54,403	52,418	51,070	405.2	466.0	554.3	528.4	514.8
Hawaii	6,026	6,015	6,001	6,340	6,640	465.3	442.2	436.5	455.4	476.9
Idaho	3,842	4,208	4,699	4,550	5,428	248.5	268.4	296.5	285.1	340.2
Illinois	60,542	60,672	64,939	67,701	63,797	468.9	472.9	504.6	525.8	495.5
Indiana	21,732	22,825	27,801	29,505	28,023	338.3	352.0	426.6	451.3	428.7
Iowa	9,406	10,542	10,705	11,377	10,953	312.7	346.1	349.6	370.1	356.3
Kansas	10,510	9,601	10,598	11,135	11,012	372.9	336.5	369.1	385.8	381.6
Kentucky	13,293	16,376	16,629	17,273	17,134	308.1	377.4	380.6	394.3	391.2
Louisiana	27,628	29,151	31,614	27,353	28,739	615.0	643.0	691.0	594.4	624.5
Maine	2,431	2,586	3,094	3,413	3,438	184.4	194.7	232.9	256.8	258.7
Maryland	23,747	26,192	27,212	26,534	26,723	416.7	453.7	466.9	450.9	454.1
Massachusetts	19,315	21,080	22,764	23,550	23,210	292.9	321.9	345.6	354.3	349.2
Michigan	45,714	49,478	49,568	47,566	44,835	458.5	500.6	501.9	481.3	453.6
Minnesota	14,197	15,294	16,902	18,056	18,742	269.6	288.4	316.2	335.7	348.4
Mississippi	23,589	21,417	21,216	23,054	17,464	799.1	721.8	712.3	772.3	585.1
Missouri	25,868	26,049	27,887	27,835	27,328	432.0	435.0	464.0	462.2	453.8
Montana	2,988	3,082	3,406	3,827	3,818	306.5	311.5	341.2	380.7	379.8
Nebraska	5,443	5,114	6,780	6,748	7,301	303.0	280.0	368.0	363.7	393.5
Nevada	10,045	9,666	10,507	11,137	11,781	380.0	357.9	385.8	403.7	427.0
New Hampshire	2,102	2,462	3,010	3,072	3,119	158.7	187.0	228.3	232.6	236.2
New Jersey	23,974	26,142	26,209	27,271	28,327	275.3	297.3	297.1	307.6	319.6
New Mexico	9,493	11,706	11,374	11,898	12,249	472.4	568.5	546.2	570.5	587.3
New York	92,069	99,920	102,763	100,546	95,803	471.1	515.6	527.9	513.8	489.5
North Carolina	41,045	42,048	54,819	50,596	48,416	437.5	441.0	567.7	518.8	496.5
North Dakota	1,957	2,404	2,445	2,908	2,932	302.5	357.4	357.5	415.6	419.1
Ohio	48,239	51,150	52,653	53,141	53,121	417.9	443.4	456.1	460.3	460.2
Oklahoma	15,023	14,302	14,596	16,843	18,278	407.5	381.2	385.0	441.5	479.1
Oregon	11,497	12,352	13,643	13,454	14,181	300.5	322.4	352.4	345.0	363.7
Pennsylvania	43,068	47,518	52,884	54,993	52,056	341.7	374.1	415.0	430.9	407.8
Rhode Island	3,615	3,480	4,146	4,313	4,312	343.2	330.6	394.4	410.6	410.6
South Carolina	26,654	26,525	28,932	27,149	25,594	584.4	573.5	618.3	574.7	541.8
South Dakota	3,015	3,192	3,409	3,924	3,927	371.1	392.1	413.7	470.9	471.2
Tennessee	29,711	28,327	31,105	32,525	30,370	471.9	446.4	485.8	503.8	470.4
Texas	105,910	119,872	124,882	127,036	129,861	427.4	476.7	486.4	487.5	498.3
Utah	6,145	6,690	7,086	7,615	7,535	220.7	242.1	251.5	266.7	263.9
Vermont	1,186	1,257	1,483	1,724	1,842	190.7	200.9	236.7	275.4	294.2
Virginia	30,903	30,797	36,314	34,963	33,316	392.0	384.9	448.5	427.1	407.0
Washington	21,387	21,348	23,280	24,596	24,950	320.9	317.5	340.8	356.6	361.8
West Virginia	3,604	3,876	4,295	4,790	5,139	198.0	209.2	231.5	258.2	277.0
Wisconsin	20,906	23,236	24,619	23,726	23,572	369.7	408.6	431.0	414.3	411.6
Wyoming	1,963	2,113	2,092	2,102	2,005	360.7	374.9	368.2	364.7	347.8
U.S. TOTAL	**1,244,180**	**1,307,893**	**1,412,791**	**1,422,976**	**1,401,906**	**405.3**	**423.6**	**453.4**	**453.3**	**446.6**
Northeast	199,887	217,094	230,002	231,947	224,882	361.6	392.5	414.3	416.0	403.3
Midwest	267,529	279,557	298,306	303,622	295,543	400.3	417.7	444.2	451.0	439.0
South	505,416	531,292	578,821	576,656	568,824	446.0	463.8	498.8	491.8	485.1
West	271,348	279,950	305,662	310,751	312,657	379.1	389.1	419.5	422.3	424.9
Guam	620	899	1,071	1,031	937	347.5	563.9	671.1	644.7	585.9
Puerto Rico	7,302	5,960	5,634	6,227	5,969	184.1	160.0	152.0	169.8	162.8
Virgin Islands	488	609	820	802	775	444.4	573.1	775.2	761.8	736.2
OUTLYING AREAS	**8,410**	**7,468**	**7,525**	**8,060**	**7,681**	**197.6**	**187.1**	**189.4**	**205.0**	**195.3**
TOTAL	**1,252,590**	**1,315,361**	**1,420,316**	**1,431,036**	**1,409,587**	**402.4**	**420.6**	**450.1**	**450.2**	**443.5**

Table 4. Chlamydia Among Women — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	19,413	20,030	21,217	22,099	21,096	799.8	814.4	857.9	889.8	849.5
Alaska	3,364	3,960	3,801	3,670	3,899	1,000.5	1,162.6	1,093.7	1,047.9	1,113.3
Arizona	19,097	19,529	21,196	22,087	21,950	580.6	607.2	650.5	670.4	666.2
Arkansas	10,689	11,303	11,921	12,247	11,334	725.2	761.5	797.3	816.1	755.3
California	101,716	102,645	114,657	114,396	112,460	551.1	547.8	605.3	598.2	588.1
Colorado	14,765	14,188	15,751	15,476	14,336	592.1	565.6	617.8	598.9	554.8
Connecticut	8,937	9,223	9,824	9,464	9,210	496.3	502.8	535.1	514.2	500.4
Delaware	3,573	3,296	3,191	3,181	3,714	784.5	711.9	682.9	672.9	785.6
District of Columbia	4,153	3,782	4,357	4,426	3,992	1,311.8	1,191.2	1,337.4	1,328.0	1,197.8
Florida	52,747	53,318	54,262	55,628	56,688	560.3	554.7	557.3	563.6	574.4
Georgia	29,074	32,863	39,829	37,456	36,559	582.2	662.8	794.6	738.9	721.2
Hawaii	4,399	4,340	4,314	4,452	4,646	686.5	639.1	629.8	644.9	673.0
Idaho	2,768	3,014	3,345	3,206	3,885	359.5	385.3	422.7	402.2	487.4
Illinois	44,560	44,598	46,728	48,575	45,764	680.2	682.1	712.9	740.9	698.1
Indiana	16,150	16,344	20,065	21,633	20,307	495.6	496.2	606.2	651.8	611.8
Iowa	6,785	7,612	7,647	8,194	7,895	445.7	494.9	495.0	528.7	509.5
Kansas	8,209	7,449	8,158	8,440	8,323	578.5	518.1	564.4	581.8	573.8
Kentucky	9,621	11,859	11,990	12,366	12,086	438.0	538.0	540.2	556.3	543.8
Louisiana	20,719	20,564	23,390	20,507	21,258	898.1	888.6	1,001.1	872.7	904.7
Maine	1,705	1,814	2,149	2,420	2,404	252.7	267.4	316.9	356.5	354.1
Maryland	18,782	19,827	20,004	19,295	19,049	639.8	664.9	665.1	635.9	627.8
Massachusetts	13,786	14,753	15,744	16,319	15,851	406.8	436.4	463.3	476.4	462.7
Michigan	33,860	36,431	36,367	34,510	32,056	668.3	723.5	723.0	685.7	636.9
Minnesota	10,204	10,965	11,827	12,568	12,950	385.7	410.4	439.7	464.3	478.4
Mississippi	17,829	15,958	15,697	16,771	12,676	1,172.2	1,045.7	1,024.6	1,092.1	825.5
Missouri	18,825	18,867	20,097	19,745	19,303	614.9	617.5	655.4	643.0	628.6
Montana	2,134	2,194	2,390	2,655	2,701	438.2	445.3	480.9	530.8	540.0
Nebraska	3,884	3,561	4,783	4,628	4,945	429.2	387.0	515.7	495.9	529.9
Nevada	7,112	6,897	7,215	7,628	8,183	548.3	515.9	534.9	557.7	598.3
New Hampshire	1,542	1,808	2,184	2,150	2,187	229.6	271.0	327.3	321.6	327.2
New Jersey	18,757	20,128	19,886	20,231	20,771	422.5	446.1	439.9	445.5	457.4
New Mexico	6,987	8,718	8,309	8,724	9,033	688.3	836.9	789.7	828.6	858.0
New York	63,882	68,693	70,466	68,337	64,454	636.1	686.9	702.3	677.9	639.4
North Carolina	33,002	33,836	42,992	39,140	37,146	688.9	691.9	868.1	782.9	743.0
North Dakota	1,297	1,577	1,603	1,898	1,923	403.0	474.0	474.7	551.9	559.2
Ohio	36,724	38,636	38,914	38,879	38,293	621.5	654.4	658.9	658.8	648.9
Oklahoma	11,101	10,297	10,349	12,341	13,065	595.2	543.6	540.8	641.1	678.7
Oregon	8,136	8,565	9,489	9,425	9,932	421.9	442.6	485.3	478.8	504.5
Pennsylvania	30,335	33,175	36,463	37,569	35,657	469.1	509.4	558.5	575.0	545.8
Rhode Island	2,603	2,478	2,984	3,091	3,044	480.5	455.4	549.5	570.3	561.6
South Carolina	21,124	20,842	22,278	20,497	19,103	902.7	877.5	927.2	844.7	787.3
South Dakota	2,214	2,300	2,491	2,801	2,793	544.7	565.4	606.2	674.9	673.0
Tennessee	21,655	20,559	22,200	22,732	21,057	671.1	632.1	676.3	687.3	636.6
Texas	82,551	92,847	95,326	96,405	96,923	665.5	732.6	737.1	735.3	739.2
Utah	4,019	4,473	4,821	5,149	5,050	290.5	325.2	343.9	362.8	355.8
Vermont	889	910	1,106	1,296	1,319	281.6	286.6	348.3	408.5	415.8
Virginia	22,390	22,348	26,283	24,670	23,167	558.7	548.4	637.9	592.4	556.3
Washington	15,741	15,634	16,641	17,271	17,452	472.0	463.3	486.5	499.8	505.1
West Virginia	2,684	2,832	3,092	3,405	3,624	289.3	301.5	328.8	362.2	385.5
Wisconsin	15,038	16,657	17,402	16,727	16,448	528.4	581.5	605.1	580.1	570.5
Wyoming	1,187	1,305	1,357	1,492	1,387	444.2	472.5	487.4	528.8	491.6
U.S. TOTAL	**912,718**	**949,802**	**1,018,552**	**1,018,272**	**993,348**	**586.7**	**605.1**	**643.4**	**638.7**	**623.1**
Northeast	142,436	152,982	160,806	160,877	154,897	502.6	537.8	563.8	562.0	541.1
Midwest	197,750	204,997	216,082	218,598	211,000	583.1	602.9	633.7	639.9	617.6
South	381,107	396,361	428,378	423,166	412,537	661.6	678.5	724.2	708.3	690.5
West	191,425	195,462	213,286	215,631	214,914	536.2	541.5	583.9	584.6	582.7
Guam	512	664	783	726	700	583.9	846.8	996.9	921.9	888.9
Puerto Rico	6,336	4,878	4,528	5,102	4,766	307.0	251.4	234.3	267.1	249.6
Virgin Islands	435	427	591	592	579	752.2	757.7	1,051.7	1,056.8	1,033.6
OUTLYING AREAS	**7,283**	**5,969**	**5,902**	**6,420**	**6,045**	**329.6**	**287.6**	**285.5**	**314.0**	**295.7**
TOTAL	**920,001**	**955,771**	**1,024,454**	**1,024,692**	**999,393**	**583.1**	**601.0**	**638.8**	**634.6**	**618.9**

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

Table 5. Chlamydia Among Men — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	6,508	6,877	7,648	8,295	8,201	285.2	296.4	328.3	354.7	350.7
Alaska	1,802	2,058	1,938	1,792	1,875	497.5	556.8	516.5	470.0	491.8
Arizona	6,904	7,331	8,052	8,354	8,610	208.8	230.8	249.8	256.4	264.2
Arkansas	3,664	4,112	4,125	4,360	4,104	258.8	287.2	285.9	301.0	283.3
California	44,592	47,239	51,554	52,983	54,679	241.0	255.1	275.0	280.1	289.0
Colorado	5,228	5,259	6,057	6,155	6,050	206.6	208.6	235.9	236.4	232.4
Connecticut	3,190	3,426	3,825	3,524	3,481	185.7	196.9	219.2	201.4	198.9
Delaware	1,145	1,168	1,317	1,257	1,499	266.5	268.5	299.4	282.9	337.3
District of Columbia	2,390	1,789	2,225	2,345	2,400	844.3	629.4	761.4	784.2	802.6
Florida	20,069	21,362	21,685	22,009	23,300	220.0	232.5	232.6	233.0	246.6
Georgia	10,513	11,965	13,978	14,521	14,063	217.4	253.0	291.0	299.3	289.9
Hawaii	1,626	1,675	1,687	1,888	1,994	248.5	245.9	244.6	269.0	284.1
Idaho	1,051	1,183	1,347	1,344	1,528	135.5	150.6	169.7	168.3	191.3
Illinois	15,964	15,957	18,083	18,977	17,943	251.0	253.6	286.4	300.3	283.9
Indiana	5,502	6,451	7,681	7,850	7,708	173.9	202.2	239.5	243.9	239.5
Iowa	2,621	2,930	3,058	3,183	3,058	176.4	194.3	201.5	208.8	200.6
Kansas	2,301	2,152	2,440	2,695	2,689	164.4	152.0	171.1	187.8	187.4
Kentucky	3,647	4,488	4,577	4,851	4,989	172.2	210.2	212.9	224.8	231.2
Louisiana	6,841	6,658	7,568	6,846	7,481	313.1	300.0	338.1	304.0	332.2
Maine	726	768	944	990	1,031	112.8	118.1	145.2	152.2	158.5
Maryland	4,885	6,336	7,197	7,193	7,654	176.7	227.0	255.2	252.4	268.5
Massachusetts	5,490	6,302	7,000	7,193	7,341	171.3	199.0	219.5	223.4	228.0
Michigan	11,675	12,926	13,095	12,962	12,683	238.1	266.6	270.2	267.2	261.5
Minnesota	3,993	4,329	5,075	5,430	5,791	152.4	164.5	191.2	203.2	216.7
Mississippi	5,760	5,459	5,519	6,281	4,788	402.5	378.8	381.5	433.4	330.4
Missouri	7,043	7,182	7,790	8,090	8,025	240.7	244.8	264.6	274.1	271.9
Montana	851	888	1,016	1,172	1,116	174.4	178.8	202.7	232.1	221.0
Nebraska	1,549	1,548	1,987	2,093	2,196	173.7	170.8	217.1	226.9	238.1
Nevada	2,931	2,768	3,290	3,508	3,590	217.7	203.0	239.3	252.2	258.0
New Hampshire	560	654	826	922	932	85.8	100.7	126.9	141.4	142.9
New Jersey	5,200	5,874	6,231	6,958	7,476	121.8	137.3	144.9	160.9	172.9
New Mexico	2,500	2,986	3,054	3,170	3,209	251.3	293.5	296.5	307.0	310.7
New York	28,171	31,224	32,126	32,147	31,273	296.6	333.0	340.6	338.8	329.6
North Carolina	7,798	8,030	11,585	11,354	11,254	169.9	172.9	246.3	238.9	236.8
North Dakota	654	822	841	1,010	1,009	201.2	241.9	242.9	283.9	283.6
Ohio	10,978	12,320	13,731	14,262	14,828	194.9	218.7	243.5	252.8	262.8
Oklahoma	3,879	3,997	3,851	4,498	5,213	212.9	215.2	205.1	238.0	275.8
Oregon	3,361	3,786	4,154	4,028	4,243	177.2	199.7	216.7	208.6	219.8
Pennsylvania	12,700	14,297	16,364	17,388	16,360	206.9	231.0	263.3	279.1	262.6
Rhode Island	1,012	1,002	1,162	1,222	1,268	197.9	197.1	228.6	240.4	249.5
South Carolina	5,418	5,653	6,585	6,588	6,432	243.9	251.2	289.2	286.8	280.0
South Dakota	788	883	914	1,123	1,134	194.1	216.8	221.2	268.5	271.1
Tennessee	8,055	7,748	8,905	9,754	9,311	262.4	250.5	285.3	309.8	295.7
Texas	23,302	26,966	29,533	30,532	31,980	188.3	216.2	231.8	235.8	247.0
Utah	2,126	2,215	2,265	2,466	2,485	151.8	159.5	160.0	171.7	173.1
Vermont	297	347	377	428	523	97.1	112.6	122.1	138.6	169.4
Virginia	8,442	8,397	9,929	10,247	10,112	217.9	213.9	249.7	254.8	251.4
Washington	5,645	5,711	6,639	7,325	7,498	169.6	170.5	194.7	212.8	217.9
West Virginia	920	1,044	1,203	1,385	1,514	103.1	114.3	131.5	151.3	165.4
Wisconsin	5,740	6,573	7,203	6,999	7,114	204.3	232.9	254.0	246.2	250.2
Wyoming	776	808	734	610	617	280.1	281.1	253.3	207.3	209.7
U.S. TOTAL	**328,783**	**353,923**	**389,970**	**402,557**	**405,652**	**217.1**	**233.2**	**254.4**	**260.6**	**262.6**
Northeast	57,346	63,894	68,855	70,772	69,685	212.8	237.8	255.0	260.8	256.8
Midwest	68,808	74,073	81,898	84,674	84,178	209.0	225.0	247.7	255.4	253.9
South	123,236	132,049	147,430	152,316	154,295	221.2	235.2	259.1	264.8	268.3
West	79,393	83,907	91,787	94,795	97,494	221.3	234.1	252.6	258.3	265.7
Guam	108	235	288	305	234	119.0	290.1	355.3	375.8	288.3
Puerto Rico	957	1,076	1,106	1,125	1,203	50.3	60.3	62.3	64.0	68.5
Virgin Islands	53	182	229	210	196	102.0	364.7	461.8	426.3	397.9
OUTLYING AREAS	**1,118**	**1,493**	**1,623**	**1,640**	**1,633**	**54.6**	**77.9**	**85.2**	**86.9**	**86.5**
TOTAL	**329,901**	**355,416**	**391,593**	**404,197**	**407,285**	**214.9**	**231.2**	**252.3**	**258.5**	**260.4**

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

Table 6. Chlamydia — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	20,337	22,203	27,372	26,470	16,429	370.2	420.0	509.0	485.0	301.0
Austin-Round Rock, TX	8,456	8,511	9,360	9,810	10,138	495.9	495.9	524.8	534.8	552.7
Baltimore-Columbia-Towson, MD	12,883	13,988	14,399	13,578	13,749	478.8	516.1	527.6	493.2	499.4
Birmingham-Hoover, AL	6,120	6,126	6,834	6,868	6,552	541.1	543.1	603.6	604.2	576.4
Boston-Cambridge-Newton, MA-NH	13,285	14,291	15,703	16,339	16,127	289.5	313.9	342.0	352.1	347.5
Buffalo-Cheektowaga-Niagara Falls, NY	5,769	5,938	5,965	6,010	5,724	513.3	522.9	526.0	529.9	504.7
Charlotte-Concord-Gastonia, NC-SC	10,474	9,060	13,257	11,548	11,418	474.9	408.7	587.2	502.8	497.2
Chicago-Naperville-Elgin, IL-IN-WI	46,505	45,726	49,590	51,329	47,837	485.4	483.3	521.7	539.0	502.4
Cincinnati, OH-KY-IN	8,868	9,791	10,044	10,234	10,207	411.4	463.0	473.2	480.8	479.5
Cleveland-Elyria, OH	10,439	11,608	12,348	12,339	12,126	499.2	558.8	597.0	598.0	587.6
Columbus, OH	9,095	9,625	9,031	8,946	9,734	487.4	506.1	469.3	460.2	500.7
Dallas-Fort Worth-Arlington, TX	27,239	29,430	32,002	31,697	30,684	419.0	458.0	486.2	473.0	457.9
Denver-Aurora-Lakewood, CO	11,803	14,320	12,710	12,764	12,131	462.5	563.0	488.9	482.5	458.6
Detroit-Warren-Dearborn, MI	25,347	27,751	26,237	24,229	22,567	575.6	645.9	612.2	564.5	525.8
Hartford-West Hartford-East Hartford, CT	4,467	4,616	4,837	4,562	4,311	373.5	380.7	398.7	375.7	355.0
Houston-The Woodlands-Sugar Land, TX	20,999	27,462	26,508	26,807	29,120	359.4	463.9	437.4	434.0	471.4
Indianapolis-Carmel-Anderson, IN	8,258	8,797	11,117	12,714	11,835	440.4	466.0	582.1	659.1	613.5
Jacksonville, FL	6,745	7,093	7,264	6,813	7,138	507.9	527.1	534.0	494.5	518.1
Kansas City, MO-KS	9,822	9,372	10,038	10,152	9,513	481.2	466.4	495.3	498.0	466.6
Las Vegas-Henderson-Paradise, NV	8,177	7,614	8,337	8,587	9,286	429.7	390.2	423.2	429.2	464.1
Los Angeles-Long Beach-Anaheim, CA	54,892	56,033	58,552	60,231	59,386	426.4	436.8	452.3	461.4	455.0
Louisville/Jefferson County, KY-IN	5,165	6,157	6,483	6,658	6,384	426.1	498.3	520.6	532.1	510.2
Memphis, TN-MS-AR	13,405	12,486	11,720	12,744	10,763	1,021.0	942.5	878.3	949.8	802.2
Miami-Fort Lauderdale-West Palm Beach, FL	19,101	19,095	19,561	20,933	22,821	344.3	343.1	345.0	363.2	396.0
Milwaukee-Waukesha-West Allis, WI	10,588	11,512	11,712	10,929	10,754	678.9	739.9	749.7	697.5	686.3
Minneapolis-St. Paul-Bloomington, MN-WI	10,018	10,975	12,143	12,144	12,227	300.0	327.7	358.5	354.9	357.3
Nashville-Davidson--Murfreesboro--Franklin, TN	6,135	6,026	6,990	7,151	7,356	368.1	360.6	411.5	414.1	426.0
New Orleans-Metairie, LA	6,812	7,050	8,124	7,118	8,134	562.5	592.5	669.8	580.1	662.9
New York-Newark-Jersey City, NY-NJ-PA	85,579	92,464	95,088	92,763	89,211	433.4	472.5	483.0	467.7	449.8
Oklahoma City, OK	5,475	4,704	5,087	5,640	6,190	446.1	375.4	398.0	435.0	477.4
Orlando-Kissimmee-Sanford, FL	9,199	9,491	9,545	9,928	10,230	441.7	444.7	439.6	446.5	460.0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	30,449	33,050	34,799	35,513	34,741	510.2	554.0	580.7	590.0	577.2
Phoenix-Mesa-Scottsdale, AZ	15,615	16,519	17,746	20,358	20,164	357.8	394.0	416.3	470.2	465.7
Pittsburgh, PA	6,597	7,096	8,436	8,994	8,605	280.1	301.2	357.5	381.0	364.5
Portland-Vancouver-Hillsboro, OR-WA	7,215	7,415	8,509	7,797	8,536	321.8	333.1	376.1	340.5	372.8
Providence-Warwick, RI-MA	4,865	4,759	5,559	5,941	5,828	303.9	297.3	347.4	371.0	363.9
Raleigh, NC	3,941	5,122	5,693	5,373	4,966	350.1	453.1	489.3	452.1	417.8
Richmond, VA	6,543	6,911	7,698	7,224	6,817	550.5	572.1	631.5	586.4	553.3
Riverside-San Bernardino-Ontario, CA	16,934	12,263	20,749	20,994	19,819	408.7	290.3	482.0	482.6	455.6
Sacramento--Roseville--Arden-Arcade, CA	6,320	8,084	10,866	9,852	9,771	297.1	376.2	499.3	448.5	444.8
Salt Lake City, UT	3,375	3,653	3,767	4,041	3,947	308.7	335.8	339.9	359.6	351.2
San Antonio-New Braunfels, TX	11,555	12,430	13,066	13,023	13,335	557.6	580.2	595.3	582.9	596.9
San Diego-Carlsbad, CA	14,169	15,341	15,346	16,524	14,706	464.0	495.6	488.7	520.1	462.9
San Francisco-Oakland-Hayward, CA	16,642	17,686	18,745	17,171	18,254	385.4	407.9	426.9	385.4	409.7
San Jose-Sunnyvale-Santa Clara, CA	5,537	5,691	5,965	4,676	6,717	301.0	309.8	319.8	246.8	354.6
Seattle-Tacoma-Bellevue, WA	11,533	11,510	12,329	12,965	12,971	338.4	334.6	352.3	365.0	365.2
St. Louis, MO-IL	14,519	14,660	15,517	14,843	14,783	517.7	525.9	555.7	530.9	528.8
Tampa-St. Petersburg-Clearwater, FL	11,835	12,158	12,595	12,274	12,752	430.8	436.8	445.9	431.7	448.6
Virginia Beach-Norfolk-Newport News, VA-NC	11,961	11,387	13,674	12,409	11,852	712.3	679.1	811.5	730.0	697.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	20,276	20,027	22,839	23,872	23,531	366.7	355.3	396.6	407.3	401.5
SELECTED MSAs TOTAL	**721,338**	**755,077**	**811,856**	**811,879**	**792,177**	**430.1**	**450.9**	**479.2**	**474.2**	**462.7**

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

Table 7. Chlamydia Among Women — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	14,241	15,556	19,507	18,298	11,221	512.1	573.1	707.7	652.7	400.2
Austin-Round Rock, TX	6,020	6,212	6,644	6,909	6,691	721.0	725.5	746.6	755.2	731.4
Baltimore-Columbia-Towson, MD	10,187	10,744	10,668	9,933	9,848	730.8	764.4	754.3	696.7	690.7
Birmingham-Hoover, AL	4,530	4,525	4,834	4,866	4,486	774.5	775.0	824.1	826.1	761.6
Boston-Cambridge-Newton, MA-NH	9,369	9,937	10,747	11,234	10,791	398.0	422.9	454.1	469.9	451.4
Buffalo-Cheektowaga-Niagara Falls, NY	4,254	4,386	4,370	4,317	4,024	731.7	746.5	745.7	737.4	687.3
Charlotte-Concord-Gastonia, NC-SC	8,112	7,101	10,024	8,731	8,605	721.5	624.2	864.7	740.1	729.4
Chicago-Naperville-Elgin, IL-IN-WI	34,202	33,360	35,360	36,701	34,216	702.6	689.5	728.0	754.3	703.2
Cincinnati, OH-KY-IN	7,238	7,740	7,763	7,750	7,527	656.4	716.1	715.9	713.0	692.5
Cleveland-Elyria, OH	7,755	8,556	9,065	8,877	8,550	714.7	793.1	844.7	829.5	798.9
Columbus, OH	6,688	6,947	6,266	6,280	6,749	707.7	717.8	640.2	635.3	682.8
Dallas-Fort Worth-Arlington, TX	21,314	22,979	24,221	24,018	22,744	659.7	705.4	726.5	707.6	670.0
Denver-Aurora-Lakewood, CO	8,617	10,458	9,143	9,117	8,447	677.3	817.7	700.4	686.4	636.0
Detroit-Warren-Dearborn, MI	18,870	20,530	19,161	17,460	16,152	836.7	927.2	867.8	789.8	730.6
Hartford-West Hartford-East Hartford, CT	3,250	3,324	3,470	3,301	3,109	530.6	534.2	557.6	529.8	499.0
Houston-The Woodlands-Sugar Land, TX	16,710	21,875	20,956	20,858	22,027	573.5	735.0	688.2	672.3	710.0
Indianapolis-Carmel-Anderson, IN	5,844	5,976	7,579	8,899	8,149	613.0	619.1	776.3	902.5	826.4
Jacksonville, FL	4,874	5,191	5,213	4,812	5,131	716.5	752.4	746.9	680.7	725.8
Kansas City, MO-KS	7,219	6,800	7,278	7,295	6,795	694.9	662.8	703.8	701.5	653.4
Las Vegas-Henderson-Paradise, NV	5,874	5,537	5,777	5,942	6,571	628.5	571.4	590.2	597.1	660.3
Los Angeles-Long Beach-Anaheim, CA	36,965	37,486	38,802	39,470	38,456	571.1	576.7	592.0	597.1	581.8
Louisville/Jefferson County, KY-IN	3,760	4,545	4,745	4,884	4,574	605.9	718.4	744.1	762.7	714.3
Memphis, TN-MS-AR	10,195	9,542	8,767	9,367	7,717	1,496.0	1,385.5	1,263.3	1,342.7	1,106.2
Miami-Fort Lauderdale-West Palm Beach, FL	13,788	13,566	13,815	14,692	15,645	485.5	472.5	473.5	495.4	527.5
Milwaukee-Waukesha-West Allis, WI	7,747	8,376	8,397	7,760	7,463	970.2	1,048.2	1,047.4	964.7	927.8
Minneapolis-St. Paul-Bloomington, MN-WI	7,103	7,788	8,371	8,326	8,293	422.7	459.4	488.7	481.1	479.2
Nashville-Davidson--Murfreesboro--Franklin, TN	4,359	4,250	4,942	4,928	5,084	514.3	497.5	568.7	557.8	575.5
New Orleans-Metairie, LA	4,953	5,134	6,056	5,326	6,062	788.2	840.7	972.3	843.9	960.5
New York-Newark-Jersey City, NY-NJ-PA	60,491	64,520	65,988	63,588	60,539	595.3	636.7	648.2	620.5	590.7
Oklahoma City, OK	3,912	3,292	3,518	3,951	4,430	627.6	517.9	543.3	601.6	674.6
Orlando-Kissimmee-Sanford, FL	6,740	6,777	6,993	7,373	7,503	640.8	621.9	631.1	649.6	661.0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	21,297	22,863	23,928	24,166	23,532	690.9	740.7	772.0	776.5	756.1
Phoenix-Mesa-Scottsdale, AZ	11,405	11,892	12,696	14,396	14,206	529.1	564.3	592.8	661.6	652.8
Pittsburgh, PA	4,884	5,146	5,963	6,325	6,046	400.3	422.5	489.5	519.7	496.7
Portland-Vancouver-Hillsboro, OR-WA	5,069	5,091	5,824	5,359	5,809	450.0	451.8	508.8	462.8	501.6
Providence-Warwick, RI-MA	3,503	3,433	4,022	4,256	4,124	425.1	415.1	486.9	515.3	499.3
Raleigh, NC	2,918	3,525	3,951	3,691	3,490	513.4	609.5	663.4	606.8	573.8
Richmond, VA	4,736	5,161	5,599	5,083	4,792	774.3	826.7	889.1	798.4	752.7
Riverside-San Bernardino-Ontario, CA	12,305	8,810	15,241	15,296	14,536	595.5	414.8	704.9	700.5	665.7
Sacramento--Roseville--Arden-Arcade, CA	4,589	5,754	7,874	7,122	6,915	425.7	525.2	709.9	635.9	617.4
Salt Lake City, UT	2,137	2,386	2,517	2,679	2,541	395.2	441.3	457.0	479.6	454.9
San Antonio-New Braunfels, TX	8,566	8,972	9,286	9,436	9,576	811.6	823.1	832.0	832.1	844.5
San Diego-Carlsbad, CA	10,050	10,538	10,395	11,102	9,684	660.5	683.6	664.9	702.5	612.8
San Francisco-Oakland-Hayward, CA	10,618	10,940	11,733	10,391	10,845	489.6	497.8	527.7	460.5	480.6
San Jose-Sunnyvale-Santa Clara, CA	3,989	3,951	4,187	3,260	4,530	443.2	431.6	450.7	345.9	480.7
Seattle-Tacoma-Bellevue, WA	8,062	8,000	8,259	8,460	8,411	473.1	463.0	470.9	474.8	472.1
St. Louis, MO-IL	10,460	10,468	11,077	10,351	10,364	722.8	727.9	769.0	717.8	718.7
Tampa-St. Petersburg-Clearwater, FL	8,323	8,527	8,913	8,738	8,948	590.9	593.9	612.5	596.5	610.8
Virginia Beach-Norfolk-Newport News, VA-NC	8,512	8,106	9,798	8,771	8,259	991.1	948.5	1,141.0	1,015.2	956.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	14,552	14,263	15,946	16,349	15,768	515.6	493.1	540.4	544.5	525.2
SELECTED MSAs TOTAL	**521,156**	**540,836**	**575,649**	**570,494**	**549,975**	**612.3**	**632.3**	**665.7**	**653.1**	**629.6**

* MSAs were selected on the basis of the largest population in the 2010 U.S. Census.
Note: Cases reported with unknown sex are not included in this table.

Table 8. Chlamydia Among Men — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	5,934	6,482	7,563	7,917	5,061	218.7	252.0	288.6	298.3	190.7
Austin-Round Rock, TX	2,430	2,290	2,710	2,890	2,592	279.3	266.2	303.2	314.3	281.9
Baltimore-Columbia-Towson, MD	2,665	3,231	3,723	3,608	3,889	205.5	247.6	283.2	271.8	293.0
Birmingham-Hoover, AL	1,588	1,545	1,852	1,985	2,031	290.7	283.9	339.4	362.5	370.9
Boston-Cambridge-Newton, MA-NH	3,891	4,334	4,946	5,086	5,328	174.1	196.7	222.4	226.0	236.8
Buffalo-Cheektowaga-Niagara Falls, NY	1,515	1,552	1,595	1,693	1,700	279.3	283.2	291.1	308.5	309.8
Charlotte-Concord-Gastonia, NC-SC	2,341	1,948	3,191	2,794	2,804	216.5	180.5	290.5	250.2	251.1
Chicago-Naperville-Elgin, IL-IN-WI	12,273	12,250	14,110	14,518	13,553	260.4	265.0	303.6	311.8	291.1
Cincinnati, OH-KY-IN	1,566	2,017	2,279	2,482	2,676	148.7	195.1	219.5	238.3	256.9
Cleveland-Elyria, OH	2,579	3,016	3,283	3,462	3,576	256.3	302.1	329.9	348.5	360.0
Columbus, OH	2,330	2,646	2,762	2,666	2,985	253.0	283.2	292.2	279.0	312.4
Dallas-Fort Worth-Arlington, TX	5,921	6,445	7,778	7,669	7,916	181.0	203.4	239.5	231.9	239.4
Denver-Aurora-Lakewood, CO	3,184	3,862	3,564	3,647	3,684	248.8	305.4	275.4	276.9	279.7
Detroit-Warren-Dearborn, MI	6,329	7,134	7,011	6,718	6,350	294.6	342.6	337.4	322.8	305.1
Hartford-West Hartford-East Hartford, CT	1,217	1,292	1,367	1,245	1,181	208.6	219.0	231.3	210.5	199.7
Houston-The Woodlands-Sugar Land, TX	4,253	5,550	5,550	5,944	7,078	145.2	188.5	184.1	193.3	230.2
Indianapolis-Carmel-Anderson, IN	2,394	2,814	3,513	3,802	3,681	259.7	305.0	376.3	403.2	390.4
Jacksonville, FL	1,868	1,893	2,047	2,001	1,989	288.3	288.7	309.1	298.2	296.5
Kansas City, MO-KS	2,603	2,572	2,760	2,857	2,718	259.7	261.5	278.1	286.1	272.1
Las Vegas-Henderson-Paradise, NV	2,301	2,076	2,558	2,644	2,708	237.7	211.4	258.1	262.9	269.3
Los Angeles-Long Beach-Anaheim, CA	17,728	18,343	19,577	20,633	20,831	276.9	289.9	306.3	320.3	323.3
Louisville/Jefferson County, KY-IN	1,392	1,601	1,710	1,744	1,781	235.3	265.5	281.4	285.4	291.5
Memphis, TN-MS-AR	3,209	2,938	2,953	3,377	3,046	508.2	461.8	461.1	524.3	472.9
Miami-Fort Lauderdale-West Palm Beach, FL	5,304	5,523	5,721	6,238	7,134	195.9	205.0	207.8	223.0	255.0
Milwaukee-Waukesha-West Allis, WI	2,767	3,134	3,312	3,169	3,284	363.5	414.1	435.5	415.5	430.6
Minneapolis-St. Paul-Bloomington, MN-WI	2,915	3,187	3,772	3,813	3,933	175.7	192.7	225.3	225.4	232.5
Nashville-Davidson--Murfreesboro--Franklin, TN	1,776	1,767	2,048	2,185	2,271	216.9	216.4	246.8	259.1	269.3
New Orleans-Metairie, LA	1,836	1,714	2,043	1,792	2,072	315.1	295.9	346.3	300.7	347.7
New York-Newark-Jersey City, NY-NJ-PA	25,060	27,844	28,877	29,065	28,546	261.4	295.2	303.7	303.3	297.9
Oklahoma City, OK	1,536	1,410	1,457	1,688	1,760	254.3	228.4	231.1	263.8	275.1
Orlando-Kissimmee-Sanford, FL	2,452	2,705	2,539	2,555	2,708	237.9	258.9	238.8	234.7	248.8
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	9,129	10,146	10,817	11,314	11,178	316.4	352.4	373.9	389.2	384.6
Phoenix-Mesa-Scottsdale, AZ	4,210	4,626	5,047	5,960	5,957	190.6	221.8	237.9	276.8	276.6
Pittsburgh, PA	1,712	1,947	2,471	2,668	2,550	150.8	171.1	216.5	233.3	223.0
Portland-Vancouver-Hillsboro, OR-WA	2,146	2,323	2,685	2,437	2,723	192.4	211.4	240.2	215.3	240.6
Providence-Warwick, RI-MA	1,360	1,325	1,536	1,683	1,702	175.1	171.2	198.4	217.1	219.5
Raleigh, NC	999	1,577	1,723	1,673	1,474	179.2	285.6	303.4	288.3	254.0
Richmond, VA	1,786	1,727	2,053	2,129	2,011	309.6	295.8	348.4	357.6	337.8
Riverside-San Bernardino-Ontario, CA	4,622	3,437	5,412	5,683	5,271	222.5	163.6	252.6	262.3	243.3
Sacramento--Roseville--Arden-Arcade, CA	1,682	2,287	2,960	2,712	2,846	160.3	217.1	277.4	251.9	264.4
Salt Lake City, UT	1,238	1,267	1,250	1,362	1,406	224.1	231.5	224.2	241.0	248.8
San Antonio-New Braunfels, TX	2,986	3,458	3,780	3,587	3,757	293.7	328.6	350.4	326.1	341.5
San Diego-Carlsbad, CA	4,097	4,785	4,925	5,418	5,013	267.4	308.0	312.3	339.3	313.9
San Francisco-Oakland-Hayward, CA	5,909	6,645	6,948	6,739	7,370	274.9	310.8	320.5	306.5	335.2
San Jose-Sunnyvale-Santa Clara, CA	1,513	1,649	1,667	1,353	2,186	161.0	179.0	178.0	142.1	229.6
Seattle-Tacoma-Bellevue, WA	3,471	3,509	4,070	4,505	4,560	203.7	205.0	233.1	254.5	257.6
St. Louis, MO-IL	4,059	4,190	4,436	4,474	4,411	299.0	310.5	328.1	330.5	325.8
Tampa-St. Petersburg-Clearwater, FL	3,441	3,601	3,657	3,532	3,752	257.0	267.2	267.0	256.3	272.3
Virginia Beach-Norfolk-Newport News, VA-NC	3,420	3,275	3,857	3,631	3,584	416.9	398.3	466.8	434.3	428.7
Washington-Arlington-Alexandria, DC-VA-MD-WV	5,660	5,720	6,867	7,461	7,725	209.0	208.5	244.6	261.1	270.3
SELECTED MSAs TOTAL	**198,597**	**212,609**	**234,332**	**240,208**	**240,342**	**240.4**	**259.6**	**282.5**	**286.5**	**286.7**

* MSAs were selected on the basis of the largest population in the 2010 U.S. Census.
Note: Cases reported with unknown sex are not included in this table.

Table 9. Chlamydia — Reported Cases and Rates of Reported Cases in Counties and Independent Cities Ranked by Number of Reported Cases, United States, 2013

Rank†	County/Independent City	Cases	Rate per 100,000 Population	Cumulative Percentage
1	Los Angeles County, CA	50,775	509.6	3
2	Cook County, IL	34,589	661.2	6
3	Harris County, TX	23,698	557.1	7
4	Philadelphia County, PA	19,570	1,264.5	9
5	Maricopa County, AZ	18,940	480.4	10
6	Kings County, NY	17,808	694.1	11
7	Bronx County, NY	16,116	1,144.2	12
8	Wayne County, MI	15,723	877.2	14
9	San Diego County, CA	14,706	462.9	15
10	Dallas County, TX	14,691	598.7	16
11	Bexar County, TX	11,826	662.3	17
12	New York County, NY	11,426	705.7	17
13	Queens County, NY	11,092	488.0	18
14	San Bernardino County, CA	10,966	526.9	19
15	Miami-Dade County, FL	10,287	397.0	20
16	Cuyahoga County, OH	10,025	792.4	20
17	Milwaukee County, WI	9,734	1,019.0	21
18	Clark County, NV	9,286	464.1	22
19	Marion County, IN	9,282	1,010.0	22
20	Riverside County, CA	8,853	390.2	23
21	Tarrant County, TX	8,774	466.7	24
22	Orange County, CA	8,611	278.7	24
23	Shelby County, TN	8,471	900.4	25
24	Broward County, FL	8,048	443.4	25
25	Sacramento County, CA	7,965	549.3	26
26	Franklin County, OH	7,825	654.5	27
27	Baltimore (City), MD	7,765	1,249.7	27
28	Hillsborough County, FL	7,167	560.9	28
29	Travis County, TX	6,839	624.2	28
30	Orange County, FL	6,803	565.9	29
31	King County, WA	6,792	338.3	29
32	Hamilton County, OH	6,584	820.9	30
33	Santa Clara County, CA	6,517	354.7	30
34	Kern County, CA	6,508	760.1	30
35	Alameda County, CA	6,479	416.7	31
36	Washington, D.C.	6,414	1,014.4	31
37	Fresno County, CA	6,390	674.1	32
38	Prince George's County, MD	6,163	699.4	32
39	Allegheny County, PA	6,095	495.8	33
40	Mecklenburg County, NC	6,087	628.2	33
41	Suffolk County, MA	5,785	777.1	34
42	Hennepin County, MN	5,766	486.8	34
43	Duval County, FL	5,720	650.3	34
44	El Paso County, TX	5,583	674.8	35
45	Denver County, CO	5,380	848.2	35
46	Jefferson County, AL	5,290	801.5	36
47	Essex County, NJ	5,221	662.8	36
48	St. Louis County, MO	5,211	520.9	36
49	Pima County, AZ	5,192	523.2	37
50	Honolulu County, HI	5,185	531.0	37
51	San Francisco County, CA	5,112	619.0	37
52	Jackson County, MO	5,078	749.7	38
53	Jefferson County, KY	4,944	658.5	38
54	Erie County, NY	4,892	532.3	38
55	Bernalillo County, NM	4,604	683.6	39
56	Monroe County, NY	4,582	612.7	39
57	Palm Beach County, FL	4,486	330.7	39
58	Contra Costa County, CA	4,443	411.5	40
59	Fulton County, GA	4,416	451.6	40
60	Oklahoma County, OK	4,300	579.7	40
61	Pierce County, WA	4,294	529.0	41
62	Wake County, NC	4,210	442.2	41
63	St. Louis (City), MO	4,128	1,297.4	41
64	Pinellas County, FL	4,080	442.8	42
65	Orleans Parish, LA	4,064	1,100.6	42
66	Davidson County, TN	3,965	611.6	42
67	Multnomah County, OR	3,933	518.0	42
68	Salt Lake County, UT	3,806	357.8	43
69	New Haven County, CT	3,799	440.3	43
70	Hartford County, CT	3,759	418.9	43

* Accounting for 43% of reported chlamydia cases.

† Counties and independent cities were ranked in descending order by number of cases reported then by rate in 2013.

Table 10. Chlamydia — Reported Cases and Rates of Reported Cases by Age Group and Sex, United States, 2009–2013

Age Group	Cases				Rates*			
	Total	Male	Female	Unknown Sex	Total	Male	Female	
0–4	1,022	339	676	7	4.8	3.1	6.5	2009
5–9	187	33	154	0	0.9	0.3	1.5	
10–14	13,899	1,405	12,447	47	69.6	13.7	127.6	
15–19	429,173	80,725	347,597	851	1,992.6	730.5	3,314.7	
20–24	454,760	120,975	332,946	839	2,111.3	1,090.5	3,187.3	
25–29	190,481	62,437	127,708	336	878.7	561.7	1,209.1	
30–34	77,606	28,344	49,103	159	390.2	280.4	502.0	
35–39	36,286	14,859	21,354	73	176.7	143.5	209.7	
40–44	18,263	8,750	9,467	46	87.0	83.3	90.3	
45–54	15,033	7,818	7,183	32	33.7	35.6	31.8	
55–64	3,365	1,787	1,573	5	9.7	10.6	8.7	
65+	946	472	471	3	2.4	2.8	2.1	
Unknown Age	3,159	839	2,039	281				
TOTAL	**1,244,180**	**328,783**	**912,718**	**2,679**	**405.3**	**217.1**	**586.7**	
0–4	964	327	619	18	4.8	3.2	6.3	2010
5–9	188	26	158	4	0.9	0.3	1.6	
10–14	14,531	1,590	12,860	81	70.3	15.0	127.4	
15–19	441,342	85,570	354,252	1,520	2,002.4	757.0	3,299.5	
20–24	488,996	131,686	355,994	1,316	2,265.3	1,195.6	3,367.4	
25–29	197,525	66,470	130,561	494	936.1	625.0	1,247.4	
30–34	83,408	31,230	51,925	253	417.8	312.4	521.0	
35–39	38,384	15,861	22,421	102	190.2	157.9	221.2	
40–44	19,614	9,594	9,931	89	93.9	92.3	94.6	
45–54	16,106	8,635	7,423	48	35.8	39.0	32.5	
55–64	3,523	1,834	1,674	15	9.7	10.4	8.9	
65+	954	464	481	9	2.4	2.7	2.1	
Unknown Age	2,358	636	1,503	219				
TOTAL	**1,307,893**	**353,923**	**949,802**	**4,168**	**423.6**	**233.2**	**605.1**	
0–4	747	284	458	5	3.7	2.8	4.6	2011
5–9	143	24	118	1	0.7	0.2	1.2	
10–14	15,405	1,743	13,588	74	74.4	16.5	134.3	
15–19	459,029	90,764	366,818	1,447	2,120.8	816.3	3,485.2	
20–24	542,947	147,948	393,534	1,465	2,450.8	1,307.8	3,630.0	
25–29	214,534	73,357	140,628	549	1,008.2	681.7	1,337.0	
30–34	91,787	34,971	56,562	254	447.5	340.1	553.0	
35–39	40,734	16,911	23,711	112	207.9	173.2	241.1	
40–44	21,654	10,460	11,120	74	102.9	100.0	105.2	
45–54	18,136	9,910	8,182	44	40.6	45.0	36.0	
55–64	4,210	2,300	1,903	7	11.1	12.5	9.7	
65+	1,064	569	486	9	2.6	3.2	2.1	
Unknown Age	2,401	729	1,444	228				
TOTAL	**1,412,791**	**389,970**	**1,018,552**	**4,269**	**453.4**	**254.4**	**643.4**	
0–4	774	272	495	7	3.9	2.7	5.1	2012
5–9	151	17	134	0	0.7	0.2	1.3	
10–14	14,355	1,655	12,673	27	69.5	15.7	125.5	
15–19	433,239	86,150	346,430	659	2,028.2	785.8	3,331.7	
20–24	554,173	152,772	400,629	772	2,453.9	1,322.8	3,630.9	
25–29	224,014	77,666	146,037	311	1,046.9	716.2	1,383.8	
30–34	97,736	38,011	59,594	131	467.4	362.2	572.1	
35–39	43,660	18,274	25,313	73	224.0	188.1	259.0	
40–44	23,882	11,596	12,245	41	113.6	110.9	115.9	
45–54	20,321	11,332	8,961	28	45.9	52.0	39.9	
55–64	4,950	2,783	2,161	6	12.8	15.0	10.8	
65+	1,134	602	525	7	2.6	3.2	2.2	
Unknown Age	4,587	1,427	3,075	85				
TOTAL	**1,422,976**	**402,557**	**1,018,272**	**2,147**	**453.3**	**260.6**	**638.7**	
0–4	681	266	402	13	3.4	2.6	4.1	2013
5–9	145	20	123	2	0.7	0.2	1.2	
10–14	12,585	1,554	11,001	30	60.9	14.7	108.9	
15–19	395,612	78,404	316,438	770	1,852.1	715.2	3,043.3	
20–24	553,658	153,102	399,545	1,011	2,451.6	1,325.6	3,621.1	
25–29	233,429	82,190	150,733	506	1,090.9	757.9	1,428.3	
30–34	103,675	41,017	62,414	244	495.8	390.9	599.2	
35–39	46,991	20,157	26,720	114	241.1	207.5	273.4	
40–44	24,774	12,200	12,501	73	117.8	116.6	118.3	
45–54	21,511	12,180	9,299	32	48.6	55.9	41.4	
55–64	5,424	3,154	2,259	11	14.1	17.0	11.3	
65+	1,377	750	616	11	3.2	4.0	2.5	
Unknown Age	2,044	658	1,297	89				
TOTAL	**1,401,906**	**405,652**	**993,348**	**2,906**	**446.6**	**262.6**	**623.1**	

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

Note: This table should be used only for age comparisons. Cases in the 0–4 age group may include cases due to perinatal transmission.

Table 11A. Chlamydia — Reported Cases by Race/Ethnicity, Age Group, and Sex, United States*, 2013

Age Group	American Indians/ Alaska Natives			Asians			Blacks, Non-Hispanic		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	1	0	1	8	2	6	139	52	87
5–9	1	1	0	1	0	1	40	4	36
10–14	189	14	175	46	2	44	4,415	654	3,750
15–19	4,022	739	3,282	2,313	296	2,013	119,385	28,712	90,577
20–24	5,267	1,135	4,130	5,634	1,248	4,380	149,739	46,479	103,170
25–29	2,714	628	2,084	3,264	998	2,261	57,402	22,563	34,804
30–34	1,250	306	943	1,685	615	1,066	23,876	10,841	13,022
35–39	524	129	395	879	350	528	10,207	5,269	4,930
40–44	254	68	186	513	227	286	4,977	2,962	2,008
45–54	209	67	141	467	227	240	4,137	2,613	1,519
55–64	44	11	33	138	67	70	1,049	660	388
65+	8	4	4	31	14	17	154	96	58
Unknown Age	15	8	7	20	9	11	245	99	143
TOTAL	**14,498**	**3,110**	**11,381**	**14,999**	**4,055**	**10,923**	**375,765**	**121,004**	**254,492**

Age Group	Native Hawaiians/ Other Pacific Islanders			Whites, Non-Hispanic			Multirace		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	3	0	3	128	55	71	3	1	2
5–9	0	0	0	21	1	20	1	0	1
10–14	20	1	19	1,849	101	1,746	79	4	75
15–19	699	97	602	82,131	11,894	70,185	2,036	333	1,703
20–24	1,263	262	1,001	132,378	34,140	98,148	2,412	664	1,748
25–29	679	181	498	54,838	19,036	35,758	907	331	576
30–34	294	90	204	22,993	9,115	13,853	353	148	205
35–39	103	36	67	9,578	4,242	5,325	124	59	64
40–44	58	29	29	5,324	2,787	2,532	63	37	26
45–54	31	15	16	5,011	3,272	1,738	61	39	22
55–64	5	5	0	1,222	887	335	5	3	2
65+	1	0	1	260	189	71	2	2	0
Unknown Age	5	1	4	307	98	205	6	1	5
TOTAL	**3,161**	**717**	**2,444**	**316,040**	**85,817**	**229,987**	**6,052**	**1,622**	**4,429**

Age Group	Hispanics			Other/Unknown		
	Total†	Male	Female	Total†	Male	Female
0–4	87	30	56	211	84	118
5–9	27	5	22	34	5	27
10–14	1,319	148	1,171	2,640	333	2,291
15–19	47,557	8,565	38,951	86,597	16,561	69,506
20–24	70,663	17,742	52,830	120,508	31,880	87,946
25–29	33,276	10,657	22,575	52,251	17,296	34,607
30–34	15,620	5,411	10,184	24,810	9,143	15,510
35–39	7,431	2,660	4,761	12,060	4,732	7,254
40–44	3,489	1,396	2,085	6,668	2,979	3,644
45–54	2,439	1,166	1,270	5,824	3,009	2,797
55–64	441	205	236	1,654	911	734
65+	102	54	48	540	270	266
Unknown Age	228	73	150	733	270	405
TOTAL	**182,679**	**48,112**	**134,339**	**314,530**	**87,473**	**225,105**

* Includes 46 states and the District of Columbia reporting race/ethnicity data in the Office of Management and Budget compliant formats in 2013.
† Total includes cases reported with unknown sex.
Note: These tables should be used only for race/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 per 100,000 Population by Race/Ethnicity, Age Group, and Sex, United States*, 2013

Age Group	American Indians/ Alaska Natives			Asians			Blacks, Non-Hispanic		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0.6	0.0	1.3	1.0	0.5	1.5	5.9	4.3	7.5
5–9	0.6	1.2	0.0	0.1	0.0	0.2	1.7	0.3	3.1
10–14	116.4	16.9	219.5	5.8	0.5	11.1	178.0	51.9	307.6
15–19	2,376.9	855.1	3,964.1	284.1	71.5	503.2	4,467.5	2,109.6	6,907.6
20–24	2,977.2	1,255.8	4,772.6	564.5	246.4	890.8	5,308.0	3,282.5	7,342.7
25–29	1,784.9	824.0	2,747.9	294.3	185.4	396.0	2,428.5	1,957.6	2,873.6
30–34	889.7	437.3	1,337.1	147.6	115.4	175.2	1,045.7	993.3	1,092.6
35–39	405.9	202.5	604.0	77.1	65.3	87.3	489.2	533.6	448.6
40–44	189.3	102.9	273.2	46.2	43.7	48.4	226.3	284.1	173.6
45–54	72.5	48.4	94.2	25.3	26.4	24.3	91.3	122.1	63.6
55–64	19.4	10.2	27.6	9.4	10.2	8.6	29.7	40.7	20.2
65+	4.3	4.8	3.9	2.2	2.3	2.1	5.1	7.9	3.2
Unknown Age									
TOTAL	**697.9**	**304.0**	**1,079.2**	**111.5**	**63.5**	**154.6**	**1,147.2**	**771.1**	**1,491.7**

Age Group	Native Hawaiians/ Other Pacific Islanders			Whites, Non-Hispanic			Multirace		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	7.9	0.0	16.2	1.4	1.2	1.6	0.4	0.2	0.5
5–9	0.0	0.0	0.0	0.2	0.0	0.4	0.1	0.0	0.3
10–14	54.0	5.2	106.3	18.6	2.0	36.1	12.5	1.2	24.0
15–19	1,806.3	488.9	3,192.6	786.1	221.3	1,383.3	367.6	119.4	619.6
20–24	2,709.0	1,084.9	4,454.2	1,173.6	594.0	1,774.2	528.4	297.9	748.4
25–29	1,495.0	775.2	2,256.6	502.3	344.3	663.6	256.8	196.9	311.1
30–34	700.6	417.9	998.4	214.7	168.6	261.3	113.8	100.9	125.3
35–39	285.4	194.8	380.4	95.6	84.1	107.1	48.8	49.2	47.7
40–44	170.7	169.4	172.1	46.2	48.1	44.1	26.7	33.1	21.0
45–54	48.7	47.3	50.0	18.9	24.9	13.0	14.6	19.5	10.0
55–64	11.1	22.7	0.0	4.9	7.2	2.6	1.6	2.1	1.3
65+	2.9	0.0	5.3	0.9	1.4	0.4	0.8	1.8	0.0
Unknown Age									
TOTAL	**633.3**	**284.3**	**989.6**	**180.3**	**99.4**	**258.5**	**113.4**	**61.9**	**163.0**

Age Group	Hispanics		
	Total†	Male	Female
0–4	1.8	1.2	2.4
5–9	0.6	0.2	1.0
10–14	30.4	6.7	55.1
15–19	1,128.8	394.0	1,910.3
20–24	1,689.6	803.1	2,677.5
25–29	836.5	502.7	1,214.9
30–34	398.8	263.6	546.5
35–39	204.2	142.2	269.0
40–44	104.4	81.6	127.7
45–54	45.6	43.1	48.1
55–64	13.5	12.9	13.9
65+	3.6	4.4	3.0
Unknown Age			
TOTAL	**377.0**	**195.2**	**564.2**

* Includes 46 states and the District of Columbia reporting race/ethnicity data in the Office of Management and Budget compliant formats in 2013.
† Total includes cases reported with unknown sex.
Note: These tables should be used only for race/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 12. Chlamydia Among Women 15–25 Years of Age — Reported Cases and Rates of Reported Cases by Age, United States, 2009–2013

	Age	Cases	Rate per 100,000 Population
2009	15	25,118	1,246.0
	16	47,662	2,316.9
	17	72,782	3,466.4
	18	98,822	4,626.6
	19	103,213	4,738.9
	20	92,398	4,384.4
	21	78,650	3,775.1
	22	64,631	3,122.6
	23	53,362	2,558.1
	24	43,905	2,091.4
	25	35,465	1,720.0
2010	15	25,432	1,231.1
	16	48,233	2,296.7
	17	73,089	3,428.0
	18	100,399	4,573.2
	19	107,099	4,774.3
	20	99,175	4,485.9
	21	84,674	3,973.3
	22	69,755	3,342.6
	23	56,264	2,734.2
	24	46,126	2,212.0
	25	37,155	1,768.4
2011	15	25,792	1,272.2
	16	48,942	2,368.5
	17	75,143	3,569.5
	18	104,501	4,902.9
	19	112,440	5,122.9
	20	107,958	4,804.7
	21	95,195	4,236.2
	22	77,799	3,605.2
	23	62,339	2,953.3
	24	50,243	2,417.5
	25	40,711	1,943.9
2012	15	24,453	1,207.2
	16	45,041	2,212.8
	17	69,465	3,346.4
	18	99,459	4,699.5
	19	108,012	5,036.6
	20	104,425	4,727.7
	21	96,456	4,266.0
	22	81,292	3,593.9
	23	65,473	3,011.7
	24	52,983	2,489.8
	25	41,911	1,999.6
2013	15	21,680	1,070.3
	16	40,528	1,991.1
	17	61,666	2,970.7
	18	90,330	4,268.2
	19	102,234	4,767.2
	20	99,556	4,507.3
	21	93,713	4,144.7
	22	81,884	3,620.0
	23	68,600	3,155.5
	24	55,792	2,621.8
	25	44,330	2,115.0

Note: This table should be used only for age comparisons. 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, 2013

Rank*	State	Cases	Rate per 100,000 Population
1	Louisiana	8,669	188.4
2	Alabama	8,377	173.7
3	Mississippi	5,096	170.7
4	Alaska	1,128	154.2
5	South Carolina	7,194	152.3
6	Delaware	1,390	151.6
7	Ohio	16,619	144.0
8	Georgia	14,252	143.7
9	North Carolina	13,666	140.1
10	Oklahoma	5,303	139.0
11	Arkansas	4,007	135.9
12	Texas	33,835	129.8
13	Illinois	16,464	127.9
14	Missouri	7,546	125.3
15	Tennessee	7,376	114.2
16	Indiana	7,144	109.3
17	Pennsylvania	13,874	108.7
18	Florida	20,818	107.8
19	Michigan	10,569	106.9
	U.S. TOTAL†	**333,004**	**106.1**
20	New York	19,919	101.8
21	Maryland	5,989	101.8
22	California	38,166	100.3
23	Kentucky	4,315	98.5
24	Nevada	2,714	98.4
25	Arizona	6,412	97.8
26	South Dakota	784	94.1
27	New Mexico	1,918	92.0
28	Virginia	6,952	84.9
29	Wisconsin	4,599	80.3
30	Connecticut	2,860	79.7
31	New Jersey	7,014	79.1
32	Kansas	2,161	74.9
33	Nebraska	1,385	74.6
34	Minnesota	3,873	72.0
35	North Dakota	492	70.3
36	Washington	4,369	63.3
37	West Virginia	1,063	57.3
38	Colorado	2,820	54.4
39	Hawaii	718	51.6
40	Iowa	1,472	47.9
41	Massachusetts	3,106	46.7
42	Oregon	1,729	44.3
43	Rhode Island	454	43.2
44	Utah	951	33.3
45	Montana	224	22.3
46	Maine	245	18.4
47	Vermont	97	15.5
48	Idaho	211	13.2
49	Wyoming	66	11.5
50	New Hampshire	121	9.2

* 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 2,478 cases and a rate of 391.9, but excludes outlying areas (Guam with 92 cases and rate of 57.5, Puerto Rico with 356 cases and rate of 9.7, and Virgin Islands with 58 cases and rate of 55.1).

Table 14. Gonorrhea — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	7,498	7,933	9,132	9,270	8,377	159.2	166.0	190.1	192.2	173.7
Alaska	990	1,273	984	726	1,128	141.7	179.2	136.2	99.3	154.2
Arizona	3,250	3,249	4,564	5,809	6,412	49.3	50.8	70.4	88.6	97.8
Arkansas	4,460	4,769	4,687	4,307	4,007	154.4	163.6	159.5	146.0	135.9
California	23,228	26,441	27,516	33,579	38,166	62.8	71.0	73.0	88.3	100.3
Colorado	2,823	2,787	2,363	2,822	2,820	56.2	55.4	46.2	54.4	54.4
Connecticut	2,558	2,569	2,449	2,133	2,860	72.7	71.9	68.4	59.4	79.7
Delaware	971	1,010	827	899	1,390	109.7	112.5	91.2	98.0	151.6
District of Columbia	2,561	2,104	2,569	2,402	2,478	427.1	349.7	415.7	379.9	391.9
Florida	20,878	20,163	19,689	19,462	20,818	112.6	107.2	103.3	100.7	107.8
Georgia	13,687	15,852	16,428	15,326	14,252	139.2	163.6	167.4	154.5	143.7
Hawaii	631	759	685	815	718	48.7	55.8	49.8	58.5	51.6
Idaho	110	147	162	167	211	7.1	9.4	10.2	10.5	13.2
Illinois	19,962	15,777	17,037	18,149	16,464	154.6	123.0	132.4	141.0	127.9
Indiana	6,835	6,496	6,569	7,338	7,144	106.4	100.2	100.8	112.2	109.3
Iowa	1,658	1,803	1,920	2,006	1,472	55.1	59.2	62.7	65.3	47.9
Kansas	2,505	2,084	2,209	2,228	2,161	88.9	73.0	76.9	77.2	74.9
Kentucky	3,827	4,345	4,521	4,283	4,315	88.7	100.1	103.5	97.8	98.5
Louisiana	8,996	8,912	9,169	8,873	8,669	200.3	196.6	200.4	192.8	188.4
Maine	143	162	272	456	245	10.8	12.2	20.5	34.3	18.4
Maryland	6,395	7,413	6,458	5,686	5,989	112.2	128.4	110.8	96.6	101.8
Massachusetts	1,976	2,483	2,353	2,628	3,106	30.0	37.9	35.7	39.5	46.7
Michigan	14,704	13,627	12,901	12,584	10,569	147.5	137.9	130.6	127.3	106.9
Minnesota	2,303	2,119	2,284	3,082	3,873	43.7	40.0	42.7	57.3	72.0
Mississippi	7,241	6,195	5,814	6,875	5,096	245.3	208.8	195.2	230.3	170.7
Missouri	6,488	7,159	7,802	7,889	7,546	108.4	119.5	129.8	131.0	125.3
Montana	80	102	85	108	224	8.2	10.3	8.5	10.7	22.3
Nebraska	1,376	1,187	1,352	1,429	1,385	76.6	65.0	73.4	77.0	74.6
Nevada	1,726	1,728	2,000	2,264	2,714	65.3	64.0	73.4	82.1	98.4
New Hampshire	113	151	130	147	121	8.5	11.5	9.9	11.1	9.2
New Jersey	4,762	5,872	7,348	7,486	7,014	54.7	66.8	83.3	84.4	79.1
New Mexico	1,082	1,229	1,839	1,883	1,918	53.8	59.7	88.3	90.3	92.0
New York	17,004	18,320	20,706	22,571	19,919	87.0	94.5	106.4	115.3	101.8
North Carolina	13,870	14,111	17,454	14,318	13,666	147.9	148.0	180.8	146.8	140.1
North Dakota	151	204	251	335	492	23.3	30.3	36.7	47.9	70.3
Ohio	15,988	16,496	16,726	16,493	16,619	138.5	143.0	144.9	142.9	144.0
Oklahoma	4,673	4,369	4,215	4,441	5,303	126.7	116.5	111.2	116.4	139.0
Oregon	1,113	1,076	1,489	1,464	1,729	29.1	28.1	38.5	37.5	44.3
Pennsylvania	10,138	12,883	13,770	15,390	13,874	80.4	101.4	108.1	120.6	108.7
Rhode Island	322	291	360	507	454	30.6	27.6	34.2	48.3	43.2
South Carolina	8,318	7,970	8,350	7,638	7,194	182.4	172.3	178.4	161.7	152.3
South Dakota	344	468	602	707	784	42.3	57.5	73.1	84.8	94.1
Tennessee	7,926	7,121	7,667	9,098	7,376	125.9	112.2	119.7	140.9	114.2
Texas	29,295	31,788	30,930	32,473	33,835	118.2	126.4	120.5	124.6	129.8
Utah	341	310	277	479	951	12.2	11.2	9.8	16.8	33.3
Vermont	50	58	48	99	97	8.0	9.3	7.7	15.8	15.5
Virginia	7,789	7,402	6,518	6,885	6,952	98.8	92.5	80.5	84.1	84.9
Washington	2,285	2,864	2,737	3,238	4,369	34.3	42.6	40.1	46.9	63.3
West Virginia	475	579	796	831	1,063	26.1	31.2	42.9	44.8	57.3
Wisconsin	5,201	5,091	4,789	4,704	4,599	92.0	89.5	83.8	82.1	80.3
Wyoming	74	40	46	44	66	13.6	7.1	8.1	7.6	11.5
U.S. TOTAL	**301,174**	**309,341**	**321,849**	**334,826**	**333,004**	**98.1**	**100.2**	**103.3**	**106.7**	**106.1**
Northeast	37,066	42,789	47,436	51,417	47,690	67.0	77.4	85.4	92.2	85.5
Midwest	77,515	72,511	74,442	76,944	73,108	116.0	108.3	110.8	114.3	108.6
South	148,860	152,036	155,224	153,067	150,780	131.4	132.7	133.8	130.5	128.6
West	37,733	42,005	44,747	53,398	61,426	52.7	58.4	61.4	72.6	83.5
Guam	59	97	96	92	92	33.1	60.8	60.2	57.5	57.5
Puerto Rico	230	312	341	345	356	5.8	8.4	9.2	9.4	9.7
Virgin Islands	115	151	139	136	58	104.7	142.1	131.4	129.2	55.1
OUTLYING AREAS	**404**	**560**	**576**	**573**	**506**	**9.5**	**14.0**	**14.5**	**14.6**	**12.9**
TOTAL	**301,578**	**309,901**	**322,425**	**335,399**	**333,510**	**96.9**	**99.1**	**102.2**	**105.5**	**104.9**

Table 15. Gonorrhea Among Women — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	4,240	4,432	5,103	5,187	4,668	174.7	180.2	206.3	208.9	188.0
Alaska	516	698	515	385	589	153.5	204.9	148.2	109.9	168.2
Arizona	1,475	1,553	2,212	2,827	3,102	44.8	48.3	67.9	85.8	94.1
Arkansas	2,562	2,729	2,687	2,432	2,160	173.8	183.9	179.7	162.1	143.9
California	9,430	10,546	10,811	13,045	14,258	51.1	56.3	57.1	68.2	74.6
Colorado	1,502	1,514	1,285	1,362	1,243	60.2	60.4	50.4	52.7	48.1
Connecticut	1,491	1,449	1,378	1,153	1,419	82.8	79.0	75.1	62.6	77.1
Delaware	564	621	471	496	763	123.8	134.1	100.8	104.9	161.4
District of Columbia	1,233	1,073	1,209	1,006	953	389.5	338.0	371.1	301.8	285.9
Florida	10,745	10,240	9,999	9,570	9,718	114.1	106.5	102.7	97.0	98.5
Georgia	7,253	8,297	8,589	7,921	7,060	145.2	167.3	171.4	156.3	139.3
Hawaii	264	314	273	299	264	41.2	46.2	39.9	43.3	38.2
Idaho	51	68	79	63	87	6.6	8.7	10.0	7.9	10.9
Illinois	11,248	8,924	9,500	9,837	8,574	171.7	136.5	144.9	150.1	130.8
Indiana	3,985	3,598	3,690	4,139	3,796	122.3	109.2	111.5	124.7	114.4
Iowa	1,049	1,179	1,217	1,170	812	68.9	76.7	78.8	75.5	52.4
Kansas	1,541	1,235	1,360	1,339	1,222	108.6	85.9	94.1	92.3	84.2
Kentucky	2,132	2,487	2,596	2,328	2,331	97.1	112.8	117.0	104.7	104.9
Louisiana	5,125	4,824	5,263	5,080	4,927	222.2	208.5	225.3	216.2	209.7
Maine	62	75	122	240	119	9.2	11.1	18.0	35.4	17.5
Maryland	3,457	4,028	3,461	2,878	2,841	117.8	135.1	115.1	94.9	93.6
Massachusetts	976	1,004	1,083	1,076	1,168	28.8	29.7	31.9	31.4	34.1
Michigan	8,536	7,971	7,599	7,194	5,865	168.5	158.3	151.1	142.9	116.5
Minnesota	1,270	1,248	1,294	1,676	2,037	48.0	46.7	48.1	61.9	75.3
Mississippi	4,335	3,602	3,344	3,834	2,726	285.0	236.0	218.3	249.7	177.5
Missouri	3,585	3,951	4,195	4,209	3,944	117.1	129.3	136.8	137.1	128.4
Montana	46	56	51	58	127	9.4	11.4	10.3	11.6	25.4
Nebraska	821	675	823	784	694	90.7	73.4	88.7	84.0	74.4
Nevada	826	830	879	982	1,203	63.7	62.1	65.2	71.8	88.0
New Hampshire	54	59	59	61	52	8.0	8.8	8.8	9.1	7.8
New Jersey	2,435	3,115	3,916	3,798	3,484	54.8	69.0	86.6	83.6	76.7
New Mexico	570	610	925	857	823	56.2	58.6	87.9	81.4	78.2
New York	7,927	8,718	9,716	10,021	8,020	78.9	87.2	96.8	99.4	79.6
North Carolina	7,868	8,314	10,076	8,093	7,547	164.2	170.0	203.4	161.9	151.0
North Dakota	88	140	149	207	301	27.3	42.1	44.1	60.2	87.5
Ohio	9,766	10,034	10,009	9,706	9,176	165.3	169.9	169.5	164.5	155.5
Oklahoma	2,809	2,493	2,395	2,652	3,000	150.6	131.6	125.1	137.8	155.8
Oregon	505	477	602	528	566	26.2	24.7	30.8	26.8	28.8
Pennsylvania	5,650	7,268	7,687	8,360	7,206	87.4	111.6	117.7	128.0	110.3
Rhode Island	146	121	167	232	192	27.0	22.2	30.8	42.8	35.4
South Carolina	5,004	4,905	4,981	4,416	4,050	213.8	206.5	207.3	182.0	166.9
South Dakota	190	290	399	446	464	46.7	71.3	97.1	107.5	111.8
Tennessee	4,365	3,884	4,112	4,721	3,617	135.3	119.4	125.3	142.7	109.4
Texas	16,071	17,246	16,476	17,151	17,206	129.6	136.1	127.4	130.8	131.2
Utah	70	75	66	132	373	5.1	5.5	4.7	9.3	26.3
Vermont	29	24	24	54	46	9.2	7.6	7.6	17.0	14.5
Virginia	4,314	4,146	3,693	3,734	3,678	107.6	101.7	89.6	89.7	88.3
Washington	949	1,044	1,066	1,230	1,704	28.5	30.9	31.2	35.6	49.3
West Virginia	281	326	467	438	539	30.3	34.7	49.7	46.6	57.3
Wisconsin	3,113	3,164	2,907	2,640	2,455	109.4	110.5	101.1	91.6	85.1
Wyoming	44	19	25	19	39	16.5	6.9	9.0	6.7	13.8
U.S. TOTAL	**162,568**	**165,693**	**171,005**	**172,066**	**163,208**	**104.5**	**105.6**	**108.0**	**107.9**	**102.4**
Northeast	18,770	21,833	24,152	24,995	21,706	66.2	76.7	84.7	87.3	75.8
Midwest	45,192	42,409	43,142	43,347	39,340	133.3	124.7	126.5	126.9	115.2
South	82,358	83,647	84,922	81,937	77,784	143.0	143.2	143.6	137.1	130.2
West	16,248	17,804	18,789	21,787	24,378	45.5	49.3	51.4	59.1	66.1
Guam	32	45	44	46	43	36.5	57.4	56.0	58.4	54.6
Puerto Rico	126	141	140	157	120	6.1	7.3	7.2	8.2	6.3
Virgin Islands	90	96	94	92	41	155.6	170.3	167.3	164.2	73.2
OUTLYING AREAS	**248**	**282**	**278**	**295**	**204**	**11.2**	**13.6**	**13.4**	**14.4**	**10.0**
TOTAL	**162,816**	**165,975**	**171,283**	**172,361**	**163,412**	**103.2**	**104.4**	**106.8**	**106.7**	**101.2**

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

Table 16. Gonorrhea Among Men — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	3,250	3,430	3,825	4,034	3,680	142.4	147.8	164.2	172.5	157.4
Alaska	474	575	469	341	539	130.9	155.6	125.0	89.4	141.4
Arizona	1,775	1,696	2,350	2,981	3,310	53.7	53.4	72.9	91.5	101.6
Arkansas	1,898	2,038	1,996	1,873	1,843	134.1	142.4	138.3	129.3	127.2
California	13,705	15,773	16,598	20,431	23,849	74.1	85.2	88.5	108.0	126.1
Colorado	1,319	1,273	1,078	1,460	1,577	52.1	50.5	42.0	56.1	60.6
Connecticut	1,067	1,120	1,071	978	1,440	62.1	64.4	61.4	55.9	82.3
Delaware	407	389	356	403	627	94.7	89.4	80.9	90.7	141.1
District of Columbia	1,328	1,028	1,360	1,386	1,519	469.2	361.7	465.4	463.5	508.0
Florida	10,099	9,906	9,675	9,892	11,049	110.7	107.8	103.8	104.7	116.9
Georgia	6,368	7,421	7,684	7,301	7,075	131.7	156.9	160.0	150.5	145.8
Hawaii	367	445	412	516	454	56.1	65.3	59.7	73.5	64.7
Idaho	58	78	83	104	124	7.5	9.9	10.5	13.0	15.5
Illinois	8,710	6,824	7,513	8,283	7,872	137.0	108.5	119.0	131.1	124.6
Indiana	2,831	2,884	2,867	3,188	3,347	89.5	90.4	89.4	99.1	104.0
Iowa	609	624	703	836	660	41.0	41.4	46.3	54.8	43.3
Kansas	964	849	849	889	939	68.9	60.0	59.5	61.9	65.4
Kentucky	1,690	1,854	1,913	1,948	1,966	79.8	86.8	89.0	90.3	91.1
Louisiana	3,849	3,540	3,739	3,793	3,742	176.1	159.5	167.0	168.4	166.2
Maine	81	86	150	216	126	12.6	13.2	23.1	33.2	19.4
Maryland	2,922	3,377	2,992	2,806	3,145	105.7	121.0	106.1	98.4	110.3
Massachusetts	996	1,479	1,269	1,551	1,932	31.1	46.7	39.8	48.2	60.0
Michigan	6,004	5,634	5,281	5,372	4,694	122.5	116.2	109.0	110.8	96.8
Minnesota	1,033	871	990	1,395	1,835	39.4	33.1	37.3	52.2	68.7
Mississippi	2,906	2,593	2,470	3,039	2,370	203.1	179.9	170.8	209.7	163.5
Missouri	2,903	3,208	3,607	3,680	3,602	99.2	109.4	122.5	124.7	122.1
Montana	34	46	34	50	97	7.0	9.3	6.8	9.9	19.2
Nebraska	553	512	528	641	674	62.0	56.5	57.7	69.5	73.1
Nevada	900	898	1,121	1,280	1,509	66.9	65.9	81.6	92.0	108.5
New Hampshire	59	92	71	86	69	9.0	14.2	10.9	13.2	10.6
New Jersey	2,326	2,727	3,400	3,673	3,514	54.5	63.7	79.1	85.0	81.3
New Mexico	512	619	914	1,025	1,095	51.5	60.8	88.7	99.3	106.0
New York	9,072	9,601	10,977	12,529	11,844	95.5	102.4	116.4	132.0	124.8
North Carolina	5,902	5,712	7,300	6,180	6,113	128.6	123.0	155.2	130.0	128.6
North Dakota	62	64	101	127	191	19.1	18.8	29.2	35.7	53.7
Ohio	6,068	6,421	6,717	6,787	7,443	107.7	114.0	119.1	120.3	131.9
Oklahoma	1,857	1,873	1,708	1,789	2,303	101.9	100.9	91.0	94.7	121.9
Oregon	608	599	887	936	1,163	32.0	31.6	46.3	48.5	60.2
Pennsylvania	4,484	5,615	6,078	7,025	6,659	73.0	90.7	97.8	112.8	106.9
Rhode Island	176	170	193	275	262	34.4	33.4	38.0	54.1	51.5
South Carolina	3,289	3,056	3,351	3,196	3,133	148.1	135.8	147.2	139.1	136.4
South Dakota	153	177	202	259	320	37.7	43.4	48.9	61.9	76.5
Tennessee	3,560	3,235	3,555	4,368	3,758	116.0	104.6	113.9	138.7	119.3
Texas	13,215	14,524	14,448	15,286	16,410	106.8	116.5	113.4	118.1	126.7
Utah	271	235	211	347	578	19.3	16.9	14.9	24.2	40.3
Vermont	21	33	24	45	51	6.9	10.7	7.8	14.6	16.5
Virginia	3,465	3,248	2,814	3,145	3,272	89.4	82.7	70.8	78.2	81.4
Washington	1,334	1,818	1,671	2,008	2,665	40.1	54.3	49.0	58.3	77.4
West Virginia	194	253	329	393	524	21.7	27.7	36.0	42.9	57.2
Wisconsin	2,061	1,926	1,880	2,064	2,140	73.4	68.2	66.3	72.6	75.3
Wyoming	30	21	21	25	27	10.8	7.3	7.2	8.5	9.2
U.S. TOTAL	**137,819**	**142,470**	**149,835**	**162,235**	**169,130**	**91.0**	**93.9**	**97.7**	**105.0**	**109.5**
Northeast	18,282	20,923	23,233	26,378	25,897	67.9	77.9	86.1	97.2	95.4
Midwest	31,951	29,994	31,238	33,521	33,717	97.0	91.1	94.5	101.1	101.7
South	66,199	67,477	69,515	70,832	72,529	118.8	120.2	122.2	123.2	126.1
West	21,387	24,076	25,849	31,504	36,987	59.6	67.2	71.1	85.9	100.8
Guam	27	52	52	46	49	29.8	64.2	64.2	56.7	60.4
Puerto Rico	104	171	201	188	236	5.5	9.6	11.3	10.7	13.4
Virgin Islands	25	55	45	44	17	48.1	110.2	90.7	89.3	34.5
OUTLYING AREAS	**156**	**278**	**298**	**278**	**302**	**7.6**	**14.5**	**15.6**	**14.7**	**16.0**
TOTAL	**137,975**	**142,748**	**150,133**	**162,513**	**169,432**	**89.9**	**92.9**	**96.7**	**103.9**	**108.3**

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

Table 17. Gonorrhea — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

	Cases					Rates per 100,000 Population				
MSAs	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	7,484	8,351	8,577	8,299	5,452	136.2	158.0	159.5	152.1	99.9
Austin-Round Rock, TX	1,973	1,932	2,009	2,204	2,570	115.7	112.6	112.6	120.2	140.1
Baltimore-Columbia-Towson, MD	3,869	4,369	3,634	2,974	3,233	143.8	161.2	133.2	108.0	117.4
Birmingham-Hoover, AL	1,970	2,363	2,550	2,340	2,130	174.2	209.5	225.2	205.9	187.4
Boston-Cambridge-Newton, MA-NH	1,352	1,881	1,671	1,995	2,372	29.5	41.3	36.4	43.0	51.1
Buffalo-Cheektowaga-Niagara Falls, NY	1,574	1,227	1,543	2,172	1,232	140.1	108.1	136.1	191.5	108.6
Charlotte-Concord-Gastonia, NC-SC	3,689	3,060	3,832	3,172	3,058	167.3	138.0	169.7	138.1	133.2
Chicago-Naperville-Elgin, IL-IN-WI	15,864	12,380	13,188	14,304	12,793	165.6	130.9	138.8	150.2	134.3
Cincinnati, OH-KY-IN	3,220	3,378	3,515	3,227	3,229	149.4	159.7	165.6	151.6	151.7
Cleveland-Elyria, OH	3,089	3,608	3,930	4,203	4,155	147.7	173.7	190.0	203.7	201.4
Columbus, OH	3,197	3,354	3,038	2,859	3,220	171.3	176.3	157.9	147.1	165.6
Dallas-Fort Worth-Arlington, TX	7,935	8,771	8,743	7,842	8,354	122.0	136.5	132.8	117.0	124.7
Denver-Aurora-Lakewood, CO	1,995	2,344	1,662	2,055	1,828	78.2	92.2	63.9	77.7	69.1
Detroit-Warren-Dearborn, MI	9,366	9,160	8,924	8,062	6,564	212.7	213.2	208.2	187.8	152.9
Hartford-West Hartford-East Hartford, CT	961	1,126	1,036	744	1,065	80.4	92.9	85.4	61.3	87.7
Houston-The Woodlands-Sugar Land, TX	6,225	7,645	6,861	7,582	7,783	106.5	129.1	113.2	122.7	126.0
Indianapolis-Carmel-Anderson, IN	3,110	3,140	3,128	3,738	3,616	165.9	166.3	163.8	193.8	187.5
Jacksonville, FL	2,015	2,128	2,040	1,948	2,321	151.7	158.1	150.0	141.4	168.5
Kansas City, MO-KS	3,186	3,202	2,913	2,919	2,696	156.1	159.4	143.7	143.2	132.2
Las Vegas-Henderson-Paradise, NV	1,553	1,604	1,740	1,968	2,256	81.6	82.2	88.3	98.4	112.8
Los Angeles-Long Beach-Anaheim, CA	9,774	11,156	11,105	13,102	14,449	75.9	87.0	85.8	100.4	110.7
Louisville/Jefferson County, KY-IN	2,099	2,243	2,400	2,040	2,063	173.2	181.5	192.7	163.0	164.9
Memphis, TN-MS-AR	4,542	4,094	3,852	4,498	3,086	345.9	309.0	288.7	335.2	230.0
Miami-Fort Lauderdale-West Palm Beach, FL	5,239	5,506	5,352	5,291	5,801	94.4	98.9	94.4	91.8	100.7
Milwaukee-Waukesha-West Allis, WI	3,588	3,425	3,349	3,277	3,179	230.0	220.1	214.4	209.1	202.9
Minneapolis-St. Paul-Bloomington, MN-WI	1,805	1,670	1,889	2,534	3,188	54.1	49.9	55.8	74.0	93.2
Nashville-Davidson--Murfreesboro--Franklin, TN	1,318	1,362	1,681	1,900	1,806	79.1	81.5	99.0	110.0	104.6
New Orleans-Metairie, LA	2,116	2,022	2,099	2,198	2,448	174.7	169.9	173.1	179.1	199.5
New York-Newark-Jersey City, NY-NJ-PA	15,543	17,724	21,153	21,310	19,319	78.7	90.6	107.4	107.5	97.4
Oklahoma City, OK	2,066	1,700	1,845	1,947	2,352	168.3	135.7	144.4	150.2	181.4
Orlando-Kissimmee-Sanford, FL	2,663	2,495	2,277	2,328	2,514	127.9	116.9	104.9	104.7	113.1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	7,407	9,694	10,123	11,026	10,557	124.1	162.5	168.9	183.2	175.4
Phoenix-Mesa-Scottsdale, AZ	2,317	2,335	3,340	4,526	4,918	53.1	55.7	78.3	104.5	113.6
Pittsburgh, PA	1,866	2,069	2,473	3,048	2,827	79.2	87.8	104.8	129.1	119.8
Portland-Vancouver-Hillsboro, OR-WA	826	926	1,318	1,183	1,199	36.8	41.6	58.3	51.7	52.4
Providence-Warwick, RI-MA	427	382	475	643	593	26.7	23.9	29.7	40.2	37.0
Raleigh, NC	1,141	1,388	1,606	1,532	1,384	101.3	122.8	138.0	128.9	116.4
Richmond, VA	1,866	1,701	1,419	1,671	1,658	157.0	140.8	116.4	135.6	134.6
Riverside-San Bernardino-Ontario, CA	1,921	1,924	2,330	3,031	3,273	46.4	45.5	54.1	69.7	75.2
Sacramento--Roseville--Arden-Arcade, CA	1,124	1,676	1,913	2,324	2,597	52.8	78.0	87.9	105.8	118.2
Salt Lake City, UT	242	202	197	342	690	22.1	18.6	17.8	30.4	61.4
San Antonio-New Braunfels, TX	3,697	3,729	3,731	3,672	3,352	178.4	174.0	170.0	164.4	150.0
San Diego-Carlsbad, CA	1,829	2,021	2,173	2,620	2,825	59.9	65.3	69.2	82.5	88.9
San Francisco-Oakland-Hayward, CA	4,375	4,867	5,009	5,263	5,681	101.3	112.3	114.1	118.1	127.5
San Jose-Sunnyvale-Santa Clara, CA	563	586	680	1,020	1,145	30.6	31.9	36.5	53.8	60.4
Seattle-Tacoma-Bellevue, WA	1,700	2,189	1,971	2,323	2,990	49.9	63.6	56.3	65.4	84.2
St. Louis, MO-IL	3,617	4,136	5,014	4,810	4,492	129.0	148.4	179.6	172.0	160.7
Tampa-St. Petersburg-Clearwater, FL	3,818	3,516	3,655	3,422	3,660	139.0	126.3	129.4	120.4	128.7
Virginia Beach-Norfolk-Newport News, VA-NC	3,651	3,431	2,813	2,630	2,581	217.4	204.6	166.9	154.7	151.8
Washington-Arlington-Alexandria, DC-VA-MD-WV	5,334	5,250	5,503	5,369	5,616	96.5	93.1	95.6	91.6	95.8
SELECTED MSAs TOTAL	**182,101**	**190,442**	**197,279**	**205,487**	**202,170**	**108.6**	**113.7**	**116.4**	**120.0**	**118.1**

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

Table 18. Gonorrhea Among Women — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	3,639	3,964	4,141	3,907	2,458	130.9	146.0	150.2	139.4	87.7
Austin-Round Rock, TX	980	910	935	993	1,078	117.4	106.3	105.1	108.5	117.8
Baltimore-Columbia-Towson, MD	2,181	2,397	1,941	1,527	1,542	156.5	170.5	137.2	107.1	108.2
Birmingham-Hoover, AL	1,056	1,323	1,417	1,280	1,099	180.6	226.6	241.6	217.3	186.6
Boston-Cambridge-Newton, MA-NH	624	708	730	738	828	26.5	30.1	30.8	30.9	34.6
Buffalo-Cheektowaga-Niagara Falls, NY	878	669	828	1,173	594	151.0	113.9	141.3	200.4	101.5
Charlotte-Concord-Gastonia, NC-SC	2,103	1,754	2,117	1,778	1,700	187.1	154.2	182.6	150.7	144.1
Chicago-Naperville-Elgin, IL-IN-WI	8,712	6,741	7,015	7,464	6,374	179.0	139.3	144.4	153.4	131.0
Cincinnati, OH-KY-IN	2,182	2,331	2,264	2,051	1,932	197.9	215.7	208.8	188.7	177.8
Cleveland-Elyria, OH	1,808	2,082	2,371	2,426	2,328	166.6	193.0	220.9	226.7	217.5
Columbus, OH	1,876	1,919	1,561	1,514	1,500	198.5	198.3	159.5	153.2	151.8
Dallas-Fort Worth-Arlington, TX	4,557	4,791	4,653	4,157	3,921	141.0	147.1	139.6	122.5	115.5
Denver-Aurora-Lakewood, CO	1,035	1,261	885	965	724	81.4	98.6	67.8	72.7	54.5
Detroit-Warren-Dearborn, MI	5,204	5,217	5,114	4,406	3,614	230.8	235.6	231.6	199.3	163.5
Hartford-West Hartford-East Hartford, CT	551	633	596	422	543	90.0	101.7	95.8	67.7	87.1
Houston-The Woodlands-Sugar Land, TX	3,299	4,170	3,803	4,039	4,033	113.2	140.1	124.9	130.2	130.0
Indianapolis-Carmel-Anderson, IN	1,701	1,638	1,674	1,957	1,761	178.4	169.7	171.5	198.5	178.6
Jacksonville, FL	1,048	1,152	1,121	983	1,121	154.1	167.0	160.6	139.1	158.6
Kansas City, MO-KS	1,816	1,804	1,592	1,585	1,424	174.8	175.8	153.9	152.4	136.9
Las Vegas-Henderson-Paradise, NV	746	779	742	847	1,015	79.8	80.4	75.8	85.1	102.0
Los Angeles-Long Beach-Anaheim, CA	3,641	3,947	3,944	4,359	4,578	56.2	60.7	60.2	65.9	69.3
Louisville/Jefferson County, KY-IN	1,121	1,246	1,375	1,096	1,079	180.6	196.9	215.6	171.2	168.5
Memphis, TN-MS-AR	2,540	2,288	2,192	2,418	1,550	372.7	332.2	315.9	346.6	222.2
Miami-Fort Lauderdale-West Palm Beach, FL	2,439	2,480	2,361	2,198	2,225	85.9	86.4	80.9	74.1	75.0
Milwaukee-Waukesha-West Allis, WI	2,098	2,070	1,980	1,814	1,655	262.8	259.0	247.0	225.5	205.8
Minneapolis-St. Paul-Bloomington, MN-WI	931	953	1,035	1,322	1,641	55.4	56.2	60.4	76.4	94.8
Nashville-Davidson--Murfreesboro--Franklin, TN	676	642	776	858	838	79.8	75.2	89.3	97.1	94.9
New Orleans-Metairie, LA	1,118	1,027	1,131	1,186	1,317	177.9	168.2	181.6	187.9	208.7
New York-Newark-Jersey City, NY-NJ-PA	7,047	8,248	9,826	9,157	7,615	69.4	81.4	96.5	89.3	74.3
Oklahoma City, OK	1,188	962	1,034	1,081	1,305	190.6	151.3	159.7	164.6	198.7
Orlando-Kissimmee-Sanford, FL	1,364	1,171	1,090	1,087	1,114	129.7	107.5	98.4	95.8	98.1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	3,811	5,125	5,361	5,581	5,052	123.6	166.0	173.0	179.3	162.3
Phoenix-Mesa-Scottsdale, AZ	1,022	1,071	1,568	2,118	2,318	47.4	50.8	73.2	97.3	106.5
Pittsburgh, PA	1,161	1,274	1,501	1,857	1,715	95.2	104.6	123.2	152.6	140.9
Portland-Vancouver-Hillsboro, OR-WA	322	371	482	393	325	28.6	32.9	42.1	33.9	28.1
Providence-Warwick, RI-MA	196	159	232	294	261	23.8	19.2	28.1	35.6	31.6
Raleigh, NC	619	738	868	807	677	108.9	127.6	145.7	132.7	111.3
Richmond, VA	991	967	797	908	957	162.0	154.9	126.6	142.6	150.3
Riverside-San Bernardino-Ontario, CA	1,024	976	1,196	1,562	1,576	49.6	46.0	55.3	71.5	72.2
Sacramento--Roseville--Arden-Arcade, CA	557	907	990	1,212	1,323	51.7	82.8	89.3	108.2	118.1
Salt Lake City, UT	37	40	41	88	263	6.8	7.4	7.4	15.8	47.1
San Antonio-New Braunfels, TX	1,921	1,886	1,835	1,865	1,624	182.0	173.0	164.4	164.5	143.2
San Diego-Carlsbad, CA	620	535	609	847	827	40.7	34.7	39.0	53.6	52.3
San Francisco-Oakland-Hayward, CA	1,421	1,710	1,531	1,493	1,491	65.5	77.8	68.9	66.2	66.1
San Jose-Sunnyvale-Santa Clara, CA	248	249	243	372	446	27.6	27.2	26.2	39.5	47.3
Seattle-Tacoma-Bellevue, WA	604	686	649	732	988	35.4	39.7	37.0	41.1	55.5
St. Louis, MO-IL	1,906	2,187	2,699	2,467	2,313	131.7	152.1	187.4	171.1	160.4
Tampa-St. Petersburg-Clearwater, FL	1,907	1,834	1,887	1,701	1,774	135.4	127.7	129.7	116.1	121.1
Virginia Beach-Norfolk-Newport News, VA-NC	2,009	1,856	1,563	1,402	1,341	233.9	217.2	182.0	162.3	155.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	2,646	2,685	2,709	2,355	2,278	93.8	92.8	91.8	78.4	75.9
SELECTED MSAs TOTAL	**93,181**	**96,533**	**99,005**	**98,842**	**92,055**	**109.5**	**112.9**	**114.5**	**113.1**	**105.4**

* MSAs were selected on the basis of the largest population in the 2010 U.S. Census.
Note: Cases reported with unknown sex are not included in this table.

Table 19. Gonorrhea Among Men — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	3,798	4,310	4,343	4,329	2,952	140.0	167.5	165.7	163.1	111.2
Austin-Round Rock, TX	991	1,022	1,073	1,196	1,295	113.9	118.8	120.1	130.1	140.8
Baltimore-Columbia-Towson, MD	1,675	1,968	1,690	1,447	1,690	129.2	150.8	128.5	109.0	127.3
Birmingham-Hoover, AL	913	1,024	1,094	1,057	1,029	167.2	188.2	200.5	193.0	187.9
Boston-Cambridge-Newton, MA-NH	726	1,173	940	1,257	1,541	32.5	53.2	42.3	55.9	68.5
Buffalo-Cheektowaga-Niagara Falls, NY	696	558	715	999	638	128.3	101.8	130.5	182.1	116.3
Charlotte-Concord-Gastonia, NC-SC	1,574	1,299	1,704	1,384	1,356	145.6	120.3	155.1	123.9	121.4
Chicago-Naperville-Elgin, IL-IN-WI	7,141	5,610	6,150	6,819	6,407	151.5	121.4	132.3	146.4	137.6
Cincinnati, OH-KY-IN	1,019	1,041	1,250	1,176	1,297	96.8	100.7	120.4	112.9	124.5
Cleveland-Elyria, OH	1,254	1,517	1,559	1,777	1,827	124.6	151.9	156.7	178.9	183.9
Columbus, OH	1,291	1,432	1,477	1,345	1,720	140.2	153.3	156.2	140.8	180.0
Dallas-Fort Worth-Arlington, TX	3,378	3,977	4,089	3,682	4,426	103.3	125.5	125.9	111.4	133.9
Denver-Aurora-Lakewood, CO	958	1,083	777	1,090	1,104	74.8	85.6	60.0	82.8	83.8
Detroit-Warren-Dearborn, MI	4,005	3,924	3,794	3,642	2,942	186.4	188.5	182.6	175.0	141.4
Hartford-West Hartford-East Hartford, CT	410	493	440	322	522	70.3	83.5	74.5	54.5	88.3
Houston-The Woodlands-Sugar Land, TX	2,922	3,462	3,055	3,543	3,749	99.8	117.6	101.3	115.2	121.9
Indianapolis-Carmel-Anderson, IN	1,404	1,499	1,447	1,772	1,854	152.3	162.5	155.0	187.9	196.6
Jacksonville, FL	966	973	919	965	1,198	149.1	148.4	138.8	143.8	178.6
Kansas City, MO-KS	1,370	1,398	1,321	1,334	1,272	136.7	142.2	133.1	133.6	127.4
Las Vegas-Henderson-Paradise, NV	807	825	998	1,119	1,239	83.3	84.0	100.7	111.3	123.2
Los Angeles-Long Beach-Anaheim, CA	6,081	7,156	7,124	8,712	9,849	95.0	113.1	111.5	135.2	152.9
Louisville/Jefferson County, KY-IN	976	995	1,020	940	969	165.0	165.0	167.9	153.8	158.6
Memphis, TN-MS-AR	2,001	1,805	1,660	2,080	1,536	316.9	283.7	259.2	323.0	238.5
Miami-Fort Lauderdale-West Palm Beach, FL	2,799	3,024	2,987	3,093	3,564	103.4	112.3	108.5	110.6	127.4
Milwaukee-Waukesha-West Allis, WI	1,470	1,354	1,368	1,463	1,521	193.1	178.9	179.9	191.8	199.4
Minneapolis-St. Paul-Bloomington, MN-WI	874	717	854	1,209	1,546	52.7	43.4	51.0	71.5	91.4
Nashville-Davidson--Murfreesboro--Franklin, TN	642	719	905	1,034	968	78.4	88.0	109.1	122.6	114.8
New Orleans-Metairie, LA	990	937	962	1,012	1,131	169.9	161.8	163.0	169.8	189.8
New York-Newark-Jersey City, NY-NJ-PA	8,491	9,451	11,291	12,124	11,639	88.6	100.2	118.7	126.5	121.5
Oklahoma City, OK	876	736	775	866	1,047	145.0	119.2	122.9	135.3	163.6
Orlando-Kissimmee-Sanford, FL	1,297	1,320	1,186	1,241	1,399	125.8	126.4	111.5	114.0	128.5
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	3,593	4,565	4,756	5,439	5,501	124.5	158.6	164.4	187.1	189.3
Phoenix-Mesa-Scottsdale, AZ	1,295	1,264	1,770	2,407	2,600	58.6	60.6	83.4	111.8	120.7
Pittsburgh, PA	704	795	971	1,191	1,110	62.0	69.8	85.1	104.1	97.1
Portland-Vancouver-Hillsboro, OR-WA	504	555	836	790	874	45.2	50.5	74.8	69.8	77.2
Providence-Warwick, RI-MA	231	223	243	349	331	29.7	28.8	31.4	45.0	42.7
Raleigh, NC	513	648	735	724	707	92.0	117.4	129.4	124.8	121.8
Richmond, VA	871	732	617	761	701	151.0	125.4	104.7	127.8	117.7
Riverside-San Bernardino-Ontario, CA	895	944	1,126	1,467	1,695	43.1	44.9	52.5	67.7	78.2
Sacramento--Roseville--Arden-Arcade, CA	558	756	917	1,104	1,271	53.2	71.8	85.9	102.6	118.1
Salt Lake City, UT	205	162	156	254	427	37.1	29.6	28.0	44.9	75.6
San Antonio-New Braunfels, TX	1,775	1,843	1,896	1,807	1,728	174.6	175.1	175.8	164.3	157.1
San Diego-Carlsbad, CA	1,206	1,482	1,552	1,766	1,995	78.7	95.4	98.4	110.6	124.9
San Francisco-Oakland-Hayward, CA	2,933	3,127	3,454	3,746	4,167	136.5	146.3	159.4	170.4	189.5
San Jose-Sunnyvale-Santa Clara, CA	314	333	430	626	699	33.4	36.1	45.9	65.8	73.4
Seattle-Tacoma-Bellevue, WA	1,094	1,501	1,322	1,591	2,002	64.2	87.7	75.7	89.9	113.1
St. Louis, MO-IL	1,711	1,949	2,315	2,340	2,178	126.0	144.4	171.2	172.8	160.9
Tampa-St. Petersburg-Clearwater, FL	1,887	1,678	1,761	1,721	1,871	141.0	124.5	128.6	124.9	135.8
Virginia Beach-Norfolk-Newport News, VA-NC	1,634	1,572	1,248	1,226	1,239	199.2	191.2	151.0	146.7	148.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	2,685	2,558	2,791	3,001	3,330	99.2	93.2	99.4	105.0	116.5
SELECTED MSAs TOTAL	**88,403**	**93,489**	**97,863**	**106,339**	**109,653**	**107.0**	**114.1**	**118.0**	**126.8**	**130.8**

* MSAs were selected on the basis of the largest population in the 2010 U.S. Census.
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, 2013

Rank†	County/Independent City	Cases	Rate per 100,000 Population	Cumulative Percentage
1	Los Angeles County, CA	12,997	130.5	3
2	Cook County, IL	10,551	201.7	7
3	Harris County, TX	6,561	154.2	9
4	Philadelphia County, PA	6,303	407.3	10
5	Wayne County, MI	5,047	281.6	12
6	Dallas County, TX	4,803	195.7	13
7	Maricopa County, AZ	4,657	118.1	15
8	Kings County, NY	3,892	151.7	16
9	New York County, NY	3,796	234.5	17
10	Cuyahoga County, OH	3,679	290.8	18
11	Bronx County, NY	3,496	248.2	19
12	Marion County, IN	3,191	347.2	20
13	Bexar County, TX	3,074	172.1	21
14	Milwaukee County, WI	3,048	319.1	22
15	Franklin County, OH	2,935	245.5	23
16	San Diego County, CA	2,825	88.9	24
17	San Francisco County, CA	2,526	305.9	25
18	Shelby County, TN	2,508	266.6	25
19	Washington, D.C.	2,478	391.9	26
20	Miami-Dade County, FL	2,391	92.3	27
21	Hamilton County, OH	2,361	294.4	27
22	Broward County, FL	2,356	129.8	28
23	Sacramento County, CA	2,314	159.6	29
24	Tarrant County, TX	2,258	120.1	30
25	Clark County, NV	2,256	112.8	30
26	Allegheny County, PA	2,170	176.5	31
27	Baltimore (City), MD	2,158	347.3	32
28	Fulton County, GA	2,122	217.0	32
29	Duval County, FL	2,057	233.9	33
30	Hillsborough County, FL	2,018	157.9	33
31	Hennepin County, MN	1,983	167.4	34
32	Queens County, NY	1,964	86.4	35
33	Jefferson County, AL	1,925	291.7	35
34	Travis County, TX	1,905	173.9	36
35	Orange County, FL	1,898	157.9	36
36	San Bernardino County, CA	1,875	90.1	37
37	Oklahoma County, OK	1,862	251.0	37
38	Jackson County, MO	1,860	274.6	38
39	Alameda County, CA	1,849	118.9	39
40	Jefferson County, KY	1,835	244.4	39
41	Fresno County, CA	1,780	187.8	40
42	King County, WA	1,776	88.5	40
43	Mecklenburg County, NC	1,775	183.2	41
44	St. Louis (City), MO	1,754	551.3	41
45	St. Louis County, MO	1,734	173.3	42
46	Kern County, CA	1,594	186.2	42
47	Orleans Parish, LA	1,485	402.2	43
48	Prince George's County, MD	1,482	168.2	43
49	Orange County, CA	1,452	47.0	44
50	Essex County, NJ	1,435	182.2	44
51	Riverside County, CA	1,398	61.6	44
52	Pinellas County, FL	1,394	151.3	45
53	Bell County, TX	1,361	421.3	45
54	Guilford County, NC	1,344	268.3	46
55	Suffolk County, MA	1,325	178.0	46
56	Montgomery County, AL	1,309	568.8	46
57	Davidson County, TN	1,282	197.7	47
58	Tulsa County, OK	1,248	203.3	47
59	Camden County, NJ	1,218	237.2	48
60	Wake County, NC	1,205	126.6	48
61	Cumberland County, NC	1,197	369.4	48
62	Montgomery County, OH	1,163	217.7	49
63	Santa Clara County, CA	1,120	61.0	49
64	DeKalb County, GA	1,087	153.7	49
65	New Haven County, CT	1,063	123.2	50
66	Erie County, NY	1,057	115.0	50
67	Palm Beach County, FL	1,054	77.7	50
68	Hinds County, MS	1,042	419.1	51
69	Monroe County, NY	1,019	136.3	51
70	Bernalillo County, NM	1,011	150.1	51

* Accounting for 51% of reported gonorrhea cases.

† Counties and independent cities were ranked in descending order by number of cases reported then by rate in 2013.

Table 21. Gonorrhea — Reported Cases and Rates of Reported Cases by Age Group and Sex, United States, 2009–2013

Age Group	Cases				Rates*			
	Total	Male	Female	Unknown Sex	Total	Male	Female	
0–4	226	83	141	2	1.1	0.8	1.4	2009
5–9	90	13	77	0	0.4	0.1	0.8	
10–14	2,983	507	2,471	5	14.9	5.0	25.3	
15–19	86,996	27,444	59,353	199	403.9	248.3	566.0	
20–24	100,645	43,986	56,436	223	467.3	396.5	540.3	
25–29	49,855	26,016	23,719	120	230.0	234.1	224.6	
30–34	24,607	14,364	10,178	65	123.7	142.1	104.1	
35–39	13,971	8,997	4,928	46	68.0	86.9	48.4	
40–44	8,975	6,504	2,446	25	42.8	61.9	23.3	
45–54	9,294	7,311	1,954	29	20.8	33.3	8.6	
55–64	2,212	1,848	363	1	6.4	11.0	2.0	
65+	554	446	108	0	1.4	2.7	0.5	
Unknown Age	766	300	394	72				
TOTAL	**301,174**	**137,819**	**162,568**	**787**	**98.1**	**91.0**	**104.5**	
0–4	247	70	167	10	1.2	0.7	1.7	2010
5–9	64	10	53	1	0.3	0.1	0.5	
10–14	3,016	486	2,498	32	14.6	4.6	24.7	
15–19	88,250	28,002	59,867	381	400.4	247.7	557.6	
20–24	105,619	46,708	58,574	337	489.3	424.1	554.1	
25–29	50,890	26,818	23,907	165	241.2	252.2	228.4	
30–34	25,401	14,809	10,510	82	127.2	148.1	105.5	
35–39	13,769	8,812	4,907	50	68.2	87.8	48.4	
40–44	9,262	6,745	2,495	22	44.3	64.9	23.8	
45–54	9,555	7,490	2,043	22	21.2	33.8	8.9	
55–64	2,194	1,852	338	4	6.0	10.5	1.8	
65+	520	411	105	4	1.3	2.4	0.5	
Unknown Age	554	257	229	68				
TOTAL	**309,341**	**142,470**	**165,693**	**1,178**	**100.2**	**93.9**	**105.6**	
0–4	182	43	136	3	0.9	0.4	1.4	2011
5–9	82	15	66	1	0.4	0.1	0.7	
10–14	3,223	548	2,648	27	15.6	5.2	26.2	
15–19	88,139	28,102	59,747	290	407.2	252.7	567.7	
20–24	111,730	49,633	61,756	341	504.3	438.7	569.6	
25–29	53,245	28,288	24,821	136	250.2	262.9	236.0	
30–34	27,157	16,044	11,044	69	132.4	156.0	108.0	
35–39	14,109	8,972	5,096	41	72.0	91.9	51.8	
40–44	9,686	6,955	2,708	23	46.1	66.5	25.6	
45–54	10,473	8,222	2,222	29	23.4	37.3	9.8	
55–64	2,747	2,270	471	6	7.2	12.4	2.4	
65+	587	485	99	3	1.4	2.7	0.4	
Unknown Age	489	258	191	40				
TOTAL	**321,849**	**149,835**	**171,005**	**1,009**	**103.3**	**97.7**	**108.0**	
0–4	198	72	122	4	1.0	0.7	1.2	2012
5–9	68	16	52	0	0.3	0.2	0.5	
10–14	3,136	573	2,559	4	15.2	5.4	25.3	
15–19	81,548	26,578	54,852	118	381.8	242.4	527.5	
20–24	115,224	52,351	62,711	162	510.2	453.3	568.4	
25–29	58,441	31,631	26,722	88	273.1	291.7	253.2	
30–34	31,420	18,936	12,436	48	150.3	180.4	119.4	
35–39	16,193	10,493	5,670	30	83.1	108.0	58.0	
40–44	10,965	7,858	3,089	18	52.1	75.1	29.2	
45–54	12,383	9,773	2,594	16	28.0	44.8	11.5	
55–64	3,230	2,642	586	2	8.4	14.2	2.9	
65+	644	537	105	2	1.5	2.9	0.4	
Unknown Age	1,376	775	568	33				
TOTAL	**334,826**	**162,235**	**172,066**	**525**	**106.7**	**105.0**	**107.9**	
0–4	172	60	111	1	0.9	0.6	1.1	2013
5–9	75	11	64	0	0.4	0.1	0.6	
10–14	2,637	508	2,122	7	12.8	4.8	21.0	
15–19	72,092	24,212	47,749	131	337.5	220.9	459.2	
20–24	113,035	53,055	59,760	220	500.5	459.4	541.6	
25–29	62,102	34,718	27,266	118	290.2	320.1	258.4	
30–34	34,065	20,855	13,143	67	162.9	198.7	126.2	
35–39	18,034	11,850	6,145	39	92.5	122.0	62.9	
40–44	11,817	8,590	3,192	35	56.2	82.1	30.2	
45–54	13,823	11,087	2,714	22	31.2	50.8	12.1	
55–64	3,802	3,176	621	5	9.9	17.1	3.1	
65+	825	696	128	1	1.9	3.7	0.5	
Unknown Age	525	312	193	20				
TOTAL	**333,004**	**169,130**	**163,208**	**666**	**106.1**	**109.5**	**102.4**	

* No population data are available for unknown sex and age; therefore, rates are not calculated.
Note: This table should be used only for age comparisons.
Cases in the 0–4 age group may include cases due to perinatal transmission.

Table 22A. Gonorrhea —Reported Cases by Race/Ethnicity, Age Group, and Sex, United States*, 2013

Age Group	American Indians/ Alaska Natives			Asians			Blacks, Non-Hispanic		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0	0	0	3	1	2	51	15	36
5–9	1	0	1	0	0	0	26	4	22
10–14	23	2	21	4	0	4	1,303	266	1,035
15–19	541	140	401	252	90	161	35,653	12,438	23,189
20–24	941	311	630	666	390	272	51,980	24,560	27,386
25–29	636	242	392	481	314	167	24,381	13,914	10,455
30–34	341	121	220	338	247	90	11,906	7,534	4,367
35–39	161	51	110	229	165	63	5,872	4,127	1,742
40–44	87	35	52	142	114	28	3,397	2,613	779
45–54	100	52	48	135	102	32	3,844	3,221	622
55–64	14	6	8	38	25	13	1,058	929	126
65+	8	8	0	11	8	3	176	152	24
Unknown Age	2	0	2	2	2	0	83	46	37
TOTAL	**2,855**	**968**	**1,885**	**2,301**	**1,458**	**835**	**139,730**	**69,819**	**69,820**

Age Group	Native Hawaiians/ Other Pacific Islanders			Whites, Non-Hispanic			Multirace		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0	0	0	34	9	25	1	1	0
5–9	1	0	1	9	0	9	2	1	1
10–14	1	0	1	256	28	228	16	0	16
15–19	56	16	40	8,888	2,279	6,600	410	104	306
20–24	166	84	82	18,231	7,687	10,529	595	237	358
25–29	109	58	51	12,671	6,439	6,215	299	167	132
30–34	67	43	24	7,734	4,360	3,364	168	120	48
35–39	34	18	16	4,043	2,465	1,574	62	41	21
40–44	18	10	8	3,172	2,287	881	37	27	10
45–54	14	11	3	4,036	3,332	698	47	40	7
55–64	2	2	0	1,120	967	153	14	12	2
65+	0	0	0	233	212	21	0	0	0
Unknown Age	1	1	0	55	32	23	2	1	1
TOTAL	**469**	**243**	**226**	**60,482**	**30,097**	**30,320**	**1,653**	**751**	**902**

Age Group	Hispanics			Other/Unknown		
	Total†	Male	Female	Total†	Male	Female
0–4	12	4	8	48	19	28
5–9	11	1	10	19	5	14
10–14	174	42	132	496	111	381
15–19	5,969	2,123	3,835	12,357	4,302	7,982
20–24	10,520	5,399	5,097	17,619	8,262	9,240
25–29	6,727	4,003	2,708	9,555	5,180	4,313
30–34	3,809	2,450	1,351	5,775	3,360	2,381
35–39	2,077	1,402	670	3,365	2,079	1,263
40–44	1,223	871	344	2,341	1,615	713
45–54	1,076	818	257	2,827	2,129	687
55–64	223	170	53	906	722	182
65+	44	36	8	234	192	41
Unknown Age	45	28	15	253	162	75
TOTAL	**31,910**	**17,347**	**14,488**	**55,795**	**28,138**	**27,300**

* Includes 46 states and the District of Columbia reporting race/ethnicity data in the Office of Management and Budget compliant formats in 2013.
† Total includes cases reported with unknown sex.
Note: These tables should be used only for race/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 per 100,000 Population by Race/Ethnicity, Age Group, and Sex, United States*, 2013

Age Group	American Indians/ Alaska Natives			Asians			Blacks, Non-Hispanic		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0.0	0.0	0.0	0.4	0.2	0.5	2.2	1.2	3.1
5–9	0.6	0.0	1.3	0.0	0.0	0.0	1.1	0.3	1.9
10–14	14.2	2.4	26.3	0.5	0.0	1.0	52.5	21.1	84.9
15–19	319.7	162.0	484.3	30.9	21.7	40.2	1,334.2	913.9	1,768.5
20–24	531.9	344.1	728.0	66.7	77.0	55.3	1,842.6	1,734.5	1,949.1
25–29	418.3	317.5	516.9	43.4	58.3	29.3	1,031.5	1,207.2	863.2
30–34	242.7	172.9	311.9	29.6	46.3	14.8	521.4	690.3	366.4
35–39	124.7	80.1	168.2	20.1	30.8	10.4	281.5	418.0	158.5
40–44	64.9	53.0	76.4	12.8	22.0	4.7	154.5	250.6	67.4
45–54	34.7	37.5	32.1	7.3	11.9	3.2	84.9	150.5	26.0
55–64	6.2	5.6	6.7	2.6	3.8	1.6	29.9	57.3	6.6
65+	4.3	9.6	0.0	0.8	1.3	0.4	5.8	12.5	1.3
Unknown Age									
TOTAL	**137.4**	**94.6**	**178.7**	**17.1**	**22.8**	**11.8**	**426.6**	**444.9**	**409.2**

Age Group	Native Hawaiians/ Other Pacific Islanders			Whites, Non-Hispanic			Multirace		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0.0	0.0	0.0	0.4	0.2	0.6	0.1	0.2	0.0
5–9	2.6	0.0	5.4	0.1	0.0	0.2	0.3	0.3	0.3
10–14	2.7	0.0	5.6	2.6	0.5	4.7	2.5	0.0	5.1
15–19	144.7	80.6	212.1	85.1	42.4	130.1	74.0	37.3	111.3
20–24	356.0	347.8	364.9	161.6	133.7	190.3	130.3	106.3	153.3
25–29	240.0	248.4	231.1	116.1	116.5	115.3	84.6	99.3	71.3
30–34	159.6	199.7	117.5	72.2	80.6	63.4	54.2	81.8	29.3
35–39	94.2	97.4	90.8	40.4	48.9	31.7	24.4	34.2	15.6
40–44	53.0	58.4	47.5	27.5	39.5	15.4	15.7	24.1	8.1
45–54	22.0	34.7	9.4	15.2	25.3	5.2	11.2	20.0	3.2
55–64	4.4	9.1	0.0	4.5	7.9	1.2	4.6	8.2	1.3
65+	0.0	0.0	0.0	0.8	1.6	0.1	0.0	0.0	0.0
Unknown Age									
TOTAL	**94.0**	**96.4**	**91.5**	**34.5**	**34.9**	**34.1**	**31.0**	**28.7**	**33.2**

Age Group	Hispanics		
	Total†	Male	Female
0–4	0.3	0.2	0.3
5–9	0.2	0.0	0.4
10–14	4.0	1.9	6.2
15–19	141.7	97.7	188.1
20–24	251.5	244.4	258.3
25–29	169.1	188.8	145.7
30–34	97.3	119.3	72.5
35–39	57.1	75.0	37.9
40–44	36.6	50.9	21.1
45–54	20.1	30.3	9.7
55–64	6.8	10.7	3.1
65+	1.6	3.0	0.5
Unknown Age			
TOTAL	**65.8**	**70.4**	**60.8**

* Includes 46 states and the District of Columbia reporting race/ethnicity data in the Office of Management and Budget compliant formats in 2013.
† Total includes cases reported with unknown sex.
Note: These tables should be used only for race/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 23. Gonorrhea Among Women 15–25 Years of Age — Reported Cases and Rates of Reported Cases by Age, United States, 2009–2013

	Age	Cases	Rate per 100,000 Population
2009	15	4,458	221.1
	16	8,150	396.2
	17	12,226	582.3
	18	16,770	785.1
	19	17,749	814.9
	20	15,433	732.3
	21	13,321	639.4
	22	10,933	528.2
	23	9,151	438.7
	24	7,598	361.9
	25	6,429	311.8
2010	15	4,502	217.9
	16	8,286	394.6
	17	12,397	581.4
	18	16,743	762.6
	19	17,939	799.7
	20	16,320	738.2
	21	14,015	657.6
	22	11,087	531.3
	23	9,329	453.4
	24	7,823	375.1
	25	6,546	311.6
2011	15	4,466	220.3
	16	8,128	393.4
	17	12,308	584.7
	18	16,973	796.3
	19	17,872	814.3
	20	16,865	750.6
	21	14,559	647.9
	22	12,202	565.4
	23	9,861	467.2
	24	8,269	397.9
	25	6,804	324.9
2012	15	4,241	209.4
	16	7,316	359.4
	17	11,006	530.2
	18	15,580	736.2
	19	16,709	779.1
	20	15,849	717.5
	21	15,029	664.7
	22	12,800	565.9
	23	10,449	480.6
	24	8,584	403.4
	25	7,343	350.3
2013	15	3,776	186.4
	16	6,503	319.5
	17	9,374	451.6
	18	13,393	632.8
	19	14,703	685.6
	20	14,420	652.8
	21	13,394	592.4
	22	12,272	542.5
	23	10,819	497.7
	24	8,855	416.1
	25	7,446	355.3

Note: This table should be used only for age comparisons. 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/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	1,138	781	758	705	679	24.2	16.3	15.8	14.6	14.1
Alaska	4	15	11	34	35	0.6	2.1	1.5	4.6	4.8
Arizona	1,084	905	907	787	962	16.4	14.2	14.0	12.0	14.7
Arkansas	552	534	464	468	527	19.1	18.3	15.8	15.9	17.9
California	6,033	6,115	6,782	8,016	9,971	16.3	16.4	18.0	21.1	26.2
Colorado	269	342	367	503	475	5.4	6.8	7.2	9.7	9.2
Connecticut	179	234	189	121	133	5.1	6.5	5.3	3.4	3.7
Delaware	87	44	124	106	146	9.8	4.9	13.7	11.6	15.9
District of Columbia	431	495	552	589	609	71.9	82.3	89.3	93.1	96.3
Florida	3,860	4,070	4,143	4,483	5,024	20.8	21.6	21.7	23.2	26.0
Georgia	2,717	2,347	1,895	2,434	2,990	27.6	24.2	19.3	24.5	30.1
Hawaii	88	73	32	43	87	6.8	5.4	2.3	3.1	6.2
Idaho	31	20	42	54	42	2.0	1.3	2.6	3.4	2.6
Illinois	1,915	2,236	2,426	2,424	2,661	14.8	17.4	18.9	18.8	20.7
Indiana	324	412	468	531	543	5.0	6.4	7.2	8.1	8.3
Iowa	65	68	70	143	226	2.2	2.2	2.3	4.7	7.4
Kansas	151	110	76	129	196	5.4	3.9	2.6	4.5	6.8
Kentucky	239	311	335	390	395	5.5	7.2	7.7	8.9	9.0
Louisiana	1,964	2,484	2,043	1,780	1,998	43.7	54.8	44.7	38.7	43.4
Maine	15	41	24	22	21	1.1	3.1	1.8	1.7	1.6
Maryland	993	1,015	1,278	1,243	1,361	17.4	17.6	21.9	21.1	23.1
Massachusetts	473	639	770	806	990	7.2	9.8	11.7	12.1	14.9
Michigan	636	683	764	786	1,068	6.4	6.9	7.7	8.0	10.8
Minnesota	217	350	367	335	541	4.1	6.6	6.9	6.2	10.1
Mississippi	745	823	748	456	293	25.2	27.7	25.1	15.3	9.8
Missouri	514	512	414	426	609	8.6	8.5	6.9	7.1	10.1
Montana	5	5	9	3	8	0.5	0.5	0.9	0.3	0.8
Nebraska	45	33	36	35	95	2.5	1.8	2.0	1.9	5.1
Nevada	306	412	430	445	523	11.6	15.3	15.8	16.1	19.0
New Hampshire	37	43	33	65	79	2.8	3.3	2.5	4.9	6.0
New Jersey	890	947	971	883	968	10.2	10.8	11.0	10.0	10.9
New Mexico	208	151	212	234	247	10.3	7.3	10.2	11.2	11.8
New York	4,623	4,860	4,786	5,312	6,173	23.7	25.1	24.6	27.1	31.5
North Carolina	1,524	1,233	1,255	1,037	1,150	16.2	12.9	13.0	10.6	11.8
North Dakota	8	6	5	14	25	1.2	0.9	0.7	2.0	3.6
Ohio	795	1,076	954	1,141	1,095	6.9	9.3	8.3	9.9	9.5
Oklahoma	296	272	270	256	383	8.0	7.3	7.1	6.7	10.0
Oregon	132	173	252	424	527	3.5	4.5	6.5	10.9	13.5
Pennsylvania	1,028	1,007	1,125	1,349	1,485	8.2	7.9	8.8	10.6	11.6
Rhode Island	64	79	84	93	94	6.1	7.5	8.0	8.9	8.9
South Carolina	507	580	639	624	753	11.1	12.5	13.7	13.2	15.9
South Dakota	10	12	14	29	61	1.2	1.5	1.7	3.5	7.3
Tennessee	1,317	1,193	1,025	1,068	980	20.9	18.8	16.0	16.5	15.2
Texas	6,975	6,413	6,161	7,057	7,045	28.1	25.5	24.0	27.1	27.0
Utah	55	133	64	101	172	2.0	4.8	2.3	3.5	6.0
Vermont	1	4	10	12	10	0.2	0.6	1.6	1.9	1.6
Virginia	755	800	726	906	1,000	9.6	10.0	9.0	11.1	12.2
Washington	322	535	712	709	711	4.8	8.0	10.4	10.3	10.3
West Virginia	32	26	9	24	39	1.8	1.4	0.5	1.3	2.1
Wisconsin	166	186	203	268	257	2.9	3.3	3.6	4.7	4.5
Wyoming	7	6	6	12	9	1.3	1.1	1.1	2.1	1.6
U.S. TOTAL	**44,832**	**45,844**	**46,040**	**49,915**	**56,471**	**14.6**	**14.8**	**14.8**	**15.9**	**18.0**
Northeast	7,310	7,854	7,992	8,663	9,953	13.2	14.2	14.4	15.5	17.8
Midwest	4,846	5,684	5,797	6,261	7,377	7.3	8.5	8.6	9.3	11.0
South	24,132	23,421	22,425	23,626	25,372	21.3	20.4	19.3	20.1	21.6
West	8,544	8,885	9,826	11,365	13,769	11.9	12.3	13.5	15.4	18.7
Guam	12	11	26	27	24	6.7	6.9	16.3	16.9	15.0
Puerto Rico	725	723	671	704	810	18.3	19.4	18.1	19.2	22.1
Virgin Islands	2	4	7	2	9	1.8	3.8	6.6	1.9	8.5
OUTLYING AREAS	**739**	**738**	**704**	**733**	**843**	**17.4**	**18.5**	**17.7**	**18.6**	**21.4**
TOTAL	**45,571**	**46,582**	**46,744**	**50,648**	**57,314**	**14.6**	**14.9**	**14.8**	**15.9**	**18.0**

* See Syphilis Morbidity Reporting in the Appendix for definition.

Table 25. All Stages of Syphilis* — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)† in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	2,188	1,916	1,549	1,822	2,257	39.8	36.2	28.8	33.4	41.4
Austin-Round Rock, TX	352	362	425	478	501	20.6	21.1	23.8	26.1	27.3
Baltimore-Columbia-Towson, MD	567	531	710	726	732	21.1	19.6	26.0	26.4	26.6
Birmingham-Hoover, AL	412	234	276	226	236	36.4	20.7	24.4	19.9	20.8
Boston-Cambridge-Newton, MA-NH	411	544	607	570	758	9.0	11.9	13.2	12.3	16.3
Buffalo-Cheektowaga-Niagara Falls, NY	40	43	48	70	115	3.6	3.8	4.2	6.2	10.1
Charlotte-Concord-Gastonia, NC-SC	380	314	372	310	360	17.2	14.2	16.5	13.5	15.7
Chicago-Naperville-Elgin, IL-IN-WI	1,797	2,085	2,266	2,269	2,499	18.8	22.0	23.8	23.8	26.2
Cincinnati, OH-KY-IN	227	483	436	529	437	10.5	22.8	20.5	24.9	20.5
Cleveland-Elyria, OH	170	182	151	140	111	8.1	8.8	7.3	6.8	5.4
Columbus, OH	253	248	237	316	341	13.6	13.0	12.3	16.3	17.5
Dallas-Fort Worth-Arlington, TX	2,152	1,958	1,816	2,141	2,093	33.1	30.5	27.6	32.0	31.2
Denver-Aurora-Lakewood, CO	223	293	319	434	382	8.7	11.5	12.3	16.4	14.4
Detroit-Warren-Dearborn, MI	412	459	522	607	830	9.4	10.7	12.2	14.1	19.3
Hartford-West Hartford-East Hartford, CT	67	85	55	21	43	5.6	7.0	4.5	1.7	3.5
Houston-The Woodlands-Sugar Land, TX	2,037	1,891	1,870	2,246	1,891	34.9	31.9	30.9	36.4	30.6
Indianapolis-Carmel-Anderson, IN	162	236	270	336	340	8.6	12.5	14.1	17.4	17.6
Jacksonville, FL	235	228	188	177	189	17.7	16.9	13.8	12.8	13.7
Kansas City, MO-KS	220	145	141	164	320	10.8	7.2	7.0	8.0	15.7
Las Vegas-Henderson-Paradise, NV	273	389	402	403	438	14.3	19.9	20.4	20.1	21.9
Los Angeles-Long Beach-Anaheim, CA	3,278	3,003	3,247	3,540	4,536	25.5	23.4	25.1	27.1	34.8
Louisville/Jefferson County, KY-IN	123	196	186	201	210	10.1	15.9	14.9	16.1	16.8
Memphis, TN-MS-AR	777	760	587	591	578	59.2	57.4	44.0	44.0	43.1
Miami-Fort Lauderdale-West Palm Beach, FL	1,969	2,259	2,315	2,591	2,740	35.5	40.6	40.8	45.0	47.5
Milwaukee-Waukesha-West Allis, WI	117	121	117	159	153	7.5	7.8	7.5	10.1	9.8
Minneapolis-St. Paul-Bloomington, MN-WI	183	309	326	313	487	5.5	9.2	9.6	9.1	14.2
Nashville-Davidson--Murfreesboro--Franklin, TN	306	267	229	271	239	18.4	16.0	13.5	15.7	13.8
New Orleans-Metairie, LA	464	688	668	547	634	38.3	57.8	55.1	44.6	51.7
New York-Newark-Jersey City, NY-NJ-PA	5,135	5,379	5,303	5,670	6,506	26.0	27.5	26.9	28.6	32.8
Oklahoma City, OK	210	148	114	148	213	17.1	11.8	8.9	11.4	16.4
Orlando-Kissimmee-Sanford, FL	408	391	485	499	632	19.6	18.3	22.3	22.4	28.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	959	930	1,029	1,119	1,333	16.1	15.6	17.2	18.6	22.1
Phoenix-Mesa-Scottsdale, AZ	682	645	676	624	713	15.6	15.4	15.9	14.4	16.5
Pittsburgh, PA	70	72	92	128	95	3.0	3.1	3.9	5.4	4.0
Portland-Vancouver-Hillsboro, OR-WA	114	153	220	410	475	5.1	6.9	9.7	17.9	20.7
Providence-Warwick, RI-MA	76	95	111	125	138	4.7	5.9	6.9	7.8	8.6
Raleigh, NC	199	154	151	150	179	17.7	13.6	13.0	12.6	15.1
Richmond, VA	205	210	154	194	204	17.2	17.4	12.6	15.7	16.6
Riverside-San Bernardino-Ontario, CA	416	428	527	775	803	10.0	10.1	12.2	17.8	18.5
Sacramento--Roseville--Arden-Arcade, CA	212	183	258	249	289	10.0	8.5	11.9	11.3	13.2
Salt Lake City, UT	40	94	48	74	136	3.7	8.6	4.3	6.6	12.1
San Antonio-New Braunfels, TX	739	730	736	983	1,167	35.7	34.1	33.5	44.0	52.2
San Diego-Carlsbad, CA	495	607	609	717	791	16.2	19.6	19.4	22.6	24.9
San Francisco-Oakland-Hayward, CA	932	1,150	1,271	1,595	1,892	21.6	26.5	28.9	35.8	42.5
San Jose-Sunnyvale-Santa Clara, CA	141	183	159	233	276	7.7	10.0	8.5	12.3	14.6
Seattle-Tacoma-Bellevue, WA	256	439	589	559	539	7.5	12.8	16.8	15.7	15.2
St. Louis, MO-IL	294	403	271	280	338	10.5	14.5	9.7	10.0	12.1
Tampa-St. Petersburg-Clearwater, FL	631	503	516	582	633	23.0	18.1	18.3	20.5	22.3
Virginia Beach-Norfolk-Newport News, VA-NC	235	237	212	296	301	14.0	14.1	12.6	17.4	17.7
Washington-Arlington-Alexandria, DC-VA-MD-WV	1,004	1,191	1,316	1,374	1,543	18.2	21.1	22.9	23.4	26.3
SELECTED MSAs TOTAL	**33,248**	**34,554**	**35,182**	**38,982**	**43,646**	**19.8**	**20.6**	**20.8**	**22.8**	**25.5**

* See Syphilis Morbidity Reporting in the Appendix for definition.
† MSAs were selected on the basis of the largest population in the 2010 U.S. Census.

Table 26. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by State, Ranked by Rates, United States, 2013

Rank*	State	Cases	Rate per 100,000 Population
1	Georgia	1,017	10.3
2	California	3,532	9.3
3	Louisiana	423	9.2
4	Florida	1,513	7.8
5	Maryland	456	7.7
6	New York	1,459	7.5
7	Nevada	205	7.4
8	Oregon	267	6.8
9	Illinois	798	6.2
10	Arkansas	177	6.0
11	South Carolina	271	5.7
12	Delaware	52	5.7
13	Texas	1,475	5.7
	U.S. TOTAL†	**17,375**	**5.5**
14	Massachusetts	360	5.4
15	South Dakota	44	5.3
16	Michigan	487	4.9
17	Arizona	287	4.4
18	Rhode Island	45	4.3
19	Missouri	251	4.2
20	North Carolina	404	4.1
21	Washington	284	4.1
22	Virginia	315	3.8
23	Alabama	183	3.8
24	Ohio	436	3.8
25	New Mexico	78	3.7
26	Pennsylvania	471	3.7
27	Minnesota	193	3.6
28	Iowa	106	3.4
29	Tennessee	214	3.3
30	Hawaii	46	3.3
31	Indiana	215	3.3
32	Alaska	23	3.1
33	Colorado	163	3.1
34	Oklahoma	118	3.1
35	Kentucky	122	2.8
36	New Jersey	233	2.6
37	Mississippi	78	2.6
38	Utah	74	2.6
39	Nebraska	41	2.2
40	New Hampshire	28	2.1
41	Kansas	51	1.8
42	North Dakota	12	1.7
43	Wisconsin	95	1.7
44	Connecticut	56	1.6
45	Idaho	15	0.9
46	West Virginia	15	0.8
47	Maine	10	0.8
48	Montana	5	0.5
49	Vermont	3	0.5
50	Wyoming	1	0.2

* 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 168 cases and a rate of 26.6, but excludes outlying areas (Guam with 6 cases and rate of 3.8, Puerto Rico with 385 cases and rate of 10.5, and Virgin Islands with 2 cases and rate of 1.9).

Table 27. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	417	260	228	216	183	8.9	5.4	4.7	4.5	3.8
Alaska	0	3	5	11	23	0.0	0.4	0.7	1.5	3.1
Arizona	231	230	274	202	287	3.5	3.6	4.2	3.1	4.4
Arkansas	275	205	182	173	177	9.5	7.0	6.2	5.9	6.0
California	1,900	2,065	2,443	2,953	3,532	5.1	5.5	6.5	7.8	9.3
Colorado	105	138	133	208	163	2.1	2.7	2.6	4.0	3.1
Connecticut	65	98	65	55	56	1.8	2.7	1.8	1.5	1.6
Delaware	27	9	27	38	52	3.1	1.0	3.0	4.1	5.7
District of Columbia	163	134	165	165	168	27.2	22.3	26.7	26.1	26.6
Florida	1,041	1,184	1,257	1,369	1,513	5.6	6.3	6.6	7.1	7.8
Georgia	953	795	678	937	1,017	9.7	8.2	6.9	9.4	10.3
Hawaii	33	35	14	23	46	2.5	2.6	1.0	1.7	3.3
Idaho	3	6	13	26	15	0.2	0.4	0.8	1.6	0.9
Illinois	750	908	881	804	798	5.8	7.1	6.8	6.2	6.2
Indiana	158	175	173	224	215	2.5	2.7	2.7	3.4	3.3
Iowa	23	19	20	70	106	0.8	0.6	0.7	2.3	3.4
Kansas	32	19	24	24	51	1.1	0.7	0.8	0.8	1.8
Kentucky	92	139	129	150	122	2.1	3.2	3.0	3.4	2.8
Louisiana	741	546	447	339	423	16.5	12.0	9.8	7.4	9.2
Maine	4	32	12	17	10	0.3	2.4	0.9	1.3	0.8
Maryland	314	328	452	431	456	5.5	5.7	7.8	7.3	7.7
Massachusetts	238	285	266	316	360	3.6	4.4	4.0	4.8	5.4
Michigan	230	235	286	295	487	2.3	2.4	2.9	3.0	4.9
Minnesota	71	149	139	118	193	1.3	2.8	2.6	2.2	3.6
Mississippi	237	228	191	150	78	8.0	7.7	6.4	5.0	2.6
Missouri	173	152	136	157	251	2.9	2.5	2.3	2.6	4.2
Montana	4	3	7	2	5	0.4	0.3	0.7	0.2	0.5
Nebraska	5	12	10	8	41	0.3	0.7	0.5	0.4	2.2
Nevada	91	130	136	113	205	3.4	4.8	5.0	4.1	7.4
New Hampshire	14	22	18	36	28	1.1	1.7	1.4	2.7	2.1
New Jersey	212	244	232	229	233	2.4	2.8	2.6	2.6	2.6
New Mexico	61	53	71	101	78	3.0	2.6	3.4	4.8	3.7
New York	1,182	1,098	1,083	1,224	1,459	6.0	5.7	5.6	6.3	7.5
North Carolina	579	396	431	347	404	6.2	4.2	4.5	3.6	4.1
North Dakota	4	3	1	4	12	0.6	0.4	0.1	0.6	1.7
Ohio	360	528	440	425	436	3.1	4.6	3.8	3.7	3.8
Oklahoma	97	92	84	83	118	2.6	2.5	2.2	2.2	3.1
Oregon	57	71	97	212	267	1.5	1.9	2.5	5.4	6.8
Pennsylvania	341	369	373	494	471	2.7	2.9	2.9	3.9	3.7
Rhode Island	20	41	46	44	45	1.9	3.9	4.4	4.2	4.3
South Carolina	123	155	221	225	271	2.7	3.4	4.7	4.8	5.7
South Dakota	0	4	0	18	44	0.0	0.5	0.0	2.2	5.3
Tennessee	403	277	278	266	214	6.4	4.4	4.3	4.1	3.3
Texas	1,644	1,230	1,169	1,627	1,475	6.6	4.9	4.6	6.2	5.7
Utah	31	65	14	42	74	1.1	2.4	0.5	1.5	2.6
Vermont	0	4	9	6	3	0.0	0.6	1.4	1.0	0.5
Virginia	299	279	213	285	315	3.8	3.5	2.6	3.5	3.8
Washington	139	266	328	302	284	2.1	4.0	4.8	4.4	4.1
West Virginia	8	6	4	8	15	0.4	0.3	0.2	0.4	0.8
Wisconsin	44	49	65	91	95	0.8	0.9	1.1	1.6	1.7
Wyoming	3	0	0	4	1	0.6	0.0	0.0	0.7	0.2
U.S. TOTAL	**13,997**	**13,774**	**13,970**	**15,667**	**17,375**	**4.6**	**4.5**	**4.5**	**5.0**	**5.5**
Northeast	2,076	2,193	2,104	2,421	2,665	3.8	4.0	3.8	4.3	4.8
Midwest	1,850	2,253	2,175	2,238	2,729	2.8	3.4	3.2	3.3	4.1
South	7,413	6,263	6,156	6,809	7,001	6.5	5.5	5.3	5.8	6.0
West	2,658	3,065	3,535	4,199	4,980	3.7	4.3	4.9	5.7	6.8
Guam	2	1	5	6	6	1.1	0.6	3.1	3.8	3.8
Puerto Rico	227	228	254	306	385	5.7	6.1	6.9	8.3	10.5
Virgin Islands	0	0	0	0	2	0.0	0.0	0.0	0.0	1.9
OUTLYING AREAS	**229**	**229**	**259**	**312**	**393**	**5.4**	**5.7**	**6.5**	**7.9**	**10.0**
TOTAL	**14,226**	**14,003**	**14,229**	**15,979**	**17,768**	**4.6**	**4.5**	**4.5**	**5.0**	**5.6**

Table 28. Primary and Secondary Syphilis Among Women — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

	Cases					Rates per 100,000 Population				
State/Area	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	137	75	54	38	22	5.6	3.0	2.2	1.5	0.9
Alaska	0	0	1	1	2	0.0	0.0	0.3	0.3	0.6
Arizona	22	20	15	16	27	0.7	0.6	0.5	0.5	0.8
Arkansas	104	82	76	49	44	7.1	5.5	5.1	3.3	2.9
California	79	74	103	116	210	0.4	0.4	0.5	0.6	1.1
Colorado	6	2	4	3	4	0.2	0.1	0.2	0.1	0.2
Connecticut	1	5	5	9	8	0.1	0.3	0.3	0.5	0.4
Delaware	11	1	1	2	3	2.4	0.2	0.2	0.4	0.6
District of Columbia	10	2	7	6	19	3.2	0.6	2.1	1.8	5.7
Florida	147	147	134	134	137	1.6	1.5	1.4	1.4	1.4
Georgia	101	82	58	66	87	2.0	1.7	1.2	1.3	1.7
Hawaii	6	7	0	2	0	0.9	1.0	0.0	0.3	0.0
Idaho	0	0	1	2	0	0.0	0.0	0.1	0.3	0.0
Illinois	55	108	81	73	66	0.8	1.7	1.2	1.1	1.0
Indiana	13	20	13	22	18	0.4	0.6	0.4	0.7	0.5
Iowa	6	3	5	7	10	0.4	0.2	0.3	0.5	0.6
Kansas	9	1	0	2	4	0.6	0.1	0.0	0.1	0.3
Kentucky	4	8	19	13	17	0.2	0.4	0.9	0.6	0.8
Louisiana	349	251	179	127	115	15.1	10.8	7.7	5.4	4.9
Maine	0	0	0	2	1	0.0	0.0	0.0	0.3	0.1
Maryland	42	26	49	45	61	1.4	0.9	1.6	1.5	2.0
Massachusetts	5	16	23	15	17	0.1	0.5	0.7	0.4	0.5
Michigan	40	23	26	30	29	0.8	0.5	0.5	0.6	0.6
Minnesota	0	9	5	7	12	0.0	0.3	0.2	0.3	0.4
Mississippi	73	69	45	34	19	4.8	4.5	2.9	2.2	1.2
Missouri	15	3	6	12	19	0.5	0.1	0.2	0.4	0.6
Montana	0	0	1	0	1	0.0	0.0	0.2	0.0	0.2
Nebraska	0	3	1	1	4	0.0	0.3	0.1	0.1	0.4
Nevada	7	7	7	4	14	0.5	0.5	0.5	0.3	1.0
New Hampshire	0	1	1	0	1	0.0	0.1	0.1	0.0	0.1
New Jersey	26	16	13	19	13	0.6	0.4	0.3	0.4	0.3
New Mexico	6	3	2	9	20	0.6	0.3	0.2	0.9	1.9
New York	55	47	37	45	44	0.5	0.5	0.4	0.4	0.4
North Carolina	108	55	31	37	36	2.3	1.1	0.6	0.7	0.7
North Dakota	1	1	0	0	1	0.3	0.3	0.0	0.0	0.3
Ohio	63	132	107	85	63	1.1	2.2	1.8	1.4	1.1
Oklahoma	24	16	12	6	13	1.3	0.8	0.6	0.3	0.7
Oregon	1	1	0	6	12	0.1	0.1	0.0	0.3	0.6
Pennsylvania	42	36	34	34	26	0.6	0.6	0.5	0.5	0.4
Rhode Island	1	2	3	1	1	0.2	0.4	0.6	0.2	0.2
South Carolina	10	9	24	34	39	0.4	0.4	1.0	1.4	1.6
South Dakota	0	0	0	1	15	0.0	0.0	0.0	0.2	3.6
Tennessee	122	49	34	31	22	3.8	1.5	1.0	0.9	0.7
Texas	490	333	255	269	179	4.0	2.6	2.0	2.1	1.4
Utah	0	2	0	0	2	0.0	0.1	0.0	0.0	0.1
Vermont	0	2	0	0	0	0.0	0.6	0.0	0.0	0.0
Virginia	22	20	18	21	17	0.5	0.5	0.4	0.5	0.4
Washington	6	5	6	9	13	0.2	0.1	0.2	0.3	0.4
West Virginia	2	0	0	2	4	0.2	0.0	0.0	0.2	0.4
Wisconsin	10	6	5	11	9	0.4	0.2	0.2	0.4	0.3
Wyoming	1	0	0	0	0	0.4	0.0	0.0	0.0	0.0
U.S. TOTAL	**2,232**	**1,780**	**1,501**	**1,458**	**1,500**	**1.4**	**1.1**	**0.9**	**0.9**	**0.9**
Northeast	130	125	116	125	111	0.5	0.4	0.4	0.4	0.4
Midwest	212	309	249	251	250	0.6	0.9	0.7	0.7	0.7
South	1,756	1,225	996	914	834	3.0	2.1	1.7	1.5	1.4
West	134	121	140	168	305	0.4	0.3	0.4	0.5	0.8
Guam	1	1	2	1	5	1.1	1.3	2.5	1.3	6.3
Puerto Rico	23	18	17	20	35	1.1	0.9	0.9	1.0	1.8
Virgin Islands	0	0	0	0	1	0.0	0.0	0.0	0.0	1.8
OUTLYING AREAS	**24**	**19**	**19**	**21**	**41**	**1.1**	**0.9**	**0.9**	**1.0**	**2.0**
TOTAL	**2,256**	**1,799**	**1,520**	**1,479**	**1,541**	**1.4**	**1.1**	**0.9**	**0.9**	**1.0**

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

Table 29. Primary and Secondary Syphilis Among Men — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	280	185	174	178	161	12.3	8.0	7.5	7.6	6.9
Alaska	0	3	4	10	21	0.0	0.8	1.1	2.6	5.5
Arizona	208	210	257	186	260	6.3	6.6	8.0	5.7	8.0
Arkansas	171	123	106	124	133	12.1	8.6	7.3	8.6	9.2
California	1,821	1,990	2,327	2,823	3,319	9.8	10.7	12.4	14.9	17.5
Colorado	99	136	129	205	159	3.9	5.4	5.0	7.9	6.1
Connecticut	64	93	60	46	48	3.7	5.3	3.4	2.6	2.7
Delaware	16	8	26	36	49	3.7	1.8	5.9	8.1	11.0
District of Columbia	153	132	158	159	149	54.1	46.4	54.1	53.2	49.8
Florida	894	1,037	1,123	1,235	1,376	9.8	11.3	12.0	13.1	14.6
Georgia	852	713	620	870	930	17.6	15.1	12.9	17.9	19.2
Hawaii	27	28	14	21	46	4.1	4.1	2.0	3.0	6.6
Idaho	3	6	12	24	15	0.4	0.8	1.5	3.0	1.9
Illinois	695	800	800	731	731	10.9	12.7	12.7	11.6	11.6
Indiana	145	155	160	202	197	4.6	4.9	5.0	6.3	6.1
Iowa	17	16	15	63	96	1.1	1.1	1.0	4.1	6.3
Kansas	23	18	24	22	47	1.6	1.3	1.7	1.5	3.3
Kentucky	88	131	110	137	105	4.2	6.1	5.1	6.3	4.9
Louisiana	392	284	268	212	308	17.9	12.8	12.0	9.4	13.7
Maine	4	32	12	15	9	0.6	4.9	1.8	2.3	1.4
Maryland	272	302	403	386	395	9.8	10.8	14.3	13.5	13.9
Massachusetts	233	269	243	301	343	7.3	8.5	7.6	9.3	10.7
Michigan	190	212	260	265	458	3.9	4.4	5.4	5.5	9.4
Minnesota	71	140	134	111	178	2.7	5.3	5.0	4.2	6.7
Mississippi	164	159	146	116	59	11.5	11.0	10.1	8.0	4.1
Missouri	158	149	130	145	232	5.4	5.1	4.4	4.9	7.9
Montana	4	3	6	2	4	0.8	0.6	1.2	0.4	0.8
Nebraska	5	9	9	7	37	0.6	1.0	1.0	0.8	4.0
Nevada	84	123	129	109	191	6.2	9.0	9.4	7.8	13.7
New Hampshire	14	21	17	36	27	2.1	3.2	2.6	5.5	4.1
New Jersey	186	228	219	210	220	4.4	5.3	5.1	4.9	5.1
New Mexico	55	50	69	92	58	5.5	4.9	6.7	8.9	5.6
New York	1,127	1,051	1,045	1,175	1,408	11.9	11.2	11.1	12.4	14.8
North Carolina	471	341	400	310	368	10.3	7.3	8.5	6.5	7.7
North Dakota	3	2	1	4	11	0.9	0.6	0.3	1.1	3.1
Ohio	297	396	333	340	373	5.3	7.0	5.9	6.0	6.6
Oklahoma	73	76	72	77	105	4.0	4.1	3.8	4.1	5.6
Oregon	56	70	97	206	255	3.0	3.7	5.1	10.7	13.2
Pennsylvania	299	333	339	460	445	4.9	5.4	5.5	7.4	7.1
Rhode Island	19	39	43	43	44	3.7	7.7	8.5	8.5	8.7
South Carolina	113	146	197	191	232	5.1	6.5	8.7	8.3	10.1
South Dakota	0	4	0	17	29	0.0	1.0	0.0	4.1	6.9
Tennessee	281	228	244	235	192	9.2	7.4	7.8	7.5	6.1
Texas	1,154	896	914	1,358	1,296	9.3	7.2	7.2	10.5	10.0
Utah	31	63	14	42	72	2.2	4.5	1.0	2.9	5.0
Vermont	0	2	9	6	3	0.0	0.6	2.9	1.9	1.0
Virginia	277	259	195	264	298	7.1	6.6	4.9	6.6	7.4
Washington	133	261	322	293	271	4.0	7.8	9.4	8.5	7.9
West Virginia	6	6	4	6	11	0.7	0.7	0.4	0.7	1.2
Wisconsin	34	43	60	80	86	1.2	1.5	2.1	2.8	3.0
Wyoming	2	0	0	4	1	0.7	0.0	0.0	1.4	0.3
U.S. TOTAL	**11,764**	**11,981**	**12,453**	**14,190**	**15,861**	**7.8**	**7.9**	**8.1**	**9.2**	**10.3**
Northeast	1,946	2,068	1,987	2,292	2,547	7.2	7.7	7.4	8.4	9.4
Midwest	1,638	1,944	1,926	1,987	2,475	5.0	5.9	5.8	6.0	7.5
South	5,657	5,026	5,160	5,894	6,167	10.2	9.0	9.1	10.2	10.7
West	2,523	2,943	3,380	4,017	4,672	7.0	8.2	9.3	10.9	12.7
Guam	1	0	3	5	1	1.1	0.0	3.7	6.2	1.2
Puerto Rico	204	210	237	286	350	10.7	11.8	13.4	16.3	19.9
Virgin Islands	0	0	0	0	1	0.0	0.0	0.0	0.0	2.0
OUTLYING AREAS	**205**	**210**	**240**	**291**	**352**	**10.0**	**11.0**	**12.6**	**15.4**	**18.6**
TOTAL	**11,969**	**12,191**	**12,693**	**14,481**	**16,213**	**7.8**	**7.9**	**8.2**	**9.3**	**10.4**

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

Table 30. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	809	651	581	745	789	14.7	12.3	10.8	13.7	14.5
Austin-Round Rock, TX	99	107	114	154	145	5.8	6.2	6.4	8.4	7.9
Baltimore-Columbia-Towson, MD	204	212	308	307	288	7.6	7.8	11.3	11.2	10.5
Birmingham-Hoover, AL	145	82	89	73	69	12.8	7.3	7.9	6.4	6.1
Boston-Cambridge-Newton, MA-NH	203	240	191	204	268	4.4	5.3	4.2	4.4	5.8
Buffalo-Cheektowaga-Niagara Falls, NY	10	11	14	27	38	0.9	1.0	1.2	2.4	3.4
Charlotte-Concord-Gastonia, NC-SC	150	116	152	116	134	6.8	5.2	6.7	5.1	5.8
Chicago-Naperville-Elgin, IL-IN-WI	732	881	853	759	763	7.6	9.3	9.0	8.0	8.0
Cincinnati, OH-KY-IN	124	272	228	166	166	5.8	12.9	10.7	7.8	7.8
Cleveland-Elyria, OH	71	82	55	44	32	3.4	3.9	2.7	2.1	1.6
Columbus, OH	116	123	122	159	167	6.2	6.5	6.3	8.2	8.6
Dallas-Fort Worth-Arlington, TX	502	342	317	391	445	7.7	5.3	4.8	5.8	6.6
Denver-Aurora-Lakewood, CO	92	120	116	183	135	3.6	4.7	4.5	6.9	5.1
Detroit-Warren-Dearborn, MI	151	146	203	235	394	3.4	3.4	4.7	5.5	9.2
Hartford-West Hartford-East Hartford, CT	25	32	15	9	14	2.1	2.6	1.2	0.7	1.2
Houston-The Woodlands-Sugar Land, TX	432	330	322	537	363	7.4	5.6	5.3	8.7	5.9
Indianapolis-Carmel-Anderson, IN	84	109	91	150	146	4.5	5.8	4.8	7.8	7.6
Jacksonville, FL	57	49	47	44	40	4.3	3.6	3.5	3.2	2.9
Kansas City, MO-KS	80	43	57	65	155	3.9	2.1	2.8	3.2	7.6
Las Vegas-Henderson-Paradise, NV	86	125	126	97	164	4.5	6.4	6.4	4.8	8.2
Los Angeles-Long Beach-Anaheim, CA	858	766	876	1,049	1,299	6.7	6.0	6.8	8.0	10.0
Louisville/Jefferson County, KY-IN	58	104	92	81	71	4.8	8.4	7.4	6.5	5.7
Memphis, TN-MS-AR	189	166	120	110	105	14.4	12.5	9.0	8.2	7.8
Miami-Fort Lauderdale-West Palm Beach, FL	518	652	630	705	762	9.3	11.7	11.1	12.2	13.2
Milwaukee-Waukesha-West Allis, WI	28	29	35	43	54	1.8	1.9	2.2	2.7	3.4
Minneapolis-St. Paul-Bloomington, MN-WI	67	140	127	116	181	2.0	4.2	3.7	3.4	5.3
Nashville-Davidson--Murfreesboro--Franklin, TN	93	76	85	88	57	5.6	4.5	5.0	5.1	3.3
New Orleans-Metairie, LA	139	93	101	66	103	11.5	7.8	8.3	5.4	8.4
New York-Newark-Jersey City, NY-NJ-PA	1,308	1,228	1,169	1,315	1,491	6.6	6.3	5.9	6.6	7.5
Oklahoma City, OK	70	55	39	54	78	5.7	4.4	3.1	4.2	6.0
Orlando-Kissimmee-Sanford, FL	109	103	174	168	201	5.2	4.8	8.0	7.6	9.0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	289	307	302	369	396	4.8	5.1	5.0	6.1	6.6
Phoenix-Mesa-Scottsdale, AZ	169	161	213	162	219	3.9	3.8	5.0	3.7	5.1
Pittsburgh, PA	29	36	49	61	39	1.2	1.5	2.1	2.6	1.7
Portland-Vancouver-Hillsboro, OR-WA	53	66	90	209	240	2.4	3.0	4.0	9.1	10.5
Providence-Warwick, RI-MA	28	47	55	58	65	1.7	2.9	3.4	3.6	4.1
Raleigh, NC	75	44	47	56	70	6.7	3.9	4.0	4.7	5.9
Richmond, VA	96	88	50	64	70	8.1	7.3	4.1	5.2	5.7
Riverside-San Bernardino-Ontario, CA	115	157	182	166	203	2.8	3.7	4.2	3.8	4.7
Sacramento--Roseville--Arden-Arcade, CA	73	57	131	151	147	3.4	2.7	6.0	6.9	6.7
Salt Lake City, UT	28	54	9	34	65	2.6	5.0	0.8	3.0	5.8
San Antonio-New Braunfels, TX	216	183	188	329	310	10.4	8.5	8.6	14.7	13.9
San Diego-Carlsbad, CA	190	274	293	331	333	6.2	8.9	9.3	10.4	10.5
San Francisco-Oakland-Hayward, CA	438	543	626	744	814	10.1	12.5	14.3	16.7	18.3
San Jose-Sunnyvale-Santa Clara, CA	59	91	68	105	146	3.2	5.0	3.6	5.5	7.7
Seattle-Tacoma-Bellevue, WA	115	236	276	248	211	3.4	6.9	7.9	7.0	5.9
St. Louis, MO-IL	83	118	92	95	108	3.0	4.2	3.3	3.4	3.9
Tampa-St. Petersburg-Clearwater, FL	180	183	199	230	226	6.6	6.6	7.0	8.1	7.9
Virginia Beach-Norfolk-Newport News, VA-NC	102	92	64	106	102	6.1	5.5	3.8	6.2	6.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	324	311	360	358	418	5.9	5.5	6.3	6.1	7.1
SELECTED MSAs TOTAL	**10,271**	**10,533**	**10,743**	**12,136**	**13,299**	**6.1**	**6.3**	**6.3**	**7.1**	**7.8**

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

Table 31. Primary and Secondary Syphilis Among Women — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	59	44	40	33	52	2.1	1.6	1.5	1.2	1.9
Austin-Round Rock, TX	14	18	12	8	6	1.7	2.1	1.3	0.9	0.7
Baltimore-Columbia-Towson, MD	33	19	39	39	46	2.4	1.4	2.8	2.7	3.2
Birmingham-Hoover, AL	44	21	10	7	5	7.5	3.6	1.7	1.2	0.8
Boston-Cambridge-Newton, MA-NH	3	12	14	5	10	0.1	0.5	0.6	0.2	0.4
Buffalo-Cheektowaga-Niagara Falls, NY	0	0	2	1	2	0.0	0.0	0.3	0.2	0.3
Charlotte-Concord-Gastonia, NC-SC	18	6	14	15	6	1.6	0.5	1.2	1.3	0.5
Chicago-Naperville-Elgin, IL-IN-WI	46	107	77	77	65	0.9	2.2	1.6	1.6	1.3
Cincinnati, OH-KY-IN	26	107	99	63	31	2.4	9.9	9.1	5.8	2.9
Cleveland-Elyria, OH	14	6	3	5	2	1.3	0.6	0.3	0.5	0.2
Columbus, OH	15	13	10	14	18	1.6	1.3	1.0	1.4	1.8
Dallas-Fort Worth-Arlington, TX	153	103	63	56	41	4.7	3.2	1.9	1.6	1.2
Denver-Aurora-Lakewood, CO	3	0	1	3	3	0.2	0.0	0.1	0.2	0.2
Detroit-Warren-Dearborn, MI	26	9	20	27	25	1.2	0.4	0.9	1.2	1.1
Hartford-West Hartford-East Hartford, CT	0	3	2	3	0	0.0	0.5	0.3	0.5	0.0
Houston-The Woodlands-Sugar Land, TX	113	77	69	97	59	3.9	2.6	2.3	3.1	1.9
Indianapolis-Carmel-Anderson, IN	7	12	5	10	9	0.7	1.2	0.5	1.0	0.9
Jacksonville, FL	11	11	11	4	5	1.6	1.6	1.6	0.6	0.7
Kansas City, MO-KS	8	1	4	1	9	0.8	0.1	0.4	0.1	0.9
Las Vegas-Henderson-Paradise, NV	7	6	4	2	6	0.7	0.6	0.4	0.2	0.6
Los Angeles-Long Beach-Anaheim, CA	22	17	16	26	50	0.3	0.3	0.2	0.4	0.8
Louisville/Jefferson County, KY-IN	1	4	7	9	11	0.2	0.6	1.1	1.4	1.7
Memphis, TN-MS-AR	67	33	22	22	17	9.8	4.8	3.2	3.2	2.4
Miami-Fort Lauderdale-West Palm Beach, FL	54	55	47	63	65	1.9	1.9	1.6	2.1	2.2
Milwaukee-Waukesha-West Allis, WI	9	5	5	5	5	1.1	0.6	0.6	0.6	0.6
Minneapolis-St. Paul-Bloomington, MN-WI	0	5	5	7	9	0.0	0.3	0.3	0.4	0.5
Nashville-Davidson--Murfreesboro--Franklin, TN	24	11	3	1	4	2.8	1.3	0.3	0.1	0.5
New Orleans-Metairie, LA	37	31	17	9	10	5.9	5.1	2.7	1.4	1.6
New York-Newark-Jersey City, NY-NJ-PA	70	53	39	57	46	0.7	0.5	0.4	0.6	0.4
Oklahoma City, OK	16	12	6	1	5	2.6	1.9	0.9	0.2	0.8
Orlando-Kissimmee-Sanford, FL	19	7	10	15	9	1.8	0.6	0.9	1.3	0.8
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	37	33	28	30	24	1.2	1.1	0.9	1.0	0.8
Phoenix-Mesa-Scottsdale, AZ	8	12	9	14	22	0.4	0.6	0.4	0.6	1.0
Pittsburgh, PA	4	2	4	5	2	0.3	0.2	0.3	0.4	0.2
Portland-Vancouver-Hillsboro, OR-WA	0	2	0	9	9	0.0	0.2	0.0	0.8	0.8
Providence-Warwick, RI-MA	1	3	3	1	3	0.1	0.4	0.4	0.1	0.4
Raleigh, NC	6	5	1	5	9	1.1	0.9	0.2	0.8	1.5
Richmond, VA	3	6	10	10	4	0.5	1.0	1.6	1.6	0.6
Riverside-San Bernardino-Ontario, CA	5	1	8	3	7	0.2	0.0	0.4	0.1	0.3
Sacramento--Roseville--Arden-Arcade, CA	16	12	7	5	10	1.5	1.1	0.6	0.4	0.9
Salt Lake City, UT	0	0	0	0	1	0.0	0.0	0.0	0.0	0.2
San Antonio-New Braunfels, TX	42	28	39	59	44	4.0	2.6	3.5	5.2	3.9
San Diego-Carlsbad, CA	6	3	13	12	10	0.4	0.2	0.8	0.8	0.6
San Francisco-Oakland-Hayward, CA	9	20	27	28	40	0.4	0.9	1.2	1.2	1.8
San Jose-Sunnyvale-Santa Clara, CA	5	3	4	3	9	0.6	0.3	0.4	0.3	1.0
Seattle-Tacoma-Bellevue, WA	4	2	3	6	10	0.2	0.1	0.2	0.3	0.6
St. Louis, MO-IL	9	3	3	9	6	0.6	0.2	0.2	0.6	0.4
Tampa-St. Petersburg-Clearwater, FL	29	33	26	29	31	2.1	2.3	1.8	2.0	2.1
Virginia Beach-Norfolk-Newport News, VA-NC	11	3	7	5	5	1.3	0.4	0.8	0.6	0.6
Washington-Arlington-Alexandria, DC-VA-MD-WV	19	13	16	15	35	0.7	0.4	0.5	0.5	1.2
SELECTED MSAs TOTAL	**1,133**	**992**	**884**	**933**	**912**	**1.3**	**1.2**	**1.0**	**1.1**	**1.0**

* MSAs were selected on the basis of the largest population in the 2010 U.S. Census.
Note: Cases reported with unknown sex are not included in this table.

Table 32. Primary and Secondary Syphilis Among Men — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

	Cases					Rates per 100,000 Population				
MSAs	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	750	607	541	712	737	27.6	23.6	20.6	26.8	27.8
Austin-Round Rock, TX	85	89	102	146	139	9.8	10.3	11.4	15.9	15.1
Baltimore-Columbia-Towson, MD	171	193	269	268	242	13.2	14.8	20.5	20.2	18.2
Birmingham-Hoover, AL	101	61	79	66	64	18.5	11.2	14.5	12.1	11.7
Boston-Cambridge-Newton, MA-NH	200	228	177	199	258	8.9	10.4	8.0	8.8	11.5
Buffalo-Cheektowaga-Niagara Falls, NY	10	11	12	26	36	1.8	2.0	2.2	4.7	6.6
Charlotte-Concord-Gastonia, NC-SC	132	110	138	101	128	12.2	10.2	12.6	9.0	11.5
Chicago-Naperville-Elgin, IL-IN-WI	686	774	776	682	697	14.6	16.7	16.7	14.6	15.0
Cincinnati, OH-KY-IN	98	165	129	103	135	9.3	16.0	12.4	9.9	13.0
Cleveland-Elyria, OH	57	76	52	39	30	5.7	7.6	5.2	3.9	3.0
Columbus, OH	101	110	112	145	149	11.0	11.8	11.8	15.2	15.6
Dallas-Fort Worth-Arlington, TX	349	239	254	335	404	10.7	7.5	7.8	10.1	12.2
Denver-Aurora-Lakewood, CO	89	120	115	180	132	7.0	9.5	8.9	13.7	10.0
Detroit-Warren-Dearborn, MI	125	137	183	208	369	5.8	6.6	8.8	10.0	17.7
Hartford-West Hartford-East Hartford, CT	25	29	13	6	14	4.3	4.9	2.2	1.0	2.4
Houston-The Woodlands-Sugar Land, TX	319	253	253	440	304	10.9	8.6	8.4	14.3	9.9
Indianapolis-Carmel-Anderson, IN	77	97	86	140	137	8.4	10.5	9.2	14.8	14.5
Jacksonville, FL	46	38	36	40	35	7.1	5.8	5.4	6.0	5.2
Kansas City, MO-KS	72	42	53	64	146	7.2	4.3	5.3	6.4	14.6
Las Vegas-Henderson-Paradise, NV	79	119	122	95	158	8.2	12.1	12.3	9.4	15.7
Los Angeles-Long Beach-Anaheim, CA	836	749	858	1,019	1,248	13.1	11.8	13.4	15.8	19.4
Louisville/Jefferson County, KY-IN	57	100	85	72	60	9.6	16.6	14.0	11.8	9.8
Memphis, TN-MS-AR	122	133	98	88	88	19.3	20.9	15.3	13.7	13.7
Miami-Fort Lauderdale-West Palm Beach, FL	464	597	583	642	697	17.1	22.2	21.2	23.0	24.9
Milwaukee-Waukesha-West Allis, WI	19	24	30	38	49	2.5	3.2	3.9	5.0	6.4
Minneapolis-St. Paul-Bloomington, MN-WI	67	135	122	109	169	4.0	8.2	7.3	6.4	10.0
Nashville-Davidson--Murfreesboro--Franklin, TN	69	65	82	87	53	8.4	8.0	9.9	10.3	6.3
New Orleans-Metairie, LA	102	55	84	57	93	17.5	9.5	14.2	9.6	15.6
New York-Newark-Jersey City, NY-NJ-PA	1,238	1,175	1,129	1,254	1,438	12.9	12.5	11.9	13.1	15.0
Oklahoma City, OK	54	43	33	53	73	8.9	7.0	5.2	8.3	11.4
Orlando-Kissimmee-Sanford, FL	90	96	164	153	192	8.7	9.2	15.4	14.1	17.6
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	252	274	274	339	372	8.7	9.5	9.5	11.7	12.8
Phoenix-Mesa-Scottsdale, AZ	161	149	202	148	197	7.3	7.1	9.5	6.9	9.1
Pittsburgh, PA	25	34	45	56	37	2.2	3.0	3.9	4.9	3.2
Portland-Vancouver-Hillsboro, OR-WA	53	64	90	200	231	4.8	5.8	8.0	17.7	20.4
Providence-Warwick, RI-MA	27	44	52	57	62	3.5	5.7	6.7	7.4	8.0
Raleigh, NC	69	39	46	51	61	12.4	7.1	8.1	8.8	10.5
Richmond, VA	93	82	40	54	66	16.1	14.0	6.8	9.1	11.1
Riverside-San Bernardino-Ontario, CA	110	156	171	163	196	5.3	7.4	8.0	7.5	9.0
Sacramento--Roseville--Arden-Arcade, CA	57	45	122	144	137	5.4	4.3	11.4	13.4	12.7
Salt Lake City, UT	28	54	9	34	64	5.1	9.9	1.6	6.0	11.3
San Antonio-New Braunfels, TX	174	155	149	270	266	17.1	14.7	13.8	24.5	24.2
San Diego-Carlsbad, CA	184	271	279	318	323	12.0	17.4	17.7	19.9	20.2
San Francisco-Oakland-Hayward, CA	429	523	596	713	773	20.0	24.5	27.5	32.4	35.2
San Jose-Sunnyvale-Santa Clara, CA	54	88	64	102	137	5.7	9.5	6.8	10.7	14.4
Seattle-Tacoma-Bellevue, WA	111	234	273	242	201	6.5	13.7	15.6	13.7	11.4
St. Louis, MO-IL	74	115	89	86	102	5.5	8.5	6.6	6.4	7.5
Tampa-St. Petersburg-Clearwater, FL	151	150	173	201	195	11.3	11.1	12.6	14.6	14.2
Virginia Beach-Norfolk-Newport News, VA-NC	91	89	57	101	97	11.1	10.8	6.9	12.1	11.6
Washington-Arlington-Alexandria, DC-VA-MD-WV	305	298	344	343	383	11.3	10.9	12.3	12.0	13.4
SELECTED MSAs TOTAL	**9,138**	**9,534**	**9,845**	**11,189**	**12,374**	**11.1**	**11.6**	**11.9**	**13.3**	**14.8**

* MSAs were selected on the basis of the largest population in the 2010 U.S. Census.
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, 2013

Rank†	County/Independent City	Cases	Rate per 100,000 Population	Cumulative Percentage
1	Los Angeles County, CA	1,095	11.0	6
2	Cook County, IL	694	13.3	10
3	San Francisco County, CA	503	60.9	13
4	New York County, NY	484	29.9	15
5	Miami-Dade County, FL	413	15.9	18
6	Fulton County, GA	379	38.8	20
7	San Diego County, CA	333	10.5	22
8	Harris County, TX	319	7.5	24
9	Bexar County, TX	293	16.4	25
10	Kings County, NY	287	11.2	27
11	Wayne County, MI	286	16.0	29
12	Philadelphia County, PA	278	18.0	30
13	Broward County, FL	265	14.6	32
14	Dallas County, TX	244	9.9	33
15	Bronx County, NY	235	16.7	35
16	Maricopa County, AZ	212	5.4	36
17	Baltimore (City), MD	211	34.0	37
18	Orange County, CA	204	6.6	38
19	DeKalb County, GA	198	28.0	39
20	King County, WA	171	8.5	40
21	Washington, D.C.	168	26.6	41
22	Clark County, NV	164	8.2	42
23	Hillsborough County, FL	163	12.8	43
24	Multnomah County, OR	160	21.1	44
25	Franklin County, OH	156	13.0	45
26	Alameda County, CA	156	10.0	46
27	Tarrant County, TX	153	8.1	47
28	Orange County, FL	147	12.2	48
29	Queens County, NY	147	6.5	49
30	Santa Clara County, CA	145	7.9	49
31	Suffolk County, MA	136	18.3	50
32	Marion County, IN	135	14.7	51
33	Hennepin County, MN	134	11.3	52
34	Hamilton County, OH	131	16.3	52
35	Travis County, TX	128	11.7	53
36	Riverside County, CA	128	5.6	54
37	Kern County, CA	122	14.2	55
38	Prince George's County, MD	122	13.8	55
39	Sacramento County, CA	117	8.1	56
40	Jackson County, MO	112	16.5	57
41	Mecklenburg County, NC	108	11.1	57
42	Caddo Parish, LA	99	38.5	58
43	Denver County, CO	89	14.0	58
44	Shelby County, TN	89	9.5	59
45	Fresno County, CA	87	9.2	59
46	Palm Beach County, FL	84	6.2	60
47	Contra Costa County, CA	79	7.3	60
48	San Joaquin County, CA	75	10.7	61
49	San Bernardino County, CA	75	3.6	61
50	Oklahoma County, OK	69	9.3	62
51	Oakland County, MI	69	5.7	62
52	Wake County, NC	66	6.9	62
53	Orleans Parish, LA	65	17.6	63
54	Middlesex County, MA	65	4.2	63
55	Richland County, SC	64	16.3	63
56	Salt Lake County, UT	64	6.0	64
57	Jefferson County, KY	63	8.4	64
58	St. Louis (City), MO	60	18.9	65
59	Cobb County, GA	59	8.3	65
60	San Mateo County, CA	58	7.8	65
61	Stanislaus County, CA	57	10.9	66
62	Pulaski County, AR	55	14.1	66
63	Pima County, AZ	53	5.3	66
64	Hudson County, NJ	52	8.0	66
65	Jefferson County, AL	52	7.9	67
66	Pinellas County, FL	52	5.6	67
67	Clayton County, GA	50	18.8	67
68	Gwinnett County, GA	50	5.9	68
69	Milwaukee County, WI	50	5.2	68
70	East Baton Rouge Parish, LA	48	10.8	68

* Accounting for 68% of reported primary and secondary syphilis cases.

† Counties and independent cities were ranked in descending order by number of cases reported then by rate in 2013.

Table 34. Primary and Secondary Syphilis Among Men and Women — Reported Cases and Rates of Reported Cases per 100,000 population, and Male–To–Female Rate Ratios in the Counties and Independent Cities Ranked in the Top 30 for Cases in 2013, United States, 2012–2013

	Male				Female				Male-to-Female Rate Ratio	
	2012		2013		2012		2013			
County/Independent City*	Cases	Rates	Cases	Rates	Cases	Rates	Cases	Rates	2012	2013
Maricopa County, AZ	147	7.5	191	9.8	12	0.6	21	1.1	12.5	8.9
Alameda County, CA	126	16.5	138	18.1	9	1.1	18	2.3	15.0	7.9
Los Angeles County, CA	918	18.7	1,055	21.5	23	0.5	40	0.8	37.4	26.9
Orange County, CA	101	6.6	193	12.6	3	0.2	10	0.6	33.0	21.0
San Diego County, CA	318	19.9	323	20.2	12	0.8	10	0.6	24.9	33.7
San Francisco County, CA	483	115	489	116	11	2.7	13	3.2	42.6	36.4
Santa Clara County, CA	101	10.9	136	14.7	3	0.3	9	1.0	36.3	14.7
Washington, D.C.	159	53.2	149	49.8	6	1.8	19	5.7	29.6	8.7
Broward County, FL	255	28.9	242	27.4	26	2.8	23	2.5	10.3	11.0
Hillsborough County, FL	136	21.8	137	22.0	19	2.9	26	4.0	7.5	5.5
Miami-Dade County, FL	325	25.8	382	30.4	21	1.6	31	2.3	16.1	13.2
Orange County, FL	126	21.3	141	23.8	11	1.8	6	1.0	11.8	23.8
DeKalb County, GA	163	48.2	186	54.9	4	1.1	12	3.3	43.8	16.6
Fulton County, GA	376	78.8	358	75.0	18	3.6	21	4.2	21.9	17.9
Cook County, IL	615	24.3	635	25.0	64	2.4	58	2.2	10.1	11.4
Baltimore (City), MD	221	75.5	177	60.5	30	9.1	34	10.3	8.3	5.9
Wayne County, MI	148	17.2	267	31.0	23	2.5	19	2.0	6.9	15.5
Clark County, NV	95	9.4	158	15.7	2	0.2	6	0.6	47.0	26.2
Bronx County, NY	170	25.6	226	34.1	7	0.9	8	1.1	28.4	31.0
Kings County, NY	257	21.2	278	22.9	10	0.7	5	0.4	30.3	57.3
New York County, NY	373	48.8	477	62.4	4	0.5	7	0.8	97.6	78.0
Queens County, NY	152	13.8	139	12.6	7	0.6	6	0.5	23.0	25.2
Franklin County, OH	139	23.9	141	24.2	12	2.0	15	2.4	12.0	10.1
Multnomah County, OR	131	34.9	158	42.1	3	0.8	2	0.5	43.6	84.2
Philadelphia County, PA	247	33.8	262	35.9	22	2.7	16	2.0	12.5	18.0
Bexar County, TX	265	30.2	251	28.6	56	6.2	42	4.6	4.9	6.2
Dallas County, TX	168	13.8	222	18.3	21	1.7	22	1.8	8.1	10.2
Harris County, TX	405	19.1	269	12.7	84	3.9	50	2.3	4.9	5.5
Tarrant County, TX	135	14.6	137	14.9	28	2.9	16	1.7	5.0	8.8
King County, WA	208	20.8	165	16.5	5	0.5	6	0.6	41.6	27.5

* Counties and independent cities are in alphabetical order by state.

Table 35. Primary and Secondary Syphilis — Reported Cases and Rates of Reported Cases by Age Group and Sex, United States, 2009–2013

	Age Group	Cases				Rates*		
		Total	Male	Female	Unknown Sex	Total	Male	Female
2009	0–4	1	0	1	0	0.0	0.0	0.0
	5–9	1	0	1	0	0.0	0.0	0.0
	10–14	19	4	15	0	0.1	0.0	0.2
	15–19	1,005	661	344	0	4.7	6.0	3.3
	20–24	2,812	2,242	570	0	13.1	20.2	5.5
	25–29	2,405	2,027	377	1	11.1	18.2	3.6
	30–34	1,857	1,571	286	0	9.3	15.5	2.9
	35–39	1,612	1,409	203	0	7.8	13.6	2.0
	40–44	1,643	1,476	167	0	7.8	14.1	1.6
	45–54	2,033	1,815	218	0	4.6	8.3	1.0
	55–64	517	475	42	0	1.5	2.8	0.2
	65+	90	83	7	0	0.2	0.5	0.0
	Unknown Age	2	1	1	0			
	TOTAL	**13,997**	**11,764**	**2,232**	**1**	**4.6**	**7.8**	**1.4**
2010	0–4	1	0	1	0	0.0	0.0	0.0
	5–9	0	0	0	0	0.0	0.0	0.0
	10–14	18	7	11	0	0.1	0.1	0.1
	15–19	932	617	313	2	4.2	5.5	2.9
	20–24	2,907	2,429	474	4	13.5	22.1	4.5
	25–29	2,455	2,131	322	2	11.6	20.0	3.1
	30–34	1,794	1,597	197	0	9.0	16.0	2.0
	35–39	1,454	1,313	140	1	7.2	13.1	1.4
	40–44	1,553	1,448	104	1	7.4	13.9	1.0
	45–54	2,056	1,877	176	3	4.6	8.5	0.8
	55–64	493	457	36	0	1.4	2.6	0.2
	65+	107	102	5	0	0.3	0.6	0.0
	Unknown Age	4	3	1	0			
	TOTAL	**13,774**	**11,981**	**1,780**	**13**	**4.5**	**7.9**	**1.1**
2011	0–4	9	5	4	0	0.0	0.0	0.0
	5–9	1	1	0	0	0.0	0.0	0.0
	10–14	15	6	9	0	0.1	0.1	0.1
	15–19	864	606	258	0	4.0	5.5	2.5
	20–24	2,987	2,582	403	2	13.5	22.8	3.7
	25–29	2,546	2,277	268	1	12.0	21.2	2.5
	30–34	1,846	1,657	187	2	9.0	16.1	1.8
	35–39	1,382	1,265	115	2	7.1	13.0	1.2
	40–44	1,503	1,408	91	4	7.1	13.5	0.9
	45–54	2,123	1,999	120	4	4.7	9.1	0.5
	55–64	554	510	43	1	1.5	2.8	0.2
	65+	138	135	3	0	0.3	0.8	0.0
	Unknown Age	2	2	0	0			
	TOTAL	**13,970**	**12,453**	**1,501**	**16**	**4.5**	**8.1**	**0.9**
2012	0–4	1	1	0	0	0.0	0.0	0.0
	5–9	0	0	0	0	0.0	0.0	0.0
	10–14	9	5	4	0	0.0	0.0	0.0
	15–19	880	640	238	2	4.1	5.8	2.3
	20–24	3,280	2,859	418	3	14.5	24.8	3.8
	25–29	2,911	2,641	266	4	13.6	24.4	2.5
	30–34	2,209	2,023	182	4	10.6	19.3	1.7
	35–39	1,563	1,443	120	0	8.0	14.9	1.2
	40–44	1,618	1,544	70	4	7.7	14.8	0.7
	45–54	2,439	2,310	128	1	5.5	10.6	0.6
	55–64	614	586	27	1	1.6	3.2	0.1
	65+	123	121	2	0	0.3	0.6	0.0
	Unknown Age	20	17	3	0			
	TOTAL	**15,667**	**14,190**	**1,458**	**19**	**5.0**	**9.2**	**0.9**
2013	0–4	5	2	3	0	0.0	0.0	0.0
	5–9	0	0	0	0	0.0	0.0	0.0
	10–14	23	14	9	0	0.1	0.1	0.1
	15–19	900	700	200	0	4.2	6.4	1.9
	20–24	3,642	3,204	435	3	16.1	27.7	3.9
	25–29	3,329	3,037	286	6	15.6	28.0	2.7
	30–34	2,447	2,272	172	3	11.7	21.7	1.7
	35–39	1,800	1,674	125	1	9.2	17.2	1.3
	40–44	1,693	1,587	105	1	8.1	15.2	1.0
	45–54	2,614	2,495	119	0	5.9	11.4	0.5
	55–64	750	716	34	0	1.9	3.8	0.2
	65+	162	152	10	0	0.4	0.8	0.0
	Unknown Age	10	8	2	0			
	TOTAL	**17,375**	**15,861**	**1,500**	**14**	**5.5**	**10.3**	**0.9**

* No population data are available for unknown sex and age; therefore, rates are not calculated.
Cases in the 0–4 and 5–9 age groups may include cases due to congenital transmission.
Note: This table should be used only for age comparisons.

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Table 36A. Primary and Secondary Syphilis — Reported Cases by Race/Ethnicity, Age Group, and Sex, United States*, 2013

Age Group	American Indians/ Alaska Natives			Asians			Blacks, Non-Hispanic		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0	0	0	0	0	0	2	0	2
5–9	0	0	0	0	0	0	0	0	0
10–14	1	0	1	0	0	0	11	6	5
15–19	6	3	3	13	11	2	441	316	125
20–24	25	17	8	73	68	5	1,674	1,425	249
25–29	16	13	3	57	54	3	1,328	1,162	162
30–34	11	11	0	50	49	1	784	697	87
35–39	9	6	3	53	51	2	485	424	61
40–44	13	10	3	32	32	0	369	323	46
45–54	12	10	2	46	44	2	503	454	49
55–64	5	5	0	12	11	1	128	111	17
65+	0	0	0	0	0	0	24	22	2
Unknown Age	0	0	0	0	0	0	1	0	1
TOTAL	**98**	**75**	**23**	**336**	**320**	**16**	**5,750**	**4,940**	**806**

Age Group	Native Hawaiians/ Other Pacific Islanders			Whites, Non-Hispanic			Multirace		
	Total†	Male	Female	Total†	Male	Female	Total†	Male	Female
0–4	0	0	0	1	1	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	1	1	0	1	0	1	0	0	0
15–19	5	4	1	133	108	25	7	5	2
20–24	8	8	0	718	650	68	23	21	2
25–29	15	14	1	778	724	53	19	18	1
30–34	3	3	0	699	661	38	17	15	2
35–39	5	4	1	589	557	31	10	9	1
40–44	0	0	0	695	659	36	8	8	0
45–54	5	5	0	1,272	1,245	27	10	10	0
55–64	1	1	0	424	415	9	5	5	0
65+	0	0	0	98	93	5	0	0	0
Unknown Age	0	0	0	4	3	1	0	0	0
TOTAL	**43**	**40**	**3**	**5,412**	**5,116**	**294**	**99**	**91**	**8**

Age Group	Hispanics			Other/Unknown		
	Total†	Male	Female	Total†	Male	Female
0–4	0	0	0	2	1	1
5–9	0	0	0	0	0	0
10–14	6	5	1	1	1	0
15–19	177	154	23	33	27	6
20–24	656	607	49	107	85	22
25–29	646	606	40	83	78	5
30–34	469	447	22	91	82	9
35–39	354	337	17	68	65	3
40–44	311	298	13	70	68	1
45–54	356	337	19	125	119	6
55–64	79	77	2	31	29	2
65+	20	18	2	8	8	0
Unknown Age	3	3	0	1	1	0
TOTAL	**3,077**	**2,889**	**188**	**620**	**564**	**55**

* Includes 47 states and the District of Columbia reporting race/ethnicity data in the Office of Management and Budget compliant formats in 2013.
† Total includes cases reported with unknown sex.
Note: These tables should be used only for race/ethnicity comparisons. See Table 35 for age–specific cases and rates and Tables 27–29 for total and sex–specific cases and rates.
Cases in the 0–4 and 5–9 age groups may include cases due to congenital transmission.
No population data exist for unknown sex, unknown age, or unknown race; therefore rates are not calculated.

Table 36B. Primary and Secondary Syphilis — Rates of Reported Cases per 100,000 Population by Race/Ethnicity, Age Group, and Sex, United States*, 2013

Age Group	American Indians/ Alaska Natives			Asians			Blacks, Non-Hispanic		
	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	0.0	0.2
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.6	0.0	1.2	0.0	0.0	0.0	0.4	0.5	0.4
15–19	3.5	3.4	3.5	1.6	2.6	0.5	15.8	22.2	9.1
20–24	13.8	18.3	9.0	7.1	13.1	1.0	56.8	96.4	17.0
25–29	10.3	16.7	3.9	5.0	9.9	0.5	54.2	97.2	12.9
30–34	7.6	15.3	0.0	4.3	9.0	0.2	33.1	61.6	7.0
35–39	6.8	9.2	4.5	4.6	9.3	0.3	22.3	41.2	5.3
40–44	9.4	14.7	4.3	2.8	6.0	0.0	16.1	29.7	3.8
45–54	4.0	7.0	1.3	2.4	5.0	0.2	10.7	20.4	2.0
55–64	2.1	4.5	0.0	0.8	1.7	0.1	3.5	6.6	0.8
65+	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.7	0.1
Unknown Age									
TOTAL	**4.6**	**7.1**	**2.1**	**2.5**	**4.9**	**0.2**	**16.8**	**30.2**	**4.5**

Age Group	Native Hawaiians/ Other Pacific Islanders			Whites, Non-Hispanic			Multirace		
	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	2.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	12.9	20.1	5.3	1.2	1.9	0.5	1.2	1.7	0.7
20–24	17.1	32.9	0.0	6.1	10.8	1.2	4.9	9.1	0.8
25–29	32.9	59.7	4.5	6.9	12.6	0.9	5.2	10.4	0.5
30–34	7.1	13.9	0.0	6.3	11.8	0.7	5.3	9.9	1.2
35–39	13.8	21.6	5.6	5.6	10.6	0.6	3.8	7.3	0.7
40–44	0.0	0.0	0.0	5.8	10.9	0.6	3.3	6.9	0.0
45–54	7.8	15.7	0.0	4.6	9.1	0.2	2.3	4.8	0.0
55–64	2.2	4.5	0.0	1.6	3.2	0.1	1.6	3.3	0.0
65+	0.0	0.0	0.0	0.3	0.7	0.0	0.0	0.0	0.0
Unknown Age									
TOTAL	**8.6**	**15.8**	**1.2**	**3.0**	**5.7**	**0.3**	**1.8**	**3.4**	**0.3**

Age Group	Hispanics		
	Total†	Male	Female
0–4	0.0	0.0	0.0
5–9	0.0	0.0	0.0
10–14	0.1	0.2	0.0
15–19	4.2	7.0	1.1
20–24	15.5	27.2	2.5
25–29	16.1	28.4	2.1
30–34	11.9	21.6	1.2
35–39	9.6	17.9	1.0
40–44	9.2	17.3	0.8
45–54	6.6	12.4	0.7
55–64	2.4	4.8	0.1
65+	0.7	1.5	0.1
Unknown Age			
TOTAL	**6.3**	**11.6**	**0.8**

* Includes 47 states and the District of Columbia reporting race/ethnicity data in the Office of Management and Budget compliant formats in 2013.
† Total includes cases reported with unknown sex.
Note: These tables should be used only for race/ethnicity comparisons. See Table 35 for age–specific cases and rates and Tables 27–29 for total and sex–specific cases and rates.
Cases in the 0–4 and 5–9 age groups may include cases due to congenital transmission.
No population data exist for unknown sex, unknown age, or unknown race; therefore rates are not calculated.

Table 37. Early Latent Syphilis — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	419	277	268	237	202	8.9	5.8	5.6	4.9	4.2
Alaska	0	5	3	8	8	0.0	0.7	0.4	1.1	1.1
Arizona	196	166	187	147	207	3.0	2.6	2.9	2.2	3.2
Arkansas	172	202	167	152	163	6.0	6.9	5.7	5.2	5.5
California	1,621	1,788	2,030	2,519	2,844	4.4	4.8	5.4	6.6	7.5
Colorado	63	129	154	194	195	1.3	2.6	3.0	3.7	3.8
Connecticut	40	51	57	52	55	1.1	1.4	1.6	1.4	1.5
Delaware	23	14	49	38	30	2.6	1.6	5.4	4.1	3.3
District of Columbia	158	239	222	244	243	26.3	39.7	35.9	38.6	38.4
Florida	1,254	1,294	1,212	1,384	1,540	6.8	6.9	6.4	7.2	8.0
Georgia	768	636	436	639	863	7.8	6.6	4.4	6.4	8.7
Hawaii	15	15	5	9	22	1.2	1.1	0.4	0.6	1.6
Idaho	3	4	11	21	6	0.2	0.3	0.7	1.3	0.4
Illinois	344	502	581	690	809	2.7	3.9	4.5	5.4	6.3
Indiana	55	103	95	148	157	0.9	1.6	1.5	2.3	2.4
Iowa	9	4	11	15	63	0.3	0.1	0.4	0.5	2.0
Kansas	58	63	34	54	84	2.1	2.2	1.2	1.9	2.9
Kentucky	64	88	109	139	167	1.5	2.0	2.5	3.2	3.8
Louisiana	799	742	488	343	276	17.8	16.4	10.7	7.5	6.0
Maine	10	6	8	2	6	0.8	0.5	0.6	0.2	0.5
Maryland	261	279	332	361	387	4.6	4.8	5.7	6.1	6.6
Massachusetts	135	195	233	231	350	2.0	3.0	3.5	3.5	5.3
Michigan	155	121	132	150	204	1.6	1.2	1.3	1.5	2.1
Minnesota	46	73	121	96	139	0.9	1.4	2.3	1.8	2.6
Mississippi	312	386	313	253	184	10.6	13.0	10.5	8.5	6.2
Missouri	146	133	124	135	220	2.4	2.2	2.1	2.2	3.7
Montana	0	2	1	0	2	0.0	0.2	0.1	0.0	0.2
Nebraska	6	1	3	8	14	0.3	0.1	0.2	0.4	0.8
Nevada	137	178	166	214	232	5.2	6.6	6.1	7.8	8.4
New Hampshire	6	5	5	9	21	0.5	0.4	0.4	0.7	1.6
New Jersey	401	386	452	410	539	4.6	4.4	5.1	4.6	6.1
New Mexico	40	41	56	68	67	2.0	2.0	2.7	3.3	3.2
New York	1,266	1,358	1,254	1,413	1,945	6.5	7.0	6.4	7.2	9.9
North Carolina	357	328	333	244	236	3.8	3.4	3.4	2.5	2.4
North Dakota	0	0	1	0	2	0.0	0.0	0.1	0.0	0.3
Ohio	221	189	160	171	211	1.9	1.6	1.4	1.5	1.8
Oklahoma	172	149	145	146	237	4.7	4.0	3.8	3.8	6.2
Oregon	29	33	63	94	127	0.8	0.9	1.6	2.4	3.3
Pennsylvania	361	355	412	484	581	2.9	2.8	3.2	3.8	4.6
Rhode Island	14	20	20	24	22	1.3	1.9	1.9	2.3	2.1
South Carolina	284	344	345	336	415	6.2	7.4	7.4	7.1	8.8
South Dakota	2	0	0	3	5	0.2	0.0	0.0	0.4	0.6
Tennessee	333	363	256	255	267	5.3	5.7	4.0	3.9	4.1
Texas	1,932	1,874	1,581	1,767	1,902	7.8	7.5	6.2	6.8	7.3
Utah	7	20	8	8	47	0.3	0.7	0.3	0.3	1.6
Vermont	1	0	1	6	2	0.2	0.0	0.2	1.0	0.3
Virginia	233	275	289	303	354	3.0	3.4	3.6	3.7	4.3
Washington	64	109	146	181	204	1.0	1.6	2.1	2.6	3.0
West Virginia	8	4	0	10	10	0.4	0.2	0.0	0.5	0.5
Wisconsin	66	52	57	86	62	1.2	0.9	1.0	1.5	1.1
Wyoming	0	3	0	2	1	0.0	0.5	0.0	0.3	0.2
U.S. TOTAL	**13,066**	**13,604**	**13,136**	**14,503**	**16,929**	**4.3**	**4.4**	**4.2**	**4.6**	**5.4**
Northeast	2,234	2,376	2,442	2,631	3,521	4.0	4.3	4.4	4.7	6.3
Midwest	1,108	1,241	1,319	1,556	1,970	1.7	1.9	2.0	2.3	2.9
South	7,549	7,494	6,545	6,851	7,476	6.7	6.5	5.6	5.8	6.4
West	2,175	2,493	2,830	3,465	3,962	3.0	3.5	3.9	4.7	5.4
Guam	1	0	4	1	3	0.6	0.0	2.5	0.6	1.9
Puerto Rico	164	191	211	222	270	4.1	5.1	5.7	6.1	7.4
Virgin Islands	0	3	0	0	2	0.0	2.8	0.0	0.0	1.9
OUTLYING AREAS	**165**	**194**	**215**	**223**	**275**	**3.9**	**4.9**	**5.4**	**5.7**	**7.0**
TOTAL	**13,231**	**13,798**	**13,351**	**14,726**	**17,204**	**4.3**	**4.4**	**4.2**	**4.6**	**5.4**

Table 38. Early Latent Syphilis — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)* in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	613	529	352	491	672	11.2	10.0	6.5	9.0	12.3
Austin-Round Rock, TX	135	137	137	170	220	7.9	8.0	7.7	9.3	12.0
Baltimore-Columbia-Towson, MD	153	148	198	206	216	5.7	5.5	7.3	7.5	7.8
Birmingham-Hoover, AL	150	67	90	74	71	13.3	5.9	7.9	6.5	6.2
Boston-Cambridge-Newton, MA-NH	116	161	176	158	278	2.5	3.5	3.8	3.4	6.0
Buffalo-Cheektowaga-Niagara Falls, NY	3	0	7	11	15	0.3	0.0	0.6	1.0	1.3
Charlotte-Concord-Gastonia, NC-SC	86	101	103	70	74	3.9	4.6	4.6	3.0	3.2
Chicago-Naperville-Elgin, IL-IN-WI	324	476	531	630	751	3.4	5.0	5.6	6.6	7.9
Cincinnati, OH-KY-IN	42	87	67	78	70	1.9	4.1	3.2	3.7	3.3
Cleveland-Elyria, OH	70	20	25	13	14	3.3	1.0	1.2	0.6	0.7
Columbus, OH	64	42	37	49	71	3.4	2.2	1.9	2.5	3.7
Dallas-Fort Worth-Arlington, TX	592	647	500	604	550	9.1	10.1	7.6	9.0	8.2
Denver-Aurora-Lakewood, CO	57	109	139	177	166	2.2	4.3	5.3	6.7	6.3
Detroit-Warren-Dearborn, MI	88	76	82	113	152	2.0	1.8	1.9	2.6	3.5
Hartford-West Hartford-East Hartford, CT	13	18	18	9	19	1.1	1.5	1.5	0.7	1.6
Houston-The Woodlands-Sugar Land, TX	420	370	351	419	348	7.2	6.2	5.8	6.8	5.6
Indianapolis-Carmel-Anderson, IN	27	70	66	102	104	1.4	3.7	3.5	5.3	5.4
Jacksonville, FL	82	91	50	57	73	6.2	6.8	3.7	4.1	5.3
Kansas City, MO-KS	64	59	40	61	111	3.1	2.9	2.0	3.0	5.4
Las Vegas-Henderson-Paradise, NV	135	174	162	207	218	7.1	8.9	8.2	10.3	10.9
Los Angeles-Long Beach-Anaheim, CA	1,070	991	1,132	1,393	1,520	8.3	7.7	8.7	10.7	11.6
Louisville/Jefferson County, KY-IN	17	46	41	72	85	1.4	3.7	3.3	5.8	6.8
Memphis, TN-MS-AR	259	257	180	188	188	19.7	19.4	13.5	14.0	14.0
Miami-Fort Lauderdale-West Palm Beach, FL	644	749	682	831	885	11.6	13.5	12.0	14.4	15.4
Milwaukee-Waukesha-West Allis, WI	46	35	33	57	43	2.9	2.2	2.1	3.6	2.7
Minneapolis-St. Paul-Bloomington, MN-WI	45	68	112	91	131	1.3	2.0	3.3	2.7	3.8
Nashville-Davidson--Murfreesboro--Franklin, TN	65	72	37	50	62	3.9	4.3	2.2	2.9	3.6
New Orleans-Metairie, LA	244	195	109	90	81	20.1	16.4	9.0	7.3	6.6
New York-Newark-Jersey City, NY-NJ-PA	1,537	1,605	1,569	1,668	2,299	7.8	8.2	8.0	8.4	11.6
Oklahoma City, OK	123	76	65	79	124	10.0	6.1	5.1	6.1	9.6
Orlando-Kissimmee-Sanford, FL	132	138	142	136	175	6.3	6.5	6.5	6.1	7.9
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	362	348	398	408	497	6.1	5.8	6.6	6.8	8.3
Phoenix-Mesa-Scottsdale, AZ	131	126	153	120	150	3.0	3.0	3.6	2.8	3.5
Pittsburgh, PA	25	27	30	46	45	1.1	1.1	1.3	1.9	1.9
Portland-Vancouver-Hillsboro, OR-WA	22	33	58	101	117	1.0	1.5	2.6	4.4	5.1
Providence-Warwick, RI-MA	16	26	26	35	28	1.0	1.6	1.6	2.2	1.7
Raleigh, NC	47	44	35	31	41	4.2	3.9	3.0	2.6	3.4
Richmond, VA	58	76	68	78	75	4.9	6.3	5.6	6.3	6.1
Riverside-San Bernardino-Ontario, CA	88	86	144	138	159	2.1	2.0	3.3	3.2	3.7
Sacramento--Roseville--Arden-Arcade, CA	38	43	51	38	33	1.8	2.0	2.3	1.7	1.5
Salt Lake City, UT	4	12	7	7	37	0.4	1.1	0.6	0.6	3.3
San Antonio-New Braunfels, TX	290	305	252	269	381	14.0	14.2	11.5	12.0	17.1
San Diego-Carlsbad, CA	80	177	162	236	211	2.6	5.7	5.2	7.4	6.6
San Francisco-Oakland-Hayward, CA	253	373	396	528	656	5.9	8.6	9.0	11.9	14.7
San Jose-Sunnyvale-Santa Clara, CA	22	29	35	44	60	1.2	1.6	1.9	2.3	3.2
Seattle-Tacoma-Bellevue, WA	56	91	134	142	167	1.6	2.6	3.8	4.0	4.7
St. Louis, MO-IL	90	106	84	89	125	3.2	3.8	3.0	3.2	4.5
Tampa-St. Petersburg-Clearwater, FL	225	117	139	176	176	8.2	4.2	4.9	6.2	6.2
Virginia Beach-Norfolk-Newport News, VA-NC	77	84	108	90	112	4.6	5.0	6.4	5.3	6.6
Washington-Arlington-Alexandria, DC-VA-MD-WV	306	441	403	497	520	5.5	7.8	7.0	8.5	8.9
SELECTED MSAs TOTAL	**9,606**	**10,158**	**9,916**	**11,427**	**13,376**	**5.7**	**6.1**	**5.9**	**6.7**	**7.8**

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

Table 39. Late and Late Latent Syphilis* — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	289	235	252	248	292	6.1	4.9	5.2	5.1	6.1
Alaska	4	7	3	14	3	0.6	1.0	0.4	1.9	0.4
Arizona	629	493	431	424	455	9.5	7.7	6.6	6.5	6.9
Arkansas	95	116	100	132	175	3.3	4.0	3.4	4.5	5.9
California	2,449	2,223	2,269	2,509	3,539	6.6	6.0	6.0	6.6	9.3
Colorado	101	75	80	101	117	2.0	1.5	1.6	1.9	2.3
Connecticut	72	83	67	14	22	2.0	2.3	1.9	0.4	0.6
Delaware	36	19	48	29	63	4.1	2.1	5.3	3.2	6.9
District of Columbia	110	121	164	180	196	18.3	20.1	26.5	28.5	31.0
Florida	1,547	1,572	1,641	1,693	1,934	8.3	8.4	8.6	8.8	10.0
Georgia	982	898	771	842	1,090	10.0	9.3	7.9	8.5	11.0
Hawaii	39	23	13	11	19	3.0	1.7	0.9	0.8	1.4
Idaho	24	9	18	6	21	1.6	0.6	1.1	0.4	1.3
Illinois	805	799	946	902	1,031	6.2	6.2	7.4	7.0	8.0
Indiana	110	134	200	159	171	1.7	2.1	3.1	2.4	2.6
Iowa	33	45	39	58	57	1.1	1.5	1.3	1.9	1.9
Kansas	58	28	18	51	61	2.1	1.0	0.6	1.8	2.1
Kentucky	81	84	95	99	102	1.9	1.9	2.2	2.3	2.3
Louisiana	413	1,163	1,090	1,065	1,267	9.2	25.7	23.8	23.1	27.5
Maine	1	3	4	3	5	0.1	0.2	0.3	0.2	0.4
Maryland	387	386	470	439	504	6.8	6.7	8.1	7.5	8.6
Massachusetts	100	158	271	258	276	1.5	2.4	4.1	3.9	4.2
Michigan	246	322	338	334	368	2.5	3.3	3.4	3.4	3.7
Minnesota	99	128	107	120	209	1.9	2.4	2.0	2.2	3.9
Mississippi	188	200	238	53	31	6.4	6.7	8.0	1.8	1.0
Missouri	189	225	153	133	135	3.2	3.8	2.5	2.2	2.2
Montana	1	0	1	1	1	0.1	0.0	0.1	0.1	0.1
Nebraska	34	20	23	18	40	1.9	1.1	1.2	1.0	2.2
Nevada	75	99	125	117	84	2.8	3.7	4.6	4.2	3.0
New Hampshire	17	16	10	19	30	1.3	1.2	0.8	1.4	2.3
New Jersey	270	314	282	243	196	3.1	3.6	3.2	2.7	2.2
New Mexico	107	57	85	64	100	5.3	2.8	4.1	3.1	4.8
New York	2,160	2,387	2,436	2,667	2,758	11.1	12.3	12.5	13.6	14.1
North Carolina	578	499	485	444	509	6.2	5.2	5.0	4.6	5.2
North Dakota	3	3	3	10	11	0.5	0.4	0.4	1.4	1.6
Ohio	206	349	341	526	431	1.8	3.0	3.0	4.6	3.7
Oklahoma	25	31	39	27	28	0.7	0.8	1.0	0.7	0.7
Oregon	46	69	92	117	133	1.2	1.8	2.4	3.0	3.4
Pennsylvania	321	280	335	365	431	2.5	2.2	2.6	2.9	3.4
Rhode Island	29	18	18	25	27	2.8	1.7	1.7	2.4	2.6
South Carolina	100	80	73	56	66	2.2	1.7	1.6	1.2	1.4
South Dakota	8	8	14	8	12	1.0	1.0	1.7	1.0	1.4
Tennessee	568	542	483	545	497	9.0	8.5	7.5	8.4	7.7
Texas	3,271	3,204	3,312	3,585	3,593	13.2	12.7	12.9	13.8	13.8
Utah	17	47	42	51	51	0.6	1.7	1.5	1.8	1.8
Vermont	0	0	0	0	5	0.0	0.0	0.0	0.0	0.8
Virginia	221	245	224	317	329	2.8	3.1	2.8	3.9	4.0
Washington	118	159	236	226	223	1.8	2.4	3.5	3.3	3.2
West Virginia	16	16	5	6	14	0.9	0.9	0.3	0.3	0.8
Wisconsin	56	84	80	91	100	1.0	1.5	1.4	1.6	1.7
Wyoming	4	3	6	6	7	0.7	0.5	1.1	1.0	1.2
U.S. TOTAL	**17,338**	**18,079**	**18,576**	**19,411**	**21,819**	**5.6**	**5.9**	**6.0**	**6.2**	**7.0**
Northeast	2,970	3,259	3,423	3,594	3,750	5.4	5.9	6.2	6.4	6.7
Midwest	1,847	2,145	2,262	2,410	2,626	2.8	3.2	3.4	3.6	3.9
South	8,907	9,411	9,490	9,760	10,690	7.9	8.2	8.2	8.3	9.1
West	3,614	3,264	3,401	3,647	4,753	5.0	4.5	4.7	5.0	6.5
Guam	9	10	17	20	14	5.0	6.3	10.7	12.5	8.8
Puerto Rico	328	302	204	175	154	8.3	8.1	5.5	4.8	4.2
Virgin Islands	2	1	7	2	5	1.8	0.9	6.6	1.9	4.7
OUTLYING AREAS	**339**	**313**	**228**	**197**	**173**	**8.0**	**7.8**	**5.7**	**5.0**	**4.4**
TOTAL	**17,677**	**18,392**	**18,804**	**19,608**	**21,992**	**5.7**	**5.9**	**6.0**	**6.2**	**6.9**

* Late and late latent syphilis includes late latent syphilis, latent syphilis of unknown duration, neurosyphilis, and late syphilis with clinical manifestations other than neurosyphilis.

Table 40. Late and Late Latent Syphilis* — Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)† in Alphabetical Order, United States, 2009–2013

MSAs	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Atlanta-Sandy Springs-Roswell, GA	757	723	611	573	782	13.8	13.7	11.4	10.5	14.3
Austin-Round Rock, TX	116	118	168	154	134	6.8	6.9	9.4	8.4	7.3
Baltimore-Columbia-Towson, MD	193	162	196	203	218	7.2	6.0	7.2	7.4	7.9
Birmingham-Hoover, AL	112	84	95	79	96	9.9	7.4	8.4	7.0	8.4
Boston-Cambridge-Newton, MA-NH	92	142	240	207	211	2.0	3.1	5.2	4.5	4.5
Buffalo-Cheektowaga-Niagara Falls, NY	27	32	27	32	62	2.4	2.8	2.4	2.8	5.5
Charlotte-Concord-Gastonia, NC-SC	142	97	116	122	151	6.4	4.4	5.1	5.3	6.6
Chicago-Naperville-Elgin, IL-IN-WI	727	703	866	853	963	7.6	7.4	9.1	9.0	10.1
Cincinnati, OH-KY-IN	58	117	131	275	191	2.7	5.5	6.2	12.9	9.0
Cleveland-Elyria, OH	29	79	70	82	64	1.4	3.8	3.4	4.0	3.1
Columbus, OH	71	82	76	101	98	3.8	4.3	3.9	5.2	5.0
Dallas-Fort Worth-Arlington, TX	1,024	944	982	1,132	1,081	15.7	14.7	14.9	16.9	16.1
Denver-Aurora-Lakewood, CO	74	64	64	74	81	2.9	2.5	2.5	2.8	3.1
Detroit-Warren-Dearborn, MI	171	232	229	252	277	3.9	5.4	5.3	5.9	6.5
Hartford-West Hartford-East Hartford, CT	29	34	22	3	10	2.4	2.8	1.8	0.2	0.8
Houston-The Woodlands-Sugar Land, TX	1,139	1,149	1,166	1,265	1,154	19.5	19.4	19.2	20.5	18.7
Indianapolis-Carmel-Anderson, IN	51	57	113	84	90	2.7	3.0	5.9	4.4	4.7
Jacksonville, FL	95	87	89	73	75	7.2	6.5	6.5	5.3	5.4
Kansas City, MO-KS	70	43	44	38	54	3.4	2.1	2.2	1.9	2.6
Las Vegas-Henderson-Paradise, NV	49	85	111	98	54	2.6	4.4	5.6	4.9	2.7
Los Angeles-Long Beach-Anaheim, CA	1,332	1,238	1,222	1,091	1,705	10.3	9.7	9.4	8.4	13.1
Louisville/Jefferson County, KY-IN	47	46	51	48	52	3.9	3.7	4.1	3.8	4.2
Memphis, TN-MS-AR	316	326	279	291	283	24.1	24.6	20.9	21.7	21.1
Miami-Fort Lauderdale-West Palm Beach, FL	797	853	984	1,032	1,075	14.4	15.3	17.4	17.9	18.7
Milwaukee-Waukesha-West Allis, WI	43	57	49	59	56	2.8	3.7	3.1	3.8	3.6
Minneapolis-St. Paul-Bloomington, MN-WI	71	101	87	105	175	2.1	3.0	2.6	3.1	5.1
Nashville-Davidson--Murfreesboro--Franklin, TN	147	119	107	133	120	8.8	7.1	6.3	7.7	6.9
New Orleans-Metairie, LA	78	392	457	386	442	6.4	32.9	37.7	31.5	36.0
New York-Newark-Jersey City, NY-NJ-PA	2,271	2,526	2,550	2,679	2,707	11.5	12.9	13.0	13.5	13.6
Oklahoma City, OK	16	17	10	15	11	1.3	1.4	0.8	1.2	0.8
Orlando-Kissimmee-Sanford, FL	165	149	166	192	250	7.9	7.0	7.6	8.6	11.2
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	304	271	325	338	439	5.1	4.5	5.4	5.6	7.3
Phoenix-Mesa-Scottsdale, AZ	368	345	299	332	335	8.4	8.2	7.0	7.7	7.7
Pittsburgh, PA	16	9	13	21	11	0.7	0.4	0.6	0.9	0.5
Portland-Vancouver-Hillsboro, OR-WA	39	54	72	99	118	1.7	2.4	3.2	4.3	5.2
Providence-Warwick, RI-MA	31	22	30	32	45	1.9	1.4	1.9	2.0	2.8
Raleigh, NC	77	65	68	63	68	6.8	5.7	5.8	5.3	5.7
Richmond, VA	50	46	36	51	58	4.2	3.8	3.0	4.1	4.7
Riverside-San Bernardino-Ontario, CA	210	185	201	465	433	5.1	4.4	4.7	10.7	10.0
Sacramento--Roseville--Arden-Arcade, CA	94	81	69	59	107	4.4	3.8	3.2	2.7	4.9
Salt Lake City, UT	8	28	32	33	34	0.7	2.6	2.9	2.9	3.0
San Antonio-New Braunfels, TX	221	232	286	366	457	10.7	10.8	13.0	16.4	20.5
San Diego-Carlsbad, CA	211	148	154	144	245	6.9	4.8	4.9	4.5	7.7
San Francisco-Oakland-Hayward, CA	239	230	244	321	421	5.5	5.3	5.6	7.2	9.4
San Jose-Sunnyvale-Santa Clara, CA	58	62	54	84	69	3.2	3.4	2.9	4.4	3.6
Seattle-Tacoma-Bellevue, WA	84	112	177	169	161	2.5	3.3	5.1	4.8	4.5
St. Louis, MO-IL	120	177	94	95	104	4.3	6.3	3.4	3.4	3.7
Tampa-St. Petersburg-Clearwater, FL	223	195	175	171	227	8.1	7.0	6.2	6.0	8.0
Virginia Beach-Norfolk-Newport News, VA-NC	55	60	40	100	86	3.3	3.6	2.4	5.9	5.1
Washington-Arlington-Alexandria, DC-VA-MD-WV	362	425	536	517	599	6.5	7.5	9.3	8.8	10.2
SELECTED MSAs TOTAL	**13,079**	**13,605**	**14,283**	**15,191**	**16,739**	**7.8**	**8.1**	**8.4**	**8.9**	**9.8**

* Late and late latent syphilis includes late latent syphilis, latent syphilis of unknown duration, neurosyphilis, and late syphilis with clinical manifestations other than neurosyphilis.

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

Table 41. Congenital Syphilis — Reported Cases and Rates of Reported Cases in Infants by State, Ranked by Rates, United States, 2013

Rank*	State†	Cases	Rate per 100,000 Live Births
1	Louisiana	32	51.3
2	Arkansas	12	31.1
3	Texas	75	19.4
4	Maryland	14	19.0
5	Florida	37	17.2
6	Georgia	20	14.9
7	Arizona	13	14.9
8	Illinois	23	13.9
9	Ohio	17	12.2
10	California	56	11.0
	HP 2020 TARGET		**9.1**
11	Delaware	1	8.8
12	Alaska	1	8.7
	U.S. TOTAL‡	**348**	**8.7**
13	Michigan	9	7.9
14	New Mexico	2	7.2
15	Kentucky	4	7.2
16	Nevada	2	5.6
17	Massachusetts	4	5.5
18	New York	11	4.5
19	Missouri	3	3.9
20	Alabama	2	3.3
21	Tennessee	2	2.5
22	Virginia	2	1.9
23	South Carolina	1	1.7
24	Pennsylvania	2	1.4
25	North Carolina	1	0.8
	Colorado	0	0.0
	Connecticut	0	0.0
	Hawaii	0	0.0
	Idaho	0	0.0
	Indiana	0	0.0
	Iowa	0	0.0
	Kansas	0	0.0
	Maine	0	0.0
	Minnesota	0	0.0
	Mississippi	0	0.0
	Montana	0	0.0
	Nebraska	0	0.0
	New Hampshire	0	0.0
	New Jersey	0	0.0
	North Dakota	0	0.0
	Oklahoma	0	0.0
	Oregon	0	0.0
	Rhode Island	0	0.0
	South Dakota	0	0.0
	Utah	0	0.0
	Vermont	0	0.0
	Washington	0	0.0
	West Virginia	0	0.0
	Wisconsin	0	0.0
	Wyoming	0	0.0

* States were ranked by rate, then by 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 2 cases and a rate of 21.8, but excludes outlying areas (Guam with 1 cases, Puerto Rico with 1 case and rate of 2.4, and Virgin Islands with 0 cases).

Table 42. Congenital Syphilis — Reported Cases and Rates of Reported Cases in Infants by Year of Birth, by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2009–2013

	Cases					Rates per 100,000 Live Births				
State/Area*	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	13	9	10	4	2	20.8	15.0	16.7	6.7	3.3
Alaska	0	0	0	1	1	0.0	0.0	0.0	8.7	8.7
Arizona	28	16	15	14	13	30.2	18.3	17.1	16.0	14.9
Arkansas	10	11	15	11	12	25.1	28.5	38.9	28.5	31.1
California	63	39	40	35	56	12.0	7.6	7.8	6.9	11.0
Colorado	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Connecticut	2	2	0	0	0	5.1	5.3	0.0	0.0	0.0
Delaware	1	2	0	1	1	8.7	17.6	0.0	8.8	8.8
District of Columbia	0	1	1	0	2	0.0	10.9	10.9	0.0	21.8
Florida	18	20	33	37	37	8.1	9.3	15.4	17.2	17.2
Georgia	14	18	10	16	20	9.9	13.4	7.5	11.9	14.9
Hawaii	1	0	0	0	0	5.3	0.0	0.0	0.0	0.0
Idaho	1	1	0	1	0	4.2	4.3	0.0	4.3	0.0
Illinois	16	27	18	28	23	9.3	16.3	10.9	16.9	13.9
Indiana	1	0	0	0	0	1.2	0.0	0.0	0.0	0.0
Iowa	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Kansas	3	0	0	0	0	7.2	0.0	0.0	0.0	0.0
Kentucky	2	0	2	2	4	3.5	0.0	3.6	3.6	7.2
Louisiana	11	33	18	33	32	16.9	52.9	28.9	52.9	51.3
Maine	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Maryland	31	22	24	12	14	41.3	29.8	32.5	16.3	19.0
Massachusetts	0	1	0	1	4	0.0	1.4	0.0	1.4	5.5
Michigan	5	5	8	7	9	4.3	4.4	7.0	6.1	7.9
Minnesota	1	0	0	1	0	1.4	0.0	0.0	1.5	0.0
Mississippi	8	9	6	0	0	18.6	22.5	15.0	0.0	0.0
Missouri	6	2	1	1	3	7.6	2.6	1.3	1.3	3.9
Montana	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Nebraska	0	0	0	1	0	0.0	0.0	0.0	3.9	0.0
Nevada	3	5	3	1	2	8.0	13.9	8.3	2.8	5.6
New Hampshire	0	0	0	1	0	0.0	0.0	0.0	7.8	0.0
New Jersey	7	3	5	1	0	6.3	2.8	4.7	0.9	0.0
New Mexico	0	0	0	1	2	0.0	0.0	0.0	3.6	7.2
New York	15	17	13	8	11	6.0	7.0	5.3	3.3	4.5
North Carolina	10	10	6	2	1	7.9	8.2	4.9	1.6	0.8
North Dakota	1	0	0	0	0	11.1	0.0	0.0	0.0	0.0
Ohio	8	10	13	19	17	5.5	7.2	9.3	13.7	12.2
Oklahoma	2	0	2	0	0	3.7	0.0	3.8	0.0	0.0
Oregon	0	0	0	1	0	0.0	0.0	0.0	2.2	0.0
Pennsylvania	5	3	5	6	2	3.4	2.1	3.5	4.2	1.4
Rhode Island	1	0	0	0	0	8.7	0.0	0.0	0.0	0.0
South Carolina	0	1	0	7	1	0.0	1.7	0.0	12.0	1.7
South Dakota	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Tennessee	13	11	8	2	2	15.8	13.8	10.1	2.5	2.5
Texas	128	105	99	78	75	31.8	27.2	25.6	20.2	19.4
Utah	0	1	0	0	0	0.0	1.9	0.0	0.0	0.0
Vermont	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Virginia	2	1	0	1	2	1.9	1.0	0.0	1.0	1.9
Washington	1	1	2	0	0	1.1	1.2	2.3	0.0	0.0
West Virginia	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Wisconsin	0	1	1	0	0	0.0	1.5	1.5	0.0	0.0
Wyoming	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
U.S. TOTAL	**431**	**387**	**358**	**334**	**348**	**10.4**	**9.7**	**9.0**	**8.4**	**8.7**
Northeast	30	26	23	17	17	4.5	4.0	3.5	2.6	2.6
Midwest	41	45	41	57	52	4.7	5.3	4.9	6.8	6.2
South	263	253	234	206	205	16.7	16.6	15.4	13.5	13.5
West	97	63	60	54	74	9.5	6.4	6.1	5.5	7.5
Guam	0	0	0	0	1	0.0	0.0	0.0	0.0	29.3
Puerto Rico	6	2	2	1	1	13.4	4.7	4.7	2.4	2.4
Virgin Islands	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
OUTLYING AREAS	**6**	**2**	**2**	**1**	**2**	**12.0**	**4.2**	**4.2**	**2.1**	**4.2**
TOTAL	**437**	**389**	**360**	**335**	**350**	**10.5**	**9.6**	**8.9**	**8.3**	**8.6**

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

Table 43. Congenital Syphilis — Reported Cases and Rates of Reported Cases per 100,000 Live Births in Infants by Year of Birth and Race/Ethnicity of Mother, United States, 2009–2013

	Whites, Non-Hispanic		Blacks, Non-Hispanic		Hispanics	
Year of Birth	Cases	Rate	Cases	Rate	Cases	Rate
2009	65	2.9	216	35.1	128	12.8
2010	63	2.9	216	36.3	91	9.6
2011	50	2.3	211	35.4	73	7.7
2012	50	2.3	189	31.7	80	8.5
2013	62	2.8	173	29.0	92	9.7

	Asians/Pacific Islanders		American Indians/Alaska Natives		Multirace	
Year of Birth	Cases	Rate	Cases	Rate	Cases	Rate
2009	11	4.6	5	11.8	0	NA
2010	9	3.8	1	2.5	2	NA
2011	14	5.9	2	4.9	0	NA
2012	6	2.5	2	4.9	0	NA
2013	8	3.4	6	14.8	0	NA

	Other		Unknown		Total	
Year of Birth	Cases	Rate	Cases	Rate	Cases	Rate
2009	2	NA	4	NA	431	10.4
2010	1	NA	4	NA	387	9.7
2011	3	NA	5	NA	358	9.0
2012	3	NA	4	NA	334	8.4
2013	2	NA	5	NA	348	8.7

NA = Not applicable.

Table 44. Chancroid — Reported Cases and Rates of Reported Cases by State/Area in Alphabetical Order, United States and Outlying Areas, 2009–2013

State/Area	Cases					Rates per 100,000 Population				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Alabama	0	1	0	1	1	0.0	0.0	0.0	0.0	0.0
Alaska	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Arizona	0	0	1	0	0	0.0	0.0	0.0	0.0	0.0
Arkansas	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
California	1	5	1	7	6	0.0	0.0	0.0	0.0	0.0
Colorado	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Connecticut	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Delaware	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
District of Columbia	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Florida	1	1	0	0	0	0.0	0.0	0.0	0.0	0.0
Georgia	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Hawaii	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Idaho	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Illinois	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Indiana	1	0	0	1	0	0.0	0.0	0.0	0.0	0.0
Iowa	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Kansas	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Kentucky	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Louisiana	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Maine	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Maryland	0	0	0	1	0	0.0	0.0	0.0	0.0	0.0
Massachusetts	3	1	2	1	2	0.0	0.0	0.0	0.0	0.0
Michigan	0	0	1	2	0	0.0	0.0	0.0	0.0	0.0
Minnesota	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Mississippi	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Missouri	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Montana	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Nebraska	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Nevada	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
New Hampshire	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
New Jersey	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
New Mexico	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
New York	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
North Carolina	6	1	0	1	0	0.1	0.0	0.0	0.0	0.0
North Dakota	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Ohio	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Oklahoma	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Oregon	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Pennsylvania	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Rhode Island	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
South Carolina	1	1	2	0	0	0.0	0.0	0.0	0.0	0.0
South Dakota	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Tennessee	0	1	0	0	0	0.0	0.0	0.0	0.0	0.0
Texas	8	12	1	0	1	0.0	0.0	0.0	0.0	0.0
Utah	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Vermont	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Virginia	1	0	0	1	0	0.0	0.0	0.0	0.0	0.0
Washington	0	1	0	0	0	0.0	0.0	0.0	0.0	0.0
West Virginia	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Wisconsin	6	0	0	0	0	0.1	0.0	0.0	0.0	0.0
Wyoming	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
U.S. TOTAL	**28**	**24**	**8**	**15**	**10**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Guam	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Puerto Rico	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
Virgin Islands	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
OUTLYING AREAS	**0**	**0**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
TOTAL	**28**	**24**	**8**	**15**	**10**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table 45. Selected STDs and Complications — Initial Visits to Physicians' Offices, National Disease and Therapeutic Index, United States, 1966–2013

Year	Genital Herpes	Genital Warts	Vaginal Trichomoniasis*	Other Vaginitis*	Pelvic Inflammatory Disease†
1966	19,000	56,000	579,000	1,155,000	NA
1967	15,000	72,000	515,000	1,277,000	NA
1968	16,000	87,000	463,000	1,460,000	NA
1969	15,000	61,000	421,000	1,390,000	NA
1970	17,000	119,000	529,000	1,500,000	NA
1971	49,000	128,000	484,000	1,281,000	NA
1972	26,000	165,000	574,000	1,810,000	NA
1973	51,000	198,000	466,000	1,858,000	NA
1974	75,000	202,000	427,000	1,907,000	NA
1975	36,000	181,000	500,000	1,919,000	NA
1976	57,000	217,000	473,000	1,690,000	NA
1977	116,000	221,000	324,000	1,713,000	NA
1978	76,000	269,000	329,000	2,149,000	NA
1979	83,000	200,000	363,000	1,662,000	NA
1980	57,000	218,000	358,000	1,670,000	423,000
1981	133,000	191,000	369,000	1,742,000	283,000
1982	134,000	256,000	268,000	1,859,000	374,000
1983	106,000	203,000	424,000	1,932,000	424,000
1984	157,000	224,000	381,000	2,450,000	381,000
1985	124,000	263,000	291,000	2,728,000	425,000
1986	136,000	275,000	338,000	3,118,000	457,000
1987	102,000	351,000	293,000	3,087,000	403,000
1988	163,000	290,000	191,000	3,583,000	431,000
1989	148,000	220,000	165,000	3,374,000	413,000
1990	172,000	275,000	213,000	4,474,000	358,000
1991	235,000	282,000	198,000	3,822,000	377,000
1992	139,000	218,000	182,000	3,428,000	335,000
1993	172,000	167,000	207,000	3,755,000	407,000
1994	142,000	239,000	199,000	4,123,000	332,000
1995	160,000	253,000	141,000	3,927,000	262,000
1996	208,000	191,000	245,000	3,472,000	286,000
1997	176,000	145,000	176,000	3,100,000	260,000
1998	188,000	211,000	164,000	3,200,000	233,000
1999	224,000	240,000	171,000	3,077,000	250,000
2000	179,000	220,000	222,000	3,470,000	254,000
2001	157,000	233,000	210,000	3,365,000	244,000
2002	216,000	266,000	150,000	3,315,000	197,000
2003	203,000	264,000	179,000	3,516,000	123,000
2004	269,000	316,000	221,000	3,602,000	132,000
2005	266,000	357,000	165,000	4,071,000	176,000
2006	371,000	422,000	200,000	3,891,000	106,000
2007	317,000	312,000	205,000	3,723,000	146,000
2008	292,000	385,000	204,000	3,571,000	104,000
2009	306,000	357,000	216,000	3,063,000	100,000
2010	232,000	376,000	149,000	3,192,000	113,000
2011	227,000	453,000	168,000	3,102,000	90,000
2012	228,000	353,000	219,000	3,452,000	106,000
2013	306,000	404,000	225,000	3,278,000	88,000

* Women only.
† Women aged 15–44 years only.
NA = Not available.
Note: Standard errors for estimates under 100,000 are not available. The relative standard errors for estimates 100,000-299,999 are from 19% to 23%; 300,000-599,999 are from 16% to 19%; 600,000-999,999 are from 13% to 16%; and 1,000,000-5,000,000 are from 7% to 13%.
SOURCE: National Disease and Therapeutic Index (IMS Health). See Other Surveillance Data Sources in the Appendix for more information.

APPENDIX

APPENDIX

Interpreting STD Surveillance Data

Sexually Transmitted Disease Surveillance 2013 presents surveillance information derived from the official statistics for the reported occurrence of nationally notifiable sexually transmitted diseases (STDs) in the United States, test positivity and prevalence data from numerous prevalence monitoring initiatives, sentinel surveillance, and national health care services surveys.

Nationally Notifiable STD Surveillance

Nationally notifiable STD surveillance data are collected and compiled from reports sent by the STD control programs and health departments in all 50 states, the District of Columbia, selected cities, U.S. dependencies and possessions, and independent nations in free association with the United States to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention (CDC). Included among the dependencies, possessions, and independent nations are Guam, Puerto Rico, and the Virgin Islands. These entities are identified as "outlying areas" of the United States in selected figures and tables.

Reporting Formats

STD morbidity data presented in this report are compiled from a combination of data reported on standardized hard copy reporting forms and electronic data received through the National Electronic Telecommunications System for Surveillance (NETSS).

Summary Report Forms

The following hard copy forms were used to report national STD morbidity data:

1. 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 syphilis and early latent syphilis by county and state.

2. 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 (including San Juan, Puerto Rico), and outlying areas of the United States.

   Note: Chlamydial infection became a nationally notifiable condition in 1996, and the form was modified to support reporting of chlamydia that year. Congenital syphilis was dropped from this aggregate form in 1995 and replaced by the case-specific CDC 73.126 form described later in this section.

3. 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 (public versus private) for all 50 states, seven large cities (Baltimore, Chicago, New York City, Los Angeles, Philadelphia, San Francisco, and the District of Columbia), and outlying areas of the United States.

   Note: Chlamydial infection became a nationally notifiable condition in 1996, and the form was modified to support reporting of chlamydia that year.

4. FORM CDC 73.126: *Congenital Syphilis (CS) Case Investigation and Reporting*. This case-specific hard copy form was first used in 1983 and continued to be used through 2013 to report detailed case-specific data for congenital syphilis in some areas.

National Electronic Telecommunications System for Surveillance

Notifiable STD data reported electronically through NETSS make up the nationally notifiable disease information published in CDC's *Morbidity and Mortality Weekly Report*.

As of December 31, 2003, all 50 states and the District of Columbia had converted from summary hard copy reporting to electronic submission of line-listed (i.e., case-specific) STD data through NETSS (43 reporting areas submit congenital syphilis surveillance data through NETSS). Puerto Rico converted to electronic reporting in 2006 for all STDs excluding congenital syphilis. Guam and the Virgin Islands continue to report STD data through summary hard copy forms.

Surveillance data and updates sent to CDC through NETSS and on hard copy forms through June 4, 2014, are included in this report. Data received after this date will appear in subsequent STD surveillance reports. The data presented in the figures and tables in this report supersede those in all earlier publications.

Population Denominators and Rate Calculations

2000–2013 Rates and Population

CDC's National Center for Health Statistics (NCHS) released bridged-race population counts for the 2000–2012 U.S. resident populations that are based on counts from the 2000 and 2010 U.S. Censuses. These estimates resulted from bridging the 31 race categories first used in the 2000 census, as specified in the 1997 Office of Management and Budget (OMB) standards, to the five race/ethnicity groups specified in the 1977 OMB standards. This report uses the first published population estimate for a given year. The latest available year for population estimates at the time this report was written was 2012. Thus 2012 population estimates were used to calculate 2009-2013 rates. For those figures and tables presenting race using The 1997 OMB race standards, non-bridged-race data provided directly by the U.S. Census Bureau were used to calculate race. Once published, the 2013 population estimates will be used to calculate rates in the upcoming 2014 STD Surveillance Report.

Population estimates for Guam, Puerto Rico, and the Virgin Islands were obtained from the U.S. Census Bureau Web site at http://www.census.gov/ipc/www/idb/tables.html. The 2011–2013 rates for outlying areas were calculated by using the 2011 population estimates. The 2013 rates by age and sex for Guam and the Virgin Islands were calculated using 2010 population estimates available at: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.

Because of the use of the updated population data, rates for 2000–2012 may be different from those presented in previous STD surveillance reports.

1990–1999 Rates and Population

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

1981–1989 Rates and Population

Rates were calculated by using U.S. Census Bureau population estimates for 1981 through 1989.[1,2]

1941–1980 Rates and Population

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

1941–2013 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 1941–2013. 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 1941 through 2013, 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.[3] Congenital syphilis rates for 1989 through 2012 were calculated by using live birth data based on information coded by the states and provided to the NCHS through the Vital Statistics Cooperative Program. Rates for 2013 were calculated by using live birth data for 2010.

Reporting Practices

Although most state and local STD programs generally adhere to the national notifiable STD case definitions collaboratively developed by the Council of State and Territorial Epidemiologists 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.

Reporting of Surveillance Data by Metropolitan Statistical Area

Sexually Transmitted Disease Surveillance 2013 continues the presentation of STD incidence data and rates for the 50 metropolitan statistical areas (MSAs) with the largest populations according to 2010 census data. STD surveillance reports published before 2005 presented data by selected cities; these data were derived from county data, which were used to estimate city-specific disease rates. Because county data were used to estimate city-specific morbidity and because current STD project areas' reporting practices do not support direct identification of city-specific morbidity reports, MSAs were chosen as a geographic unit smaller than a state or territory for presentation of STD morbidity data.

MSAs are defined by the OMB to provide nationally consistent definitions for collecting, tabulating, and publishing federal statistics for a set of geographic areas.[4] An MSA is associated with at least one urbanized area that has a population of at least 50,000. The MSA comprises the central county or counties containing the central county, plus adjacent, outlying counties that have a high degree of social and economic integration with the central county as measured through commuting.

The title of an MSA includes the name of the principal city with the largest 2010 census population. If there are multiple principal cities, the names of the second largest and third largest principal cities appear in the title in order of descending population size.

The MSA concept has been used as a statistical representation of the social and economic links between urban cores and outlying, integrated areas. However, MSAs do not equate to an urban-rural classification; all counties included in MSAs and many other counties contain both urban and rural territory and populations. STD programs that treat all parts of an MSA as if they were as urban as the densely settled core ignore the rural conditions that may exist in some parts of the area. In short, MSAs are not intended to be a general purpose geographic framework for nonstatistical activities or for use in program funding formulas.

For more information on the MSA definitions used in this report, go to: http://www.census.gov/population/metro/data/metrodef.html.

Reporting of Data for Race/Ethnicity

In April 2008, the NETSS record layout was updated to conform to the OMB's current government-wide standard for race/ethnicity data.[5] The OMB standards were first issued in 1997. Beginning with publication of *Sexually Transmitted Disease Surveillance 2012,* the race/ethnicity data are presented according to the current standard categories: American Indian or Alaska Native, Asian, black or African American, Hispanic or Latino, Native Hawaiian/Other Pacific Islander, white and multirace. As of reporting year 2013, there are 46 states (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming) and the District of Columbia compliant with the current OMB race/ethnicity standards when reporting chlamydia and gonorrhea. There are 47 states (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming) and the District of Columbia compliant with the current OMB race/ethnicity standards when reporting primary and secondary syphilis. In chlamydia and gonorrhea figures where trends are shown for 2009-2013, the data are presented for 39 states (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming) and the District of Columbia since these areas consistently reported race/ethnicity data according to the current standard categories for the five consecutive years. In primary and secondary syphilis figures where trends are shown for 2009-2013, the data are presented for 39 states (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, Wyoming) and the District of Columbia.

Management of Unknown, Missing, or Invalid Data for Age Group, Race/Ethnicity, and Sex

The percentage of unknown, missing, or invalid data for age group, race/ethnicity, and sex varies from year to year, state to state, and by disease for reported STDs (Table A1).

Prior to the publication of *Sexually Transmitted Disease Surveillance 2010*, when the percentage of unknown, missing, or invalid values for age group, race/ethnicity, and sex exceeded 50% for any state, the state's incidence and population data were excluded from the tables that presented data stratified by one or more of these variables. For the states for which 50% or more of their data were valid for age group, race/ethnicity, and sex, the values for unknown, missing, or invalid data were redistributed on the basis of the state's distribution of known age group, race/ethnicity, and sex data. Beginning with the publication of *Sexually Transmitted Disease Surveillance 2010,* redistribution methodology is not applied to any of the data. The counts presented in this report are summations of all valid data reported in reporting year 2013.

As a result, rate data that are stratified by one or more of these variables reflect rates based on reported data only.

Classification of STD Morbidity 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 (NJTP), school-based clinics, mental health providers, the military, the Indian Health Service, and other unspecified sources.

Analysis of the data reported electronically after 1996 confirmed that the new STD clinic source of report data corresponded to the earlier public source category. Therefore, source of case report data during 1984–2013 are presented as STD clinic or non-STD clinic only (Table A2).

Interpreting Chlamydia Case Reporting

Trends in rates of reported cases of chlamydia are influenced by changes in incidence of infection, as well as changes in diagnostic, screening, and reporting practices. As chlamydial infections are usually asymptomatic, the number of infections identified and reported can increase as more people are screened even when incidence is flat or decreasing. Expanded use of more sensitive diagnostics tests (e.g., nucleic acid amplification tests) can also increase the number of infections identified and reported independent of increases in incidence. 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 case rates prior to 2000 reflect incomplete reporting. Additionally, increasing use of electronic laboratory reporting has likely increased the proportion of diagnosed cases that are reported. Consequently, an increasing chlamydia case rate may reflect increases in incidence of infection, screening coverage, and use of more sensitive tests, as well as more complete reporting. Likewise, decreases in chlamydia case rates may suggest decreases in incidence of infection or screening coverage.

Syphilis Morbidity Reporting

The category of "total syphilis" or "all stages of syphilis" includes primary, secondary, latent (including early latent, late latent, and latent syphilis of unknown duration), neurosyphilis, late (including late syphilis with clinical manifestations other than neurosyphilis), and congenital syphilis.

In 1996, the syphilis stage "late syphilis with clinical manifestations other than neurosyphilis (late benign and cardiovascular syphilis)" was added to the syphilis case definition (see STD Surveillance Case Definitions in the Appendix). Although neurosyphilis can occur at almost any stage of syphilis, during 1996–2005, it was classified and reported as one of several mutually exclusive stages of syphilis. Beginning in 2005, neurosyphilis was no longer classified or reported as a distinct stage of syphilis.

Congenital Syphilis Morbidity Reporting

In 1988, the surveillance case definition for congenital syphilis was changed. This case definition has greater sensitivity than the former definition.[6] In addition, many state and local STD programs have greatly enhanced active case finding for congenital syphilis since 1988. For these reasons, as well as because of increasing morbidity, the

number of reported cases increased dramatically during 1989–1991. All reporting areas had implemented the new case definition for reporting congenital syphilis by January 1, 1992.

In addition to changing the case definition for congenital syphilis, CDC introduced a new data collection form (CDC 73.126) in 1990 (revised February 2013). Since 1995, the data collected on this form have been used for reporting congenital syphilis cases and associated rates. This form is used to collect individual case information, which allows more thorough analysis of case characteristics. For the purpose of analyzing race/ethnicity, cases are classified by the race/ethnicity of the mother. Congenital syphilis cases were reported by state and city of residence of the mother during 1995–2013.

Congenital syphilis reporting may be delayed as a result of case investigation and validation. Cases for previous years are added to CDC's surveillance databases throughout the year. Congenital syphilis data reported after publication of the current annual STD surveillance report will appear in subsequent reports and are assigned by the case patient's year of birth.

Chlamydia and Gonorrhea Positivity and Prevalence Monitoring

Chlamydia and gonorrhea prevalence was calculated for men and women 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, which provides these data to CDC. Gonorrhea screening tests for male and female students in many training centers are conducted by local laboratories; these data are not available to CDC. Test results for students at centers that submit specimens to the national contract laboratory 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. Prevalence data for state-specific figures were published with permission from the NJTP.

During the mid-1990s to 2011, chlamydia and gonorrhea positivity among women screened in correctional facilities, family planning clinics, and prenatal care clinics participating in infertility prevention activities were reported to CDC to monitor chlamydia and gonorrhea prevalence. As the national infertility prevention program expanded, these data became difficult to interpret as trends were influenced by changes in screening coverage, screening criteria, and test technologies, as well as demographic changes in patients attending clinics reporting data to CDC. These issues could not be addressed with the limited variables that were collected at the national level. Positivity data continue to be useful locally to inform clinic-based screening recommendations and to identify at-risk populations in need of prevention interventions, but are no longer collected to monitor national trends in chlamydia and gonorrhea.

STD Surveillance Network (SSuN)

In 2005, CDC established the STD Surveillance Network (SSuN) as a dynamic network comprised of state and local STD surveillance units following enhanced STD surveillance protocols. The purpose of SSuN is to improve the capacity of national, state, and local STD programs to detect, monitor, and respond rapidly to trends in STDs through enhanced collection, reporting, analysis, visualization, and interpretation of disease information.

Twelve collaborating local or state health departments contributed data to the network during 2013: Alabama Department of Public Health, Baltimore City Health Department, Chicago Department of Public Health, Colorado Department of Public Health and Environment, Connecticut Department of Public Health, County of Los Angeles Department of Public Health (in collaboration with California State Department of Public Health), Louisiana Office of Public Health, New York City Department of Health and Mental Hygiene, Philadelphia Department of Public Health, San Francisco Department of Public Health, Virginia Department of Health, and Washington State Department of Health.

The SSuN data contained in this report include demographic, behavioral, clinical, and laboratory information collected from patients at 42 STD clinics within the jurisdictions of SSuN health state and/or local health departments. These clinics are located in San Francisco, CA (San Francisco City Clinic); Los Angeles, CA (12 STD clinics in Los Angeles County); Seattle, WA (Seattle-King County Clinic); Denver, CO (Denver Metro Health Clinic); Chicago, IL (7 public STD clinics in Cook County); New Orleans, LA (Delgado Personal Health Center); Birmingham, AL (Jefferson County STD Clinic); Richmond, VA (Richmond City, Henrico County and Chesterfield County Clinics); Baltimore, MD (Druid STD Clinic and Eastern STD Clinic); Philadelphia, PA (Philadelphia STD Clinics 1 and 5); New York City, NY (9 public STD clinics in 5 boroughs); Hartford, CT (Hartford STD Clinic); and New Haven, CT (New Haven STD Clinic). However, the STD clinics in 6 jurisdictions

(Birmingham, Chicago, Denver, Hartford/New Haven, New Orleans, Richmond) submitted data on all patients from January to June 2013. The remaining jurisdictions collected data on STD clinic patients for all of 2013.

In addition to patients presenting for care at STD clinics, SSuN jurisdictions also identified a random sample of gonorrhea cases reported from all providers for enhanced follow-up and administration of a standardized behavioral interview including number, gender and demographics of recent partners. Gay, bisexual, and other men who have sex with men (MSM) were defined as men who either reported having sex with another man ever before STD testing (asked at all SSuN sites) or who did not report sex with men but reported that they considered themselves gay/homosexual or bisexual (asked at 10 of the 12 sites). Men who have sex with women (MSW) were defined as men who reported having sex with women only before STD testing or who did not report the sex of their sex partner, but reported that they considered themselves straight/heterosexual (asked at 10 of the 12 sites).

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 25–30 GISP sentinel sites and 4–5 regional laboratories in the United States. For more details on findings from GISP, go to: http://www.cdc.gov/std/GISP.

For 2013, the antimicrobial agents tested by GISP were ceftriaxone, cefixime, azithromycin, spectinomycin, ciprofloxacin, penicillin, and tetracycline.

The antimicrobial susceptibility criteria used in GISP for 2013 are as follows:

- Ceftriaxone, minimum inhibitory concentration (MIC) ≥0.5 μg/ml (decreased susceptibility)*
- Ceftriaxone, MIC ≥0.125 μg/ml (elevated MICs)*
- Cefixime, MIC ≥0.5 μg/ml (decreased susceptibility)*
- Cefixime, MIC ≥0.25 μg/ml (elevated MICs)*
- Azithromycin, MIC ≥2.0 μg/ml (decreased susceptibility)*
- Spectinomycin, MIC ≥128.0 μg/ml (resistance)
- Ciprofloxacin, MIC ≥1.0 μg/ml (resistance)
- Ciprofloxacin, MIC 0.125–0.5 μg/ml (intermediate resistance)
- Penicillin, MIC ≥2.0 μg/ml (resistance)
- Tetracycline, MIC ≥2.0 μg/ml (resistance).

The majority of these criteria are also recommended by the Clinical and Laboratory Standards Institute (CLSI).[7]

Other Surveillance Data Sources

National Health and Nutrition Examination Survey

The National Health and Nutrition Examination Survey (NHANES) is a series of cross-sectional surveys designed to provide national statistics on the health and nutritional status of the general household population in the United States. Data are collected through household interviews, standardized physical examinations, and the collection of biological samples in special mobile examination centers. In 1999, NHANES became a continuous survey with data released every 2 years. The sampling plan of the survey is a stratified, multistage, probability cluster design that selects a sample representative of the U.S. civilian, non-institutionalized population. For more information, see: http://www.cdc.gov/nchs/nhanes.htm.

National Disease and Therapeutic Index

The information on the number of initial visits to private physicians' offices for STDs was based on analysis of data from the National Disease and Therapeutic Index (NDTI) (machine-readable files or summary statistics for 1966 through 2013). NDTI is a probability sample survey of private physicians' clinical management practices. For more information on this database, contact IMS Health, e-mail: ServiceCenter@us.imshealth.com; Telephone: (800) 523-5334.

Healthy People 2020 Objectives

For three decades, *Healthy People* has provided a comprehensive set of national 10-year health promotion and disease prevention objectives aimed at improving the health of all Americans.[8] It is grounded in the principle that establishing objectives and providing benchmarks to track and monitor progress over time can motivate, guide, and focus action.

Healthy People 2020 (HP2020) continues in the tradition of its ambitious, yet achievable, 10-year agenda for improving the Nation's health. HP2020 is the result of a

* The Clinical Laboratory Standards Institute criteria for decreased susceptibility and resistance to ceftriaxone, cefixime, cefpodoxime, and azithromycin and for susceptibility to azithromycin have not been established for *N. gonorrhoeae*.

multiyear process that reflects input from a diverse group of individuals and organizations. HP2020 is organized into 42 topic areas, with more than 1,200 measures designed drive action that will support its four overarching goals:

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development, and healthy behaviors across all life stages.

The topic area, Sexually Transmitted Diseases, contains objectives and measures related to STDs. Baselines, HP2020 targets, and annual progress toward the targets are reported in Table A3. The year 2020 targets for the diseases addressed in this report are as follows: P&S syphilis (males), 6.8 cases per 100,000 population; P&S syphilis (females), 1.4 cases per 100,000 population; congenital syphilis, 9.1 cases per 100,000 live births; gonorrhea (females aged 15–44 years), 257.0 cases per 100,000 population and gonorrhea (males aged 15–44 years), 198.0 cases per 100,000 population.

The majority of the STD-related HP2020 targets were set using a standard percentage improvement with a standard default of a "10 percent improvement over the baseline."

Government Performance and Results Act of 1993

The Government Performance and Results Act (GPRA) of 1993 was enacted by Congress to increase confidence in the capability of the federal government to increase the effectiveness and accountability of federal programs, to improve service delivery, to provide federal agencies a uniform tool for internal management, and to help Congress make decisions.

GPRA requires each agency to have a performance plan with long-term outcomes and annual, measurable performance goals and to report on these plans annually, comparing results with annual goals. There are two GPRA goals for STD: reducing PID and eliminating congenital syphilis. Each of these goals has specific measures of progress, which are outlined in Table A4.

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[1] U.S. Census Bureau. United States population estimates by age, sex and race: 1980–1988. In: Current population reports [Series P-25, No. 1045]. Washington, DC: U.S. Government Printing Office; 1990.

[2] U.S. Census Bureau. United States population estimates by age, sex and race: 1989. In: Current population reports [Series P-25, No. 1057]. Washington, DC: U.S. Government Printing Office; 1990.

[3] Centers for Disease Control and Prevention. Vital statistics of the United States 1988. vol.1 - natality. Hyattsville (MD): U.S. Department of Health and Human Services; 1990.

[4] Office of Management and Budget. Standards for defining metropolitan and micropolitan statistical areas. Federal Register. 2000;65(249):82228-38.

[5] Office of Management and Budget. Revisions to the Standards for Classification of Federal Data on Race and Ethnicity. Federal Register Notice. October 30, 1997.

[6] Kaufman RE, Jones OG, Blount JH, Wiesner PJ. Questionnaire survey of reported early congenital syphilis: problems in diagnosis, prevention, and treatment. Sex Transm Dis. 1977;4:135-9.

[7] Clinical and Laboratory Standards Institute. Performance standards for antimicrobial susceptibility testing; twentieth informational supplement. M100-S23, 33(1). Wayne (PA): Clinical and Laboratory Standards Institute; 2013.

[8] U.S. Department of Health and Human Services. Healthy People 2020 Web site. [Accessed on 10/18/2013] http://healthypeople.gov/2020/default.aspx.

Table A1. Selected STDs — Percentage of Unknown, Missing, or Invalid Values for Selected Variables by State and by Nationally Notifiable STD, 2013

State	Primary and Secondary Syphilis				Gonorrhea			Chlamydia		
	Percentage Unknown Race/ Ethnicity	Percentage Unknown Age	Percentage Unknown Sex	Percentage Unknown Sex Partner	Percentage Unknown Race/ Ethnicity	Percentage Unknown Age	Percentage Unknown Sex	Percentage Unknown Race/ Ethnicity	Percentage Unknown Age	Percentage Unknown Sex
Alabama	12.6	0.0	0.0	30.6	29.1	0.1	0.3	32.6	0.2	0.6
Alaska	0.0	0.0	0.0	100.0	0.6	0.0	0.0	0.8	0.0	0.0
Arizona	1.4	0.0	0.0	8.0	15.7	0.0	0.0	19.4	0.0	0.0
Arkansas	1.1	0.0	0.0	7.3	10.0	0.1	0.1	13.3	0.1	0.1
California	6.7	0.2	0.1	12.0	25.7	0.6	0.2	34.9	0.5	0.1
Colorado	8.6	0.0	0.0	1.2	20.2	0.0	0.0	41.1	0.0	0.0
Connecticut	8.9	0.0	0.0	8.9	44.3	0.6	0.0	63.5	0.2	0.7
Delaware	0.0	0.0	0.0	69.2	2.4	0.0	0.0	4.4	0.0	0.0
District of Columbia	5.4	0.0	0.0	20.8	39.8	0.2	0.2	44.1	0.2	0.3
Florida	5.1	0.0	0.0	7.6	16.2	0.0	0.2	22.9	0.0	0.2
Georgia	1.7	0.0	0.0	29.2	32.5	0.1	0.8	42.1	0.2	0.9
Hawaii	4.3	0.0	0.0	17.4	46.2	0.0	0.0	51.1	0.1	0.0
Idaho	0.0	0.0	0.0	6.7	27.5	0.9	0.0	37.6	0.1	0.3
Illinois	1.6	0.0	0.1	20.1	15.0	0.0	0.1	19.0	0.0	0.1
Indiana	1.9	0.0	0.0	6.5	5.8	0.0	0.0	8.4	0.0	0.0
Iowa	2.8	0.0	0.0	9.4	7.0	0.0	0.0	8.2	0.0	0.0
Kansas	0.0	2.0	0.0	9.8	18.3	0.0	0.0	40.8	0.0	0.0
Kentucky	0.0	0.0	0.0	3.3	23.2	0.2	0.4	30.7	0.2	0.3
Louisiana	0.0	0.0	0.0	12.5	0.9	0.0	0.0	1.2	0.0	0.0
Maine	20.0	0.0	0.0	20.0	17.1	0.0	0.0	29.0	0.2	0.1
Maryland	1.8	0.0	0.0	5.0	16.8	0.3	0.1	25.1	0.1	0.1
Massachusetts	5.3	0.0	0.0	21.9	24.0	0.0	0.2	35.3	0.1	0.1
Michigan	0.4	0.0	0.0	9.2	29.5	0.1	0.1	33.0	0.1	0.2
Minnesota	7.8	0.0	1.6	4.1	22.0	0.0	0.0	28.5	0.0	0.0
Mississippi	2.6	0.0	0.0	3.8	15.7	0.0	0.0	19.4	0.1	0.0
Missouri	1.6	0.0	0.0	7.2	8.3	0.0	0.0	14.4	0.0	0.0
Montana*	20.0	0.0	0.0	20.0	11.6	0.0	0.0	6.3	0.8	0.0
Nebraska	12.2	0.0	0.0	31.7	26.1	0.2	1.2	36.9	0.1	2.2
Nevada	4.4	0.0	0.0	5.4	28.4	0.1	0.1	31.9	0.0	0.1
New Hampshire	3.6	0.0	0.0	25.0	5.8	0.0	0.0	10.3	0.0	0.0
New Jersey	1.3	0.0	0.0	21.9	36.6	0.8	0.2	51.7	0.6	0.3
New Mexico	15.4	0.0	0.0	3.8	27.3	0.0	0.0	36.4	0.0	0.1
New York	4.7	0.1	0.5	24.6	31.8	0.3	0.3	40.2	0.4	0.1
North Carolina	0.0	0.0	0.0	15.3	11.6	0.0	0.0	15.0	0.0	0.0
North Dakota	8.3	0.0	0.0	25.0	13.6	0.0	0.0	22.1	0.0	0.0
Ohio	0.0	0.0	0.0	7.1	20.1	0.2	0.0	26.8	0.2	0.0
Oklahoma	0.0	0.0	0.0	5.1	10.1	0.0	0.0	13.3	0.0	0.0
Oregon	2.2	0.0	0.0	24.3	8.2	0.0	0.0	22.5	0.0	0.0
Pennsylvania	5.1	0.0	0.0	18.7	28.4	0.0	0.1	35.3	0.0	0.1
Rhode Island	2.2	0.0	0.0	2.2	14.3	0.0	0.0	18.2	0.0	0.0
South Carolina	0.0	0.4	0.0	2.6	26.7	0.1	0.2	32.3	0.1	0.2
South Dakota	0.0	0.0	0.0	22.7	2.7	0.0	0.0	12.9	0.0	0.0
Tennessee	0.9	0.0	0.0	5.6	1.6	0.0	0.0	2.2	0.0	0.0
Texas	0.5	0.0	0.0	2.4	7.2	0.0	0.6	10.1	0.0	0.7
Utah	0.0	1.4	0.0	23.0	0.0	0.0	0.0	0.4	0.0	0.0
Vermont*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.1	0.0
Virginia	0.3	0.0	0.0	7.0	19.9	0.2	0.0	29.8	0.1	0.1
Washington	20.1	0.0	0.0	3.2	17.3	0.0	0.0	21.3	0.1	0.0
West Virginia	0.0	0.0	0.0	20.0	10.1	0.0	0.0	14.4	0.0	0.0
Wisconsin	3.2	0.0	0.0	66.3	20.1	0.0	0.1	20.0	0.0	0.0
Wyoming*	0.0	0.0	0.0	0.0	13.6	0.0	0.0	14.9	0.0	0.0
U.S. TOTAL	**3.8**	**0.1**	**0.1**	**13.5**	**19.4**	**0.2**	**0.2**	**26.0**	**0.1**	**0.2**

* Percentages for primary and secondary syphilis are based on less than 10 cases.
Note: Unknown includes cases reported with unknown, missing, or invalid data values.

Table A2. Reported Cases of STDs by Reporting Source and Sex, United States, 2013

Disease	Non-STD Clinic			STD Clinic			Total		
	Male	Female	Total*	Male	Female	Total*	Male†	Female†	Total‡
Chlamydia	285,308	814,541	1,102,005	69,680	54,590	124,603	405,652	993,348	1,401,906
Gonorrhea	115,734	128,460	244,630	33,408	14,076	47,615	169,130	163,208	333,004
Primary Syphilis	3,086	216	3,303	1,387	70	1,458	4,891	311	5,204
Secondary Syphilis	7,421	882	8,309	2,507	208	2,721	10,970	1,189	12,171
Early Latent Syphilis	9,983	1,720	11,722	3,248	563	3,812	14,465	2,443	16,929
Late and Late Latent Syphilis§	10,716	4,665	15,399	2,266	737	3,003	15,540	6,256	21,819
Chancroid	6	4	10	0	0	0	6	4	10

* 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.
§ Late and late latent syphilis includes late latent syphilis, latent syphilis of unknown duration, neurosyphilis, and late syphilis with clinical manifestations other than neurosyphilis.

Table A3. *Healthy People 2020* (HP 2020) Sexually Transmitted Diseases Objectives

	HP2020 Objectives	Baseline Year	Baseline	2011	2012	2013	HP 2020 Target
1	**Reduce the proportion of adolescents and young adults with Chlamydia trachomatis infections**						
	a. Among females aged 15 to 24 years attending family planning clinics	2008	7.4%	8.3%	N/A	N/A	6.7%
	b. Among females aged 24 years and under enrolled in a National Job Training Program	2008	12.8%	10.4%	11.0%	11.7%	11.5%
	c. Among males aged 24 years and under enrolled in a National Job Training Program	2008	7.0%	8.0%	7.0%	7.4%	6.3%
2	**Increase the proportion of sexually active females aged 24 years and under enrolled in Medicaid plans who are screened for genital Chlamydia infections during the measurement year**						
	a. Females aged 16 to 20 years	2008	52.7%	54.9%	53.5%	N/A	70.9%
	b. Females aged 21 to 24 years	2008	59.4%	63.4%	63.6%	N/A	80.0%
3	**Increase the proportion of sexually active females aged 24 years and under enrolled in commercial health insurance plans who are screened for genital Chlamydia infections during the measurement year**						
	a. Females aged 16 to 20 years	2008	40.1%	41.5%	41.4%	N/A	61.3%
	b. Females aged 21 to 24 years	2008	43.5%	48.4%	49.2%	N/A	74.6%
4	**Reduce the proportion of females aged 15 to 44 who have ever required treatment for pelvic inflammatory disease (PID)**	2006-2008	4.0%	N/A	N/A	N/A	3.6%
5	**Reduce gonorrhea rates (cases per 100,000 population)**						
	a. Females aged 15 to 44 years	2008	285.0	264.8	264.7	250.6	257.0
	b. Males aged 15 to 44 years	2008	220.4	217.7	232.1	239.4	198.0
6	**Reduce sustained domestic transmission of primary and secondary syphilis (cases per 100,000 population)**						
	a. Among females	2008	1.5	0.9	0.9	0.9	1.4
	b. Among males	2008	7.5	8.1	9.3	10.3	6.8
7	**Reduce congenital syphilis**	2008	10.5	8.7	7.8	8.7	9.1
8	**Reduce the proportion of females with human papillomavirus (HPV) Infection (DEVELOPMENTAL)**						
	a. Females with types 6 and 11	2003-2006	3.2	N/A	N/A	N/A	N/A
	b. Females with types 16 and 18	2003-2006	6.2	N/A	N/A	N/A	N/A
	c. Females with other types	2003-2006	40.3	N/A	N/A	N/A	N/A
9	**Reduce the proportion of young adults with genital herpes infection due to herpes simplex type 2**	2005-2008	10.5%	8.3%*		N/A	9.5%

HP2020 Objectives	Data Source
1 a	National Notifiable Disease Surveillance System (NNDSS), NCHHSTP, CDC
1b, 1c	National Job Training Program, STD Surveillance System (STDSS), NCHHSTP, CDC
2a, 2b	Healthcare Effectiveness Data and Information Set (HEDIS), National Committee for Quality Assurance (NCQA)
3a, 3b	Healthcare Effectiveness Data and Information Set (HEDIS), National Committee for Quality Assurance (NCQA)
4	2006-2010 National Survey of Family Growth (NSFG), NCHS, CDC
5a, 5b	STD Surveillance System (STDSS), NCHHSTP, CDC
6a, 6b	STD Surveillance System (STDSS), NCHHSTP, CDC
7	STD Surveillance System (STDSS), NCHHSTP, CDC
8a, 8b	NHANES, CDC, NCHS and the National Health Interview Survey (NHIS), CDC
8c	NHANES, CDC, NCHS
9	NHANES, CDC, NCHS

* The HSV seroprevalence for 20–29 year olds is reported for years 2011–2012. Data from each individual year is not available.

Table A4. Government Performance and Results Act (GPRA) Sexually Transmitted Diseases Goals, Measures, and Target

GPRA Goals	Actual 2011	Actual 2012	Actual 2013	Target 2014
Goal 1: Reduction in PID (as measured by initial visits to physicians in women 15–44 years of age)	**90,000**	**106,000**	**88,000**	**98,800**
a. Proportion of high-risk women aged 16-20 infected with chlamydia*	13.1†	12.4†	13.3	12.1
b. Proportion of high-risk women aged 21-24 infected with chlamydia*	9.1†	8.9†	9.4	8.6
c. Rate of gonorrhea/100,000 population in women aged 16-20	663	618.5	551.9	587.6
d. Rate of gonorrhea/100,000 population in women aged 21-24	536.9	545.3	513.8	524.2
e. Black: white ratio of gonorrhea in women 16-24	13.6	12.4	11.1	11.2
f. Proportion of sexually active females 16-20 enrolled in Medicaid who are screened for chlamydia infections	54.9	53.5	N/A	59.7
g. Proportion of sexually active females 21-24 enrolled in Medicaid who are screened for chlamydia infections	63.4	63.6	N/A	70.9
h. Proportion of sexually active females 16-20 enrolled in commercial health insurance plans who are screened for chlamydia infections	41.5	41.1	N/A	47.2
i. Proportion of sexually active females 21-24 enrolled in commercial health insurance plans who are screened for chlamydia infections	48.4	49.2	N/A	56.7
Goal 2: Elimination of Congenital Syphilis				
a. Incidence of P&S syphilis/100,000 population in women aged 15-44	2.1	2.1	2.1	1.8
b. Incidence of congenital syphilis/100,000 live births	8.7	8.4	8.7	7.2
c. Proportion of pregnant women that are screened for syphilis at least one month before delivery	83.0	85.0	N/A	81.9

GPRA Goals	Data Source
1	National Disease and Therapeutic Index (IMS Health)
1a, 1b	National Job Training Program
1c, 1d, 1e	STD Surveillance System (STDSS), NCHHSTP, CDC
1f, 1g, 1h, 1i	Healthcare Effectiveness Data and Information Set (HEDIS), National Committee for Quality Assurance (NCQA)
2a, 2b	STD Surveillance System (STDSS), NCHHSTP, CDC
2c	Marketscan. Thomson Reuters (Healthcare) Inc.

* Median state-specific chlamydia prevalence/positivity among states with >100 females in this age group entering the National Job Training Program.

† In FY 2013 CDC improved the calculation of these data to increase the stability of estimate over time. Data for 2010 and later years reflect this improved calculation method.

GPRA= Government Performance and Results Act; PID= pelvic inflammatory disease; P&S= primary and secondary.

STD Surveillance Case Definitions

PART 1. CASE DEFINITIONS[1] FOR NATIONALLY NOTIFIABLE INFECTIOUS DISEASES

Chancroid (Revised 9/96)

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 (Revised 6/09)

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 (Revised 9/96)

Clinical description

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

[1] Centers for Disease Control and Prevention. Case definitions for infectious conditions under public health surveillance, 1997. MMWR Morb Mortal Wkly Rep. 1997;46(No. RR-10).

Laboratory criteria for diagnosis

- Isolation of typical gram-negative, oxidase-positive diplococci (presumptive *Neisseria gonorrhoeae*) from a clinical specimen, or
- Demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid, or
- Observation of gram-negative intracellular diplococci in a urethral smear obtained from a male

Case classification

Probable: a) demonstration of gram-negative intracellular diplococci in an endocervical smear obtained from a female or b) a written morbidity report of gonorrhea submitted by a physician

Confirmed: a case that is laboratory confirmed

Syphilis (All Definitions Revised 9/96)

Syphilis is a complex sexually transmitted disease that has a highly variable clinical course. Classification by a clinician with expertise in syphilis may take precedence over the following case definitions developed for surveillance purposes.

Syphilis, primary

Clinical description

A stage of infection with *Treponema pallidum* characterized by one or more chancres (ulcers); chancres might differ considerably in clinical appearance.

Laboratory criteria for diagnosis

- Demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, direct fluorescent antibody (DFA-TP), or equivalent methods

Case classification

Probable: a clinically compatible case with one or more ulcers (chancres) consistent with primary syphilis and a reactive serologic test (nontreponemal: Venereal Disease Research Laboratory [VDRL] or rapid plasma reagin [RPR]; treponemal: fluorescent treponemal antibody absorbed [FTA-ABS] or microhemagglutination assay for antibody to T. pallidum [MHA-TP])

Confirmed: a clinically compatible case that is laboratory confirmed

Syphilis, secondary

Clinical description

A stage of infection caused by *T. pallidum* and characterized by localized or diffuse mucocutaneous lesions, often with generalized lymphadenopathy. The primary chancre may still be present.

Laboratory criteria for diagnosis

- Demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, DFA-TP, or equivalent methods

Case classification

Probable: a clinically compatible case with a nontreponemal (VDRL or RPR) titer ≥4

Confirmed: a clinically compatible case that is laboratory confirmed

Syphilis, latent

Clinical description

A stage of infection caused by *T. pallidum* in which organisms persist in the body of the infected person without causing symptoms or signs. Latent syphilis is subdivided into early, late, and unknown categories based on the duration of infection.

Case classification

Probable: no clinical signs or symptoms of syphilis and the presence of one of the following:

No past diagnosis of syphilis, a reactive nontreponemal test (i.e., VDRL or RPR), and a reactive treponemal test (i.e., FTA-ABS or MHA-TP)

A past history of syphilis therapy and a current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer

Syphilis, early latent

Clinical description

A subcategory of latent syphilis. When initial infection has occurred within the previous 12 months, latent syphilis is classified as early latent.

Case classification

Probable: latent syphilis (see Syphilis, latent) in a person who has 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
- A history of symptoms consistent with primary or secondary syphilis during the previous 12 months
- A history of sexual exposure to a partner who had confirmed or probable primary or secondary syphilis or probable early latent syphilis (documented independently as duration <1 year)
- Reactive nontreponemal and treponemal tests from a person whose only possible exposure occurred within the preceding 12 months

Syphilis, late latent

Clinical description

A subcategory of latent syphilis. When initial infection has occurred >1 year previously, latent syphilis is classified as late latent.

Case classification

Probable: latent syphilis (see Syphilis, latent) in a patient who has no evidence of having acquired the disease within the preceding 12 months (see Syphilis, early latent) and whose age and titer do not meet the criteria specified for latent syphilis of unknown duration.

Syphilis, latent, of unknown duration

Clinical description

A subcategory of latent syphilis. When the date of initial infection cannot be established as having occurred within the previous year and the patient's age and titer meet criteria described below, latent syphilis is classified as latent syphilis of unknown duration.

Case classification

Probable: latent syphilis (see Syphilis, latent) that does not meet the criteria for early latent syphilis, and the patient is aged 13–35 years and has a nontreponemal titer ≥32

Neurosyphilis

Note

Since neurosyphilis can occur at almost any stage of syphilis, it was classified and reported, between 1996 and 2005, as one of several mutually exclusive stages of syphilis. In 2005, the Division of STD Prevention requested that STD control programs discontinue classifying and reporting neurosyphilis as a distinct stage of syphilis. Since 2005, if the patient has confirmed or probably neurosyphilis, the case should be reported as the appropriate state of syphilis and neurological manifestations should be noted.

Clinical description

Evidence of central nervous system infection with *T. pallidum*

Laboratory criteria for diagnosis

A reactive serologic test for syphilis and reactive VDRL in cerebrospinal fluid (CSF)

Case classification

Probable: syphilis of any stage, a negative VDRL in CSF, and both of the following:

- Elevated CSF protein or leukocyte count in the absence of other known causes of these abnormalities
- Clinical symptoms or signs consistent with neurosyphilis without other known causes for these clinical abnormalities

Confirmed: syphilis of any stage that meets the laboratory criteria for neurosyphilis

Syphilis, late, with clinical manifestations other than Neurosyphilis (late benign syphilis and cardiovascular syphilis)

Clinical description

Clinical manifestations of late syphilis other than neurosyphilis may include inflammatory lesions of the cardiovascular system, skin, and bone. 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. Late syphilis usually becomes clinically manifest only after a period of 15–30 years of untreated infection.

Laboratory criteria for diagnosis

- Demonstration of *T. pallidum* in late lesions by fluorescent antibody or special stains (although organisms are rarely visualized in late lesions)

Case classification

Probable: characteristic abnormalities or lesions of the cardiovascular system, skin, bone, or other structures with a reactive treponemal test, in the absence of other known causes of these abnormalities, and without CSF abnormalities and clinical symptoms or signs consistent with neurosyphilis

Confirmed: a clinically compatible case that is laboratory confirmed

Comment

Analysis of CSF for evidence of neurosyphilis is necessary in the evaluation of late syphilis with clinical manifestations.

Syphilitic Stillbirth

Clinical description

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

Comment

For reporting purposes, syphilitic stillbirths should be reported as cases of congenital syphilis.

Syphilis, Congenital (Revised 9/96)

Clinical description

A condition caused by infection in utero with *Treponema pallidum*. A wide spectrum of severity exists, and only severe cases are clinically apparent at birth. An infant or child (aged <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, fluorescent antibody, or other specific stains in 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 treponemal test for syphilis and any one of the following:

- Any evidence of congenital syphilis on physical examination
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive cerebrospinal fluid (CSF) venereal disease research laboratory (VDRL)
- An elevated CSF cell count or protein (without other cause)
- A reactive fluorescent treponemal antibody absorbed—19S-IgM antibody test or IgM enzyme-linked immunosorbent assay

Confirmed: a case that is laboratory confirmed

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* Inadequate treatment consists of any nonpenicillin therapy or penicillin administered < 30 days before delivery.

Comment

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, cell count, and protein, as well as IgM antibodies, 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. 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.

PART 2. CASE DEFINITIONS[1] FOR NON-NOTIFIABLE INFECTIOUS DISEASES

Genital Herpes (Herpes Simplex Virus) (Revised 9/96)

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 (Revised 9/96)

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

[1] Centers for Disease Control and Prevention. Case definitions for infectious conditions under public health surveillance, 1997. MMWR Morb Mortal Wkly Rep. 1997;46(No. RR-10).

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 *Chlamydia 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 (Revised 9/96)

Clinical description

Cervical inflammation that is not the result of infection with *Neisseria 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)
- 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 *Chlamydia trachomatis*, Genital Infections). 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 (Revised 9/96)

Clinical description

Urethral inflammation that is not the result of infection with *Neisseria 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 *Chlamydia trachomatis*, Genital Infection). 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 (Revised 9/96)

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 white blood cells/mm^3
- 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.

Contributors

We gratefully acknowledge the contributions of state STD project directors, STD program managers, state and territorial epidemiologists, and laboratory directors. The persons listed were in the positions shown as of September 10, 2014.

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