



CONNECTICUT DEPARTMENT OF PUBLIC HEALTH



2021 Epidemiological Profile of STDs in Connecticut

2023 Connecticut Department of Public Health
STD Clinicians virtual Meeting
Session 1 – January 11, 2023

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STD Surveillance Overview

Data sources

- Clinical laboratories
 - PHC Sections 19a-36-A2; 19a-36-A3
 - Reportable Laboratory Findings
 - Form OL-15C
- Health care providers (and some others)
 - Public Health Code - Section 19a-36-A3
 - Reportable Diseases, Emergency Illnesses and Health Conditions
 - Form STD-23
- Other jurisdictions
 - Interstate Communication Control Records (ICCR)

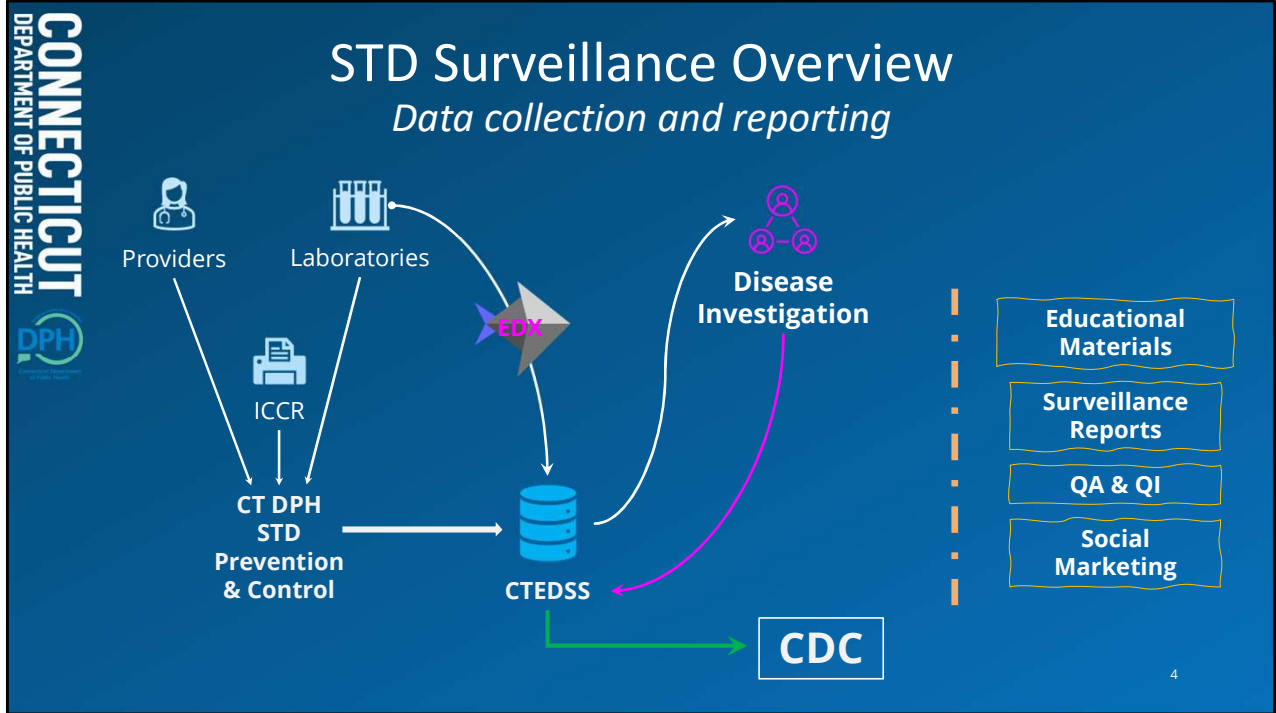
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Powers are granted to the Commissioner of Public Health and thereby the DPH by the Connecticut General Statutes. How these powers are operationalized is listed in the Public Health Code or PHC. Within the Public Health Code are listed the requirements for laboratories to report specific significant findings; and the requirements for health care providers and other persons of specific occupations (like morticians) to report specific conditions. We often refer to these as mandatory reportable diseases. Another, less frequent source of data is other state or large municipal health departments who send us information about Connecticut residents.

References:

<https://portal.ct.gov/DPH/Epidemiology-and-Emerging-Infections/CTEPI/Volumes/41/No1/a3>

<https://portal.ct.gov/DPH/Epidemiology-and-Emerging-Infections/Provider-Reporting>



This schematic summarizes the flow of data and how data inform STD Control Program activities. In addition to the lab and healthcare provider reports, we also receive Electronic Laboratory Reports (ELR) that go into the Connecticut Electronic Diseases Surveillance System, which we call CTEDSS. The information in CTEDSS is reviewed by program staff to determine if laboratory results are complete, and if a case meets criteria for follow-up with the health care provider for additional information to determine if a case investigation is needed. Specifically, we call providers to get information about: pregnancy status; chief complaint and symptoms; stage of syphilis; treatment plan and status; current address and telephone numbers; race; ethnicity; primary language; number and type of sex partners in the past 12 months; PrEP status; and results of tests for chlamydia, gonorrhea, HIV, and other STIs.

Based on what is learned from speaking with health care providers, or reviewing medical charts, specific syphilis cases are assigned to Disease Intervention Specialists (DIS) for field investigation. Results of field investigations are added to CTEDSS. In addition to those data being electronically submitted to the Centers for Disease control and Prevention, we use the quantitative and qualitative data to inform ongoing program activities such as enhancement of provider and client education,

social marketing, and quality assurance and quality improvement work.

STD Surveillance Overview

Surveillance case definitions

- "... set of uniform criteria used to define a disease for public health surveillance" – *National Notifiable Diseases Surveillance System*
- Laboratory finding of specific pathogen
- Time period to distinguish new infection from a previous infection
- Subtyping
 - Clinical manifestations

References:

<https://ndc.services.cdc.gov/case-definitions/chlamydia-trachomatis-infection-2022/>

Across the nation, public health epidemiologists use the same surveillance case definitions to systematically collect the data that will be presented today. A specific set of required variables are reported annually to the Centers for Disease Control and Prevention. Using population denominators provided by the U.S. Census Bureau, rates of reported cases by 100,000 persons are calculated. Today, you will be presented with case counts and case rates.

Preliminary 2021 STD Surveillance Data



**2.5 million
cases**

Preliminary data show 2.5 million reported cases of chlamydia, gonorrhea, and syphilis in 2021.

STDs continued to increase during the second year of the COVID-19 pandemic, with no signs of slowing. This page presents preliminary STD surveillance data for chlamydia, gonorrhea, syphilis, and congenital syphilis. These data include cases reported to CDC through the National Notifiable Diseases Surveillance System (as of July 7, 2022), STD Surveillance Network (as of June 15, 2022), and Gonococcal Isolate Surveillance Project (as of June 23, 2022), and are considered preliminary as 2021

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Source:

<https://www.cdc.gov/std/statistics/2021/default.htm#:~:text=Preliminary%20data%20show%202.5%20million,%2C%20syphilis%2C%20and%20congenital%20syphilis.>

This is a snapshot of a CDC webpage which makes clear that STD rates have continued to increase. The Connecticut experience is consistent with the national picture.

Which factors contribute to the increase in sexually transmitted infections in the United States?



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So, what do you think is driving the increase in STDs?

Chlamydia *Nationwide*

- According to data from the NDDSS as of July 2022:
 - From 2020 to 2021
 - 2.9% increase in reported cases
 - Increase among men was 5.2% compared to 0.6% increase among women
 - Over the last 10 years, the rate among men increased 35%, while among women it decreased 3.2%
 - From 2017 -2021, rates continued to be highest among non-Hispanic Black/African Americans and non-Hispanic American Indian/Alaska Natives

Chlamydia

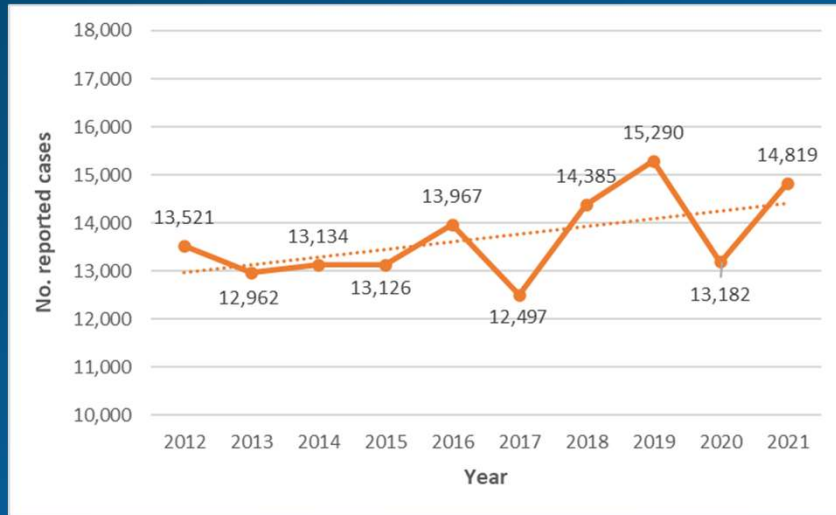
Rates per 100,000 population, New England & United States, 2016 - 2020



Data Source: <https://www.cdc.gov/std/statistics/2020/tables/3.htm>

Chlamydia

Reported Cases, Connecticut, 2012 - 2021



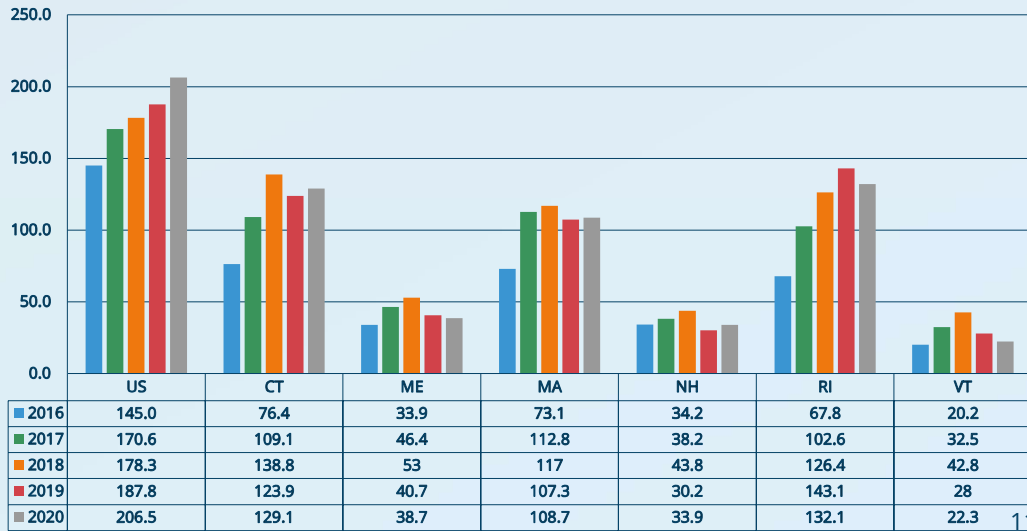
Data Sources:

Years 2012 – 2019: STD*MIS & CTEDSS data analyzed by Lynn Mitchell, Surveillance Coordinator until June 30, 2021

Years 2020 & 2021: CT Electronic Diseases Surveillance System (CTEDSS). Data retrieved January 9, 2023. Analyzed by A. Nepaul.

Gonorrhea

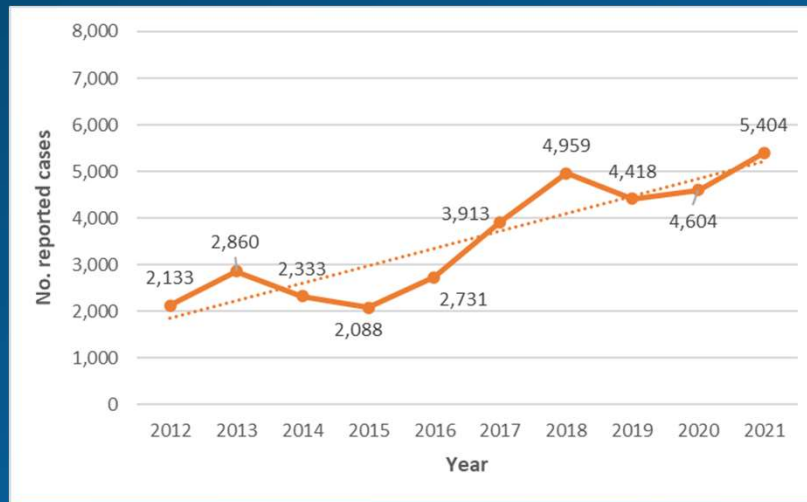
Rates per 100,000 population, New England & United States, 2016 - 2020



Data Source: <https://www.cdc.gov/std/statistics/2020/tables/8.htm>

Gonorrhea

Reported Cases, Connecticut, 2012 - 2021



Data Sources:

Years 2012 – 2015: <https://www.cdc.gov/std/stats/archive/STD-Surveillance-2015-print.pdf>. Table 14. Gonorrhea — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2011–2015.

Years 2016 – 2020: <https://www.cdc.gov/std/statistics/2020/tables/8.htm>

Year 2019: CTEDSS data analyzed by Lynn Mitchell, Surveillance Coordinator until June 30, 2021

Years 2020 & 2021: CT Electronic Diseases Surveillance System (CTEDSS). Data retrieved January 9, 2023. Analyzed by A. Nepaul.

In 2021

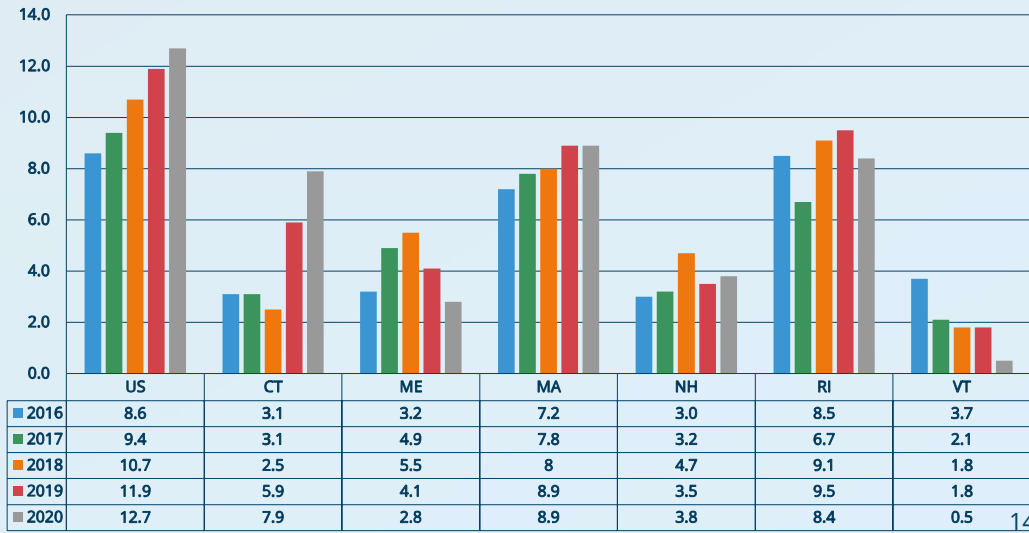


Data source: <https://www.cdc.gov/std/statistics/2019/overview.htm#Syphilis>
Image source: <https://www.cdc.gov/nchhstp/newsroom/2019/2018-STD-surveillance-report.html#Graphics>

This image is part of a set of graphics released by the Centers for Disease Control and Prevention (CDC) in February 2019 for the Syphilis Strikes Back Campaign.

Primary & Secondary Syphilis

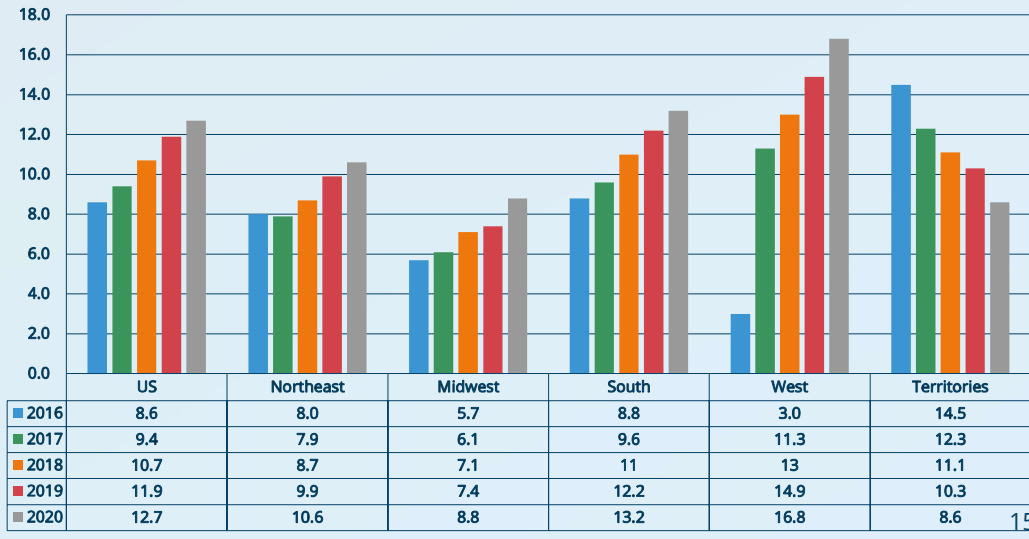
Rates per 100,000 population, New England & United States, 2016 - 2020



Data Source: <https://www.cdc.gov/std/statistics/2020/tables/14.htm>

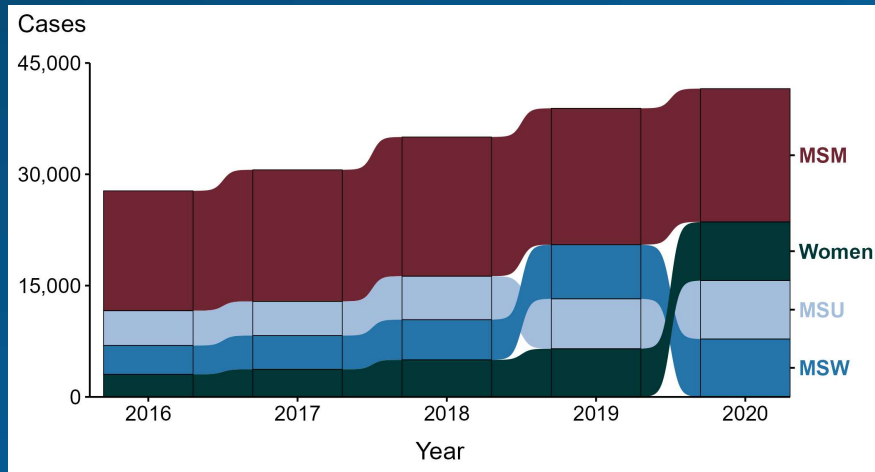
Primary & Secondary Syphilis

Rates per 100,000 population, Regions & United States, 2016 - 2020



Data Source: <https://www.cdc.gov/std/statistics/2020/tables/14.htm>

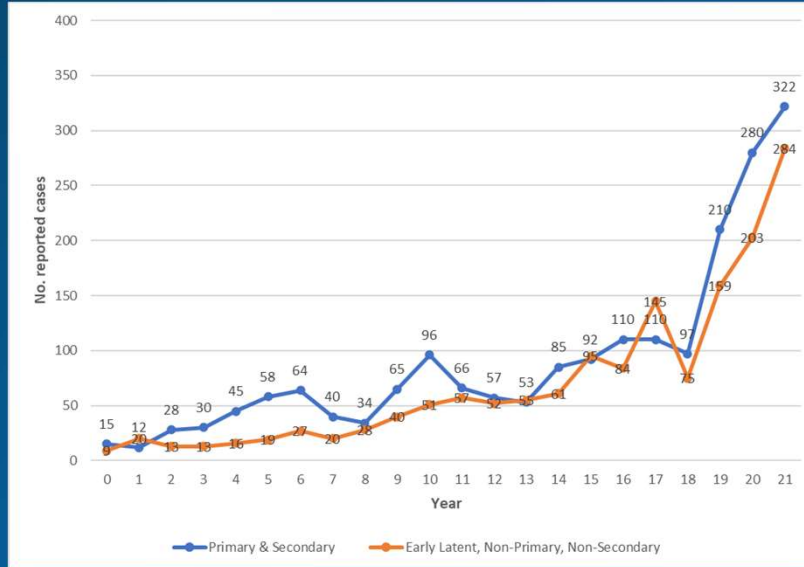
Primary and Secondary Syphilis — Reported Cases by Sex and Sex of Sex Partners, United States, 2016–2020



Content source: Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention

Source: <https://www.cdc.gov/std/statistics/2020/figures/SYPH-2.htm>

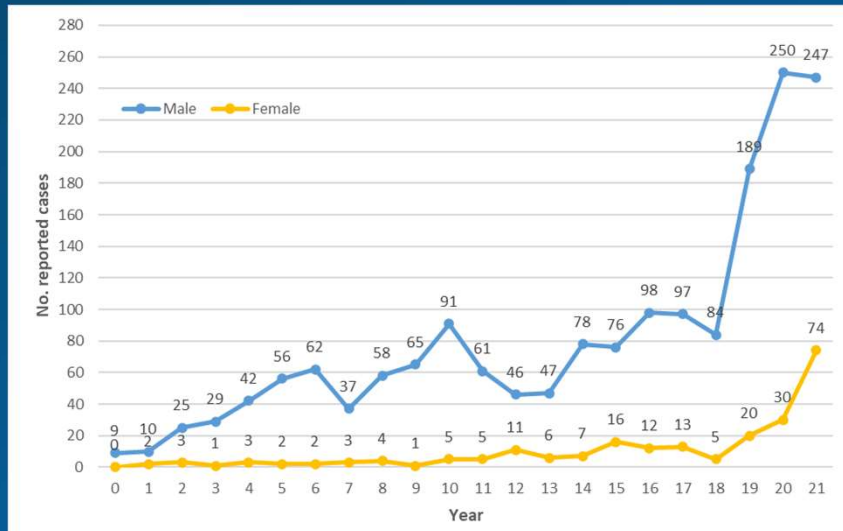
Primary & Secondary, and Early Non-Primary, Non-Secondary Syphilis, Connecticut, 2000 - 2021



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Here we see the number of primary, secondary, and early non-primary, non-secondary syphilis cases for the years 2000 to 2021. Observe the continuation of the upward trend and the steep increase from 2018 to 2021. This is in part due to an increase in heterosexual transmission. We included early non-primary, non-secondary cases here to show the total number of infectious cases, not just the symptomatic cases. These three stages of syphilis are the subject of field investigation, so this slide also tells you that our program is working three times more syphilis case investigations since 2018.

Primary & Secondary Syphilis Cases by Gender, Connecticut, 2000 - 2021

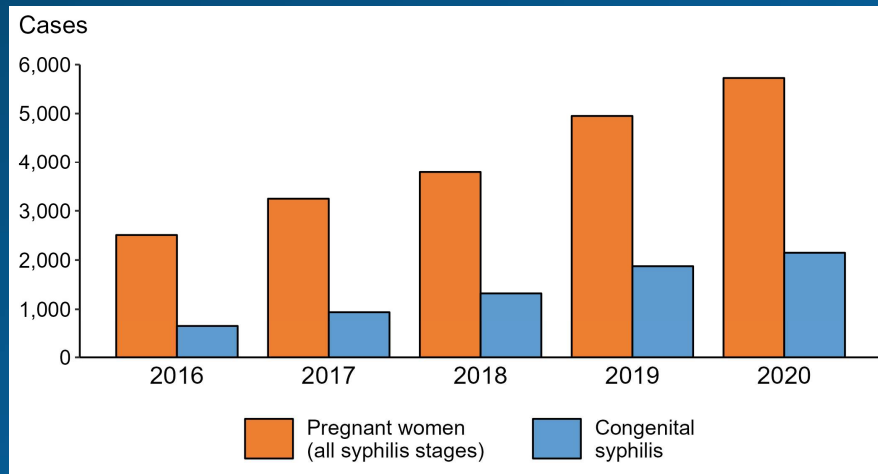


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Males account for the bulk of primary and secondary syphilis cases during 2000 to 2021. Men who have sex with men account for most primary and secondary cases among males. Please note the steading risk in primary and secondary syphilis in females since 2018.

Persons in the 20-24-, 25-29-, and 30–34-year age groups were most often affected by primary & secondary syphilis from 2017 to 2021.

Syphilis— Reported Cases of Syphilis (All Stages) among Pregnant Women and Reported Cases of Congenital Syphilis By Year of Birth, United States, 2016–2020



Content source: Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention

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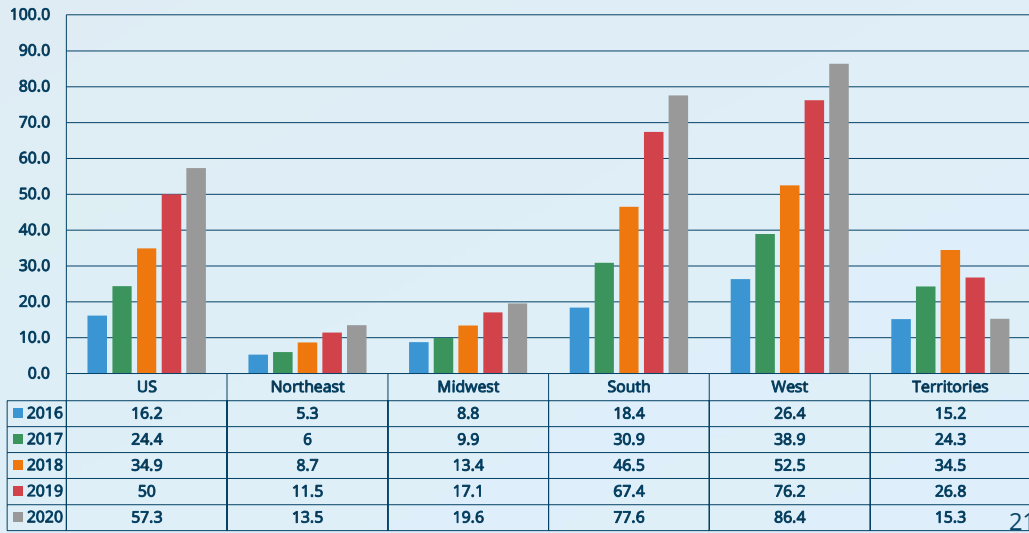
Source: <https://www.cdc.gov/std/statistics/2020/figures/CS-2.htm>

Congenital Syphilis (CS)

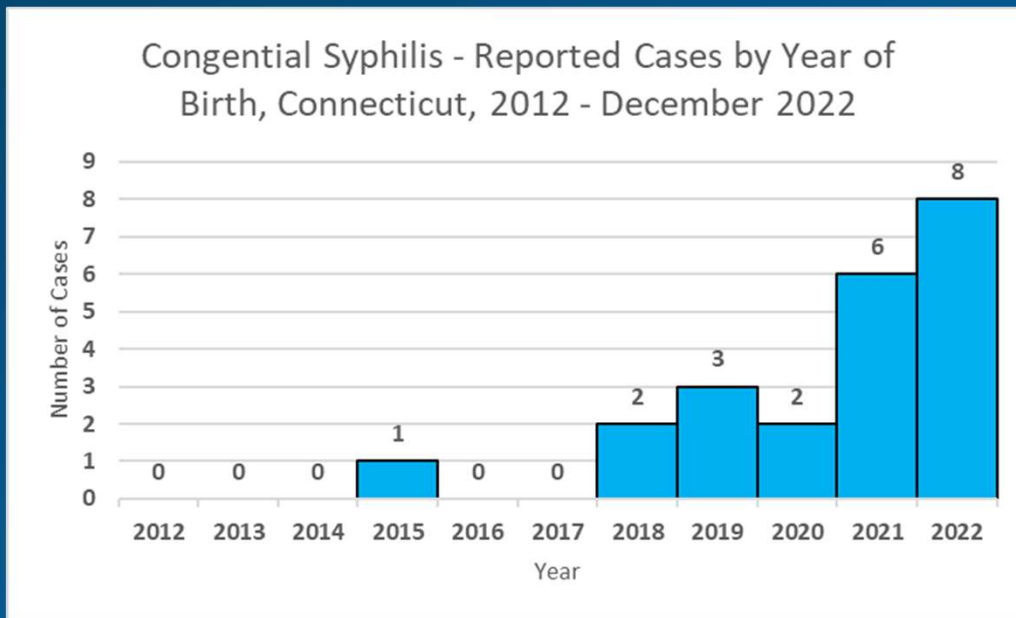


Congenital Syphilis

Rates per 100,000 Live Births, Regions & United States, 2016 - 2020



Data Source: <https://www.cdc.gov/std/statistics/2020/tables/21.htm>



CS is steadily increasing in Connecticut. CS is a category 1 mandatory reportable disease as of January 2023.

Congenital Syphilis in Connecticut

Maternal Risk Factors

- Polysubstance use disorder
 - Cocaine used may have contributed to pre-term labor in one 2021 case per the attending physician
- Little or no prenatal care
- Housing instability



Congenital Syphilis in Connecticut

Challenges to prevention & early detection

- Lack of provider familiarity with ordering diagnostic versus monitoring tests
- Delayed reporting of significant laboratory results
 - Three-month delay in notifying the ordering provider resulted in non-treatment of a pregnant person who had a January 2023 delivery date
- Failure of birthing hospital clinicians or Infection Control Practitioners to report
 - Recent instance of no notification of DPH regarding a CS case in the NICU for <20 days



Congenital Syphilis in Connecticut

Active surveillance effort

- Started in April 2022
 - Provider call within 3-5 days of recognition of no current or historic, reactive treponemal test result for
 - Female of reproductive age (15-49y) with a titer, and
 - Ordering provider is an OB/GYN or CNM
- January 2023
 - CS has been added to the list of Category 1 reportable diseases
 - Call to DPH within 12 hours of recognition or strong recognition
 - Hope this this will boost provider awareness
 - Stimulate more active follow-up with persons who miss prenatal appointments
 - Facilitate more responsiveness to DPH requests for information



Take to Clinic Messages

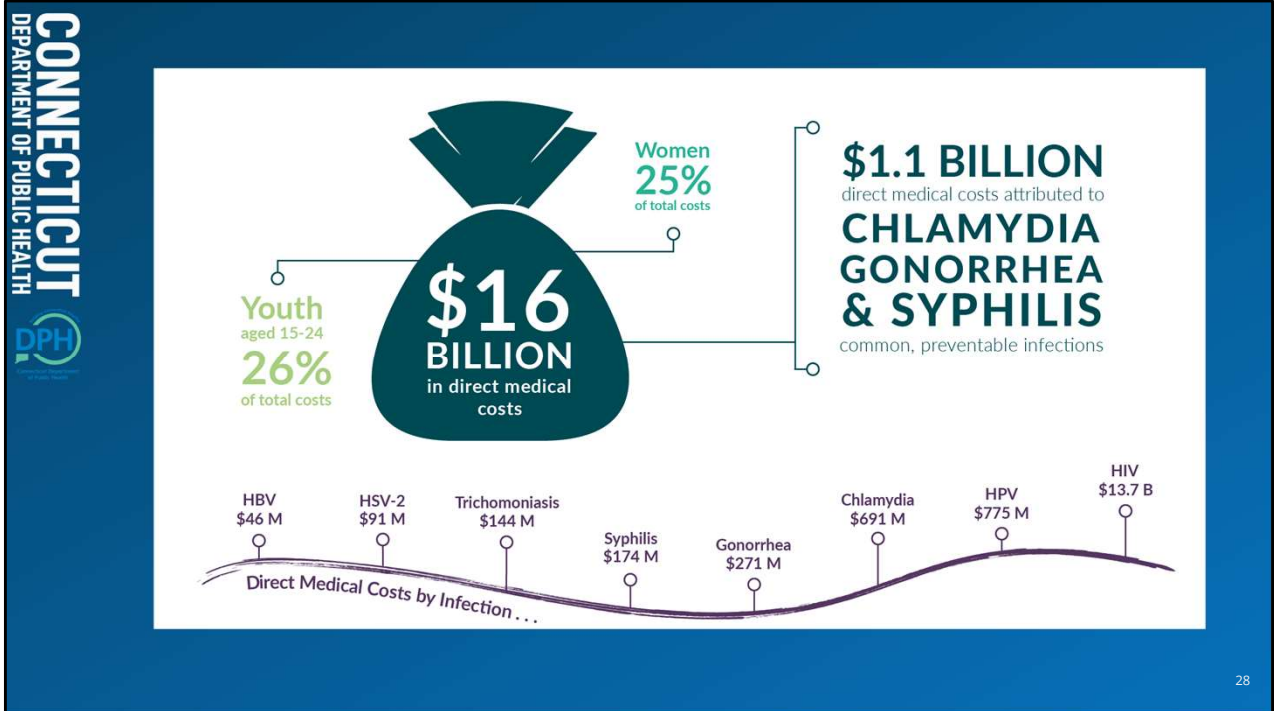
- Chlamydia
 - Highest prevalence in persons aged 15 – 24 years old
 - More cases are reported in females than in males
 - Non-Hispanic Whites are disproportionately affected

- Gonorrhea
 - Highest prevalence in persons aged 15 – 24 years old
 - Since 2013, more cases reported in males than females
 - Non-Hispanic Black/African Americans are disproportionately affected
 - Increasing antimicrobial resistance

Take to Clinic Messages

continued

- Syphilis
 - Increasing among women of reproductive age
- Congenital syphilis
 - Highest incidence in the states in the West and South
 - On the rise in Connecticut
 - Absolutely preventable
 - Now a Category 1 reportable condition
- The *2021 CDC STI Treatment Guidelines* are available as a mobile app



Source: <https://www.cdc.gov/std/statistics/prevalence-2020-at-a-glance.htm>
 In 2018, new sexually transmitted infections totaled \$16 billion in medical costs. Combined, STIs in youth and women accounted for 51% or \$8.16 billion of these costs.

Syphilis, chlamydia, and gonorrhea accounted for \$1.1 billion or 6.9% of 2018 direct lifetime medical costs.

If we can prevent transmission of these three conditions, we can reduce medical costs; and since the other conditions listed are also sexually transmitted, we can have an impact on the overall financial and human burden of infectious diseases.

We can give an even better picture of what is going on with STIs in our state with improved reporting of race and ethnicity data. All populations are at risk for STIs. To reduce health disparities, we need to be able to tell more accurate stories about the populations which need more public health intervention and healthcare resources to reduce disease transmission among members of their communities.

Thanks for all that you do to detect, treat, and report STI cases.

Working together, we can continue to help more people to avoid infection and enjoy

better health.

Q & A



Thank You

