

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)

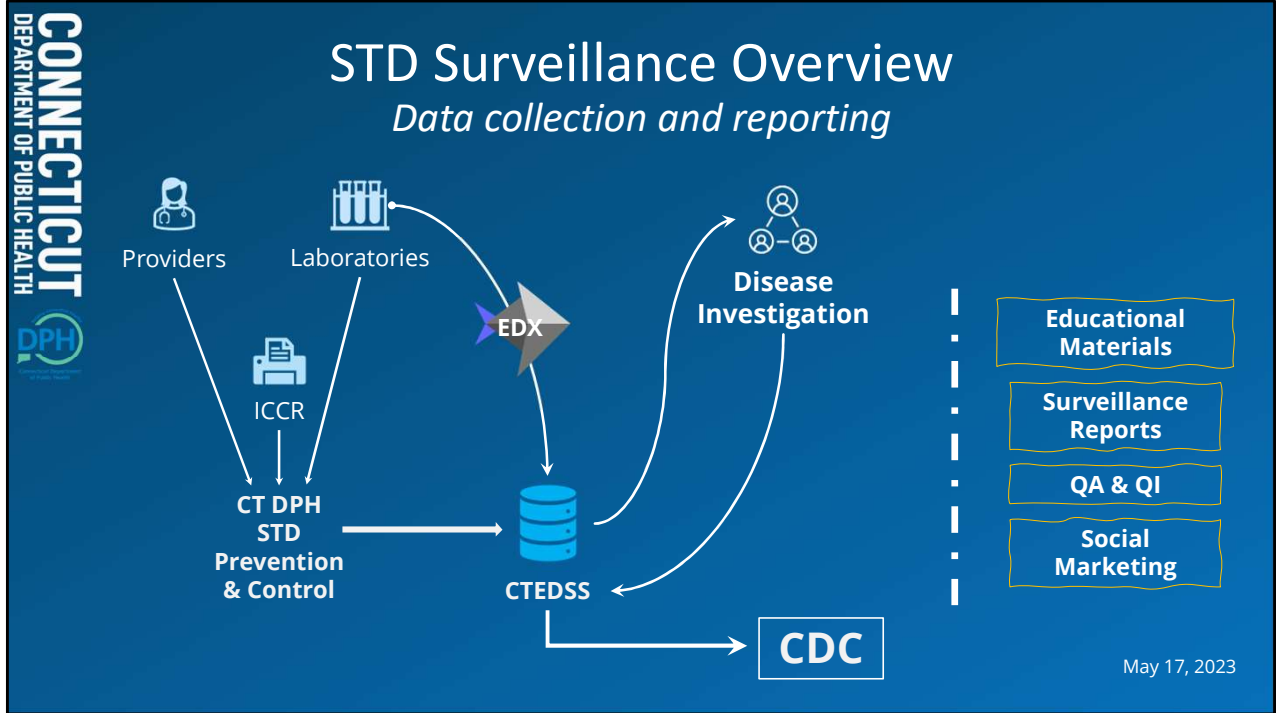
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So, how do we get surveillance information? We rely on clinical laboratories and health care providers to report specific information to the Connecticut Department of Public Health. We also request information about stillbirths from the State Vital Records Office which is within DPH. We can get information about Connecticut residents because powers are granted to the Commissioner of Public Health and thereby the DPH and its staff 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 refer to these as mandatory reportable diseases and laboratory conditions. Through Interstate Communication Control Records (ICCR), other state or large municipal health departments funded by CDC can send us information about Connecticut residents.

All data we can collect are specific to the reportable condition for which surveillance is being conducted. These data include personal identifiers and medical information, so we are extremely careful about maintaining the confidentiality and security of information stored as hardcopy or electronic files. DPH is exempt from HIPAA, so mandated reporters do not need to get patient permission to release information about STIs to DPH.

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

National Statistics, 2021 - Highlights

- Primary & secondary (P&S) syphilis has increased 781% since 2001
- Congenital syphilis has increased 464% since 2001
- Racial disparities persist
 - Black/African American people accounted for 1/3 of all reported STIs
 - Highest rate of congenital syphilis was among American Indian/Alaska Native people



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Reference

Sexually Transmitted Disease Surveillance, 2021. Centers for Disease Control and Prevention. Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention. Available at: <https://www.cdc.gov/std/statistics/2021/default.htm>

STD Surveillance

National Statistics, 2021 – At A Glance

Infection	Number of cases	Rate per 100,000 population	Rate Increase since 2020
Chlamydial	1,644,416	495.5	3.9%
Gonococcal	710,151	214.0	4.6%
Syphilis (all stages)	176,713	53.2	31.7%
Congenital syphilis	2,855	77.9	30.5%



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Reference

Sexually Transmitted Disease Surveillance, 2021. Centers for Disease Control and Prevention. Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention. Available at: <https://www.cdc.gov/std/statistics/2021/default.htm>

STD Surveillance

Connecticut Statistics, 2021 – At A Glance

Infection/Condition	Number of cases	Rate per 100,000 population	Rate Increase since 2020	Rate Increase since 2015
Chlamydial	14,750	409.1	14.7%	11.9%
Gonococcal	5,405	149.9	16.1%	158.0%
Primary & Secondary (P&S) Syphilis	329	9.1	15.2%	250%
Congenital syphilis	6	16.8	189.6%	500%



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Data Sources:

Data collected by the CT DPH STD Prevention & Control Program are submitted annually to the Centers for Disease Control and Prevention (CDC). Reported cases are those which have passed CDC validation tests.

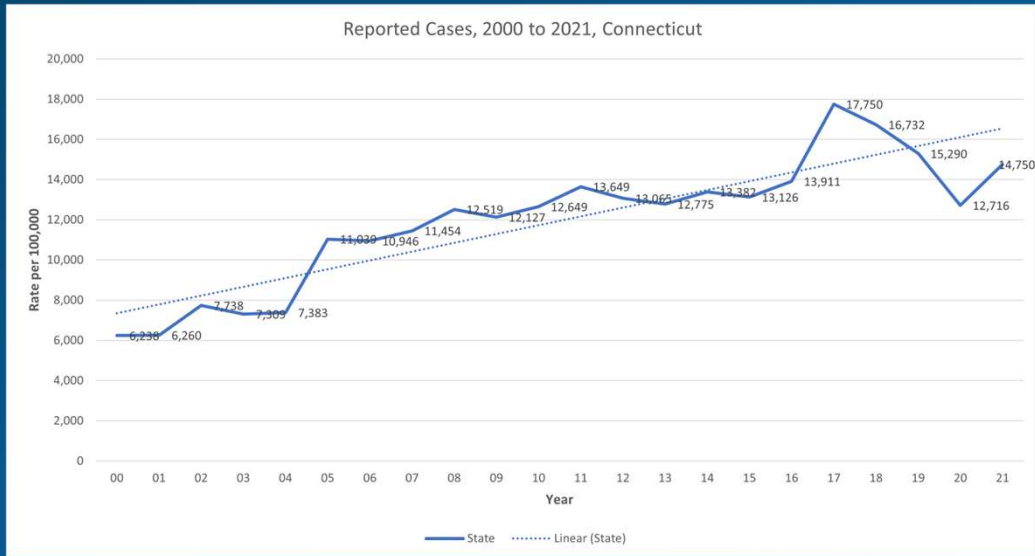
[Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention](#)

- Sexually Transmitted Disease Surveillance 2016
- Sexually Transmitted Disease Surveillance 2020
- Sexually Transmitted Disease Surveillance 2021

Reference

Sexually Transmitted Disease Surveillance, 2021. Centers for Disease Control and Prevention. Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention. Available at: <https://www.cdc.gov/std/statistics/2021/default.htm>

Chlamydia



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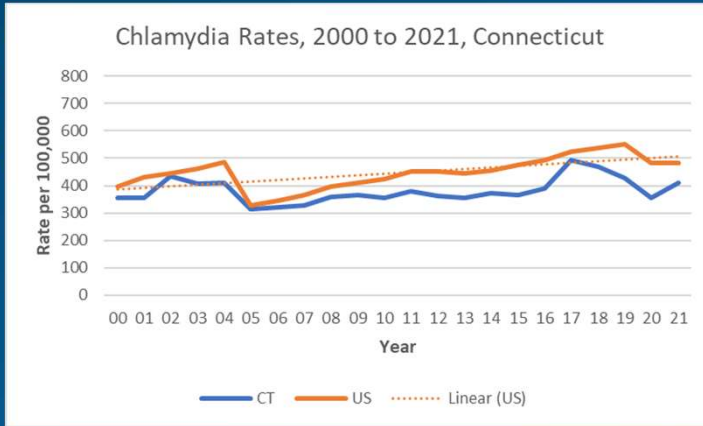
Data Sources:

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.

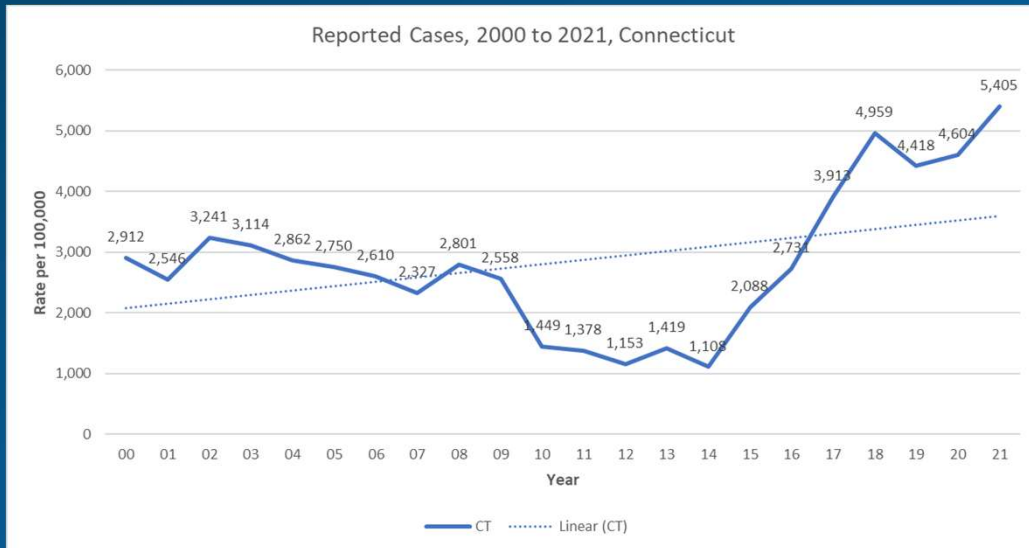
CDC: <https://www.cdc.gov/std/statistics/2021/tables/2.htm>

Chlamydia



From 2017 to 2021, there was a 17.3% decrease in reported chlamydia cases, from 494.7 to 409.1 per 100,000 persons

Gonorrhea



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Data Sources:

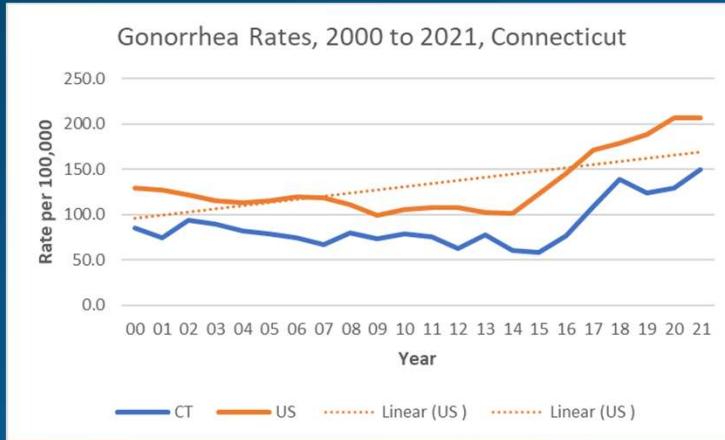
Years 2012 – 2015: <https://www.cdc.gov/std/stats/archive/STD-Surveillance-2015-print.pdf>. Table 14. Gonorrhea — Reported Cases and Rates of Reported Cases by State/Area and Region in Alphabetical Order, United States and Outlying Areas, 2011–2015.

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

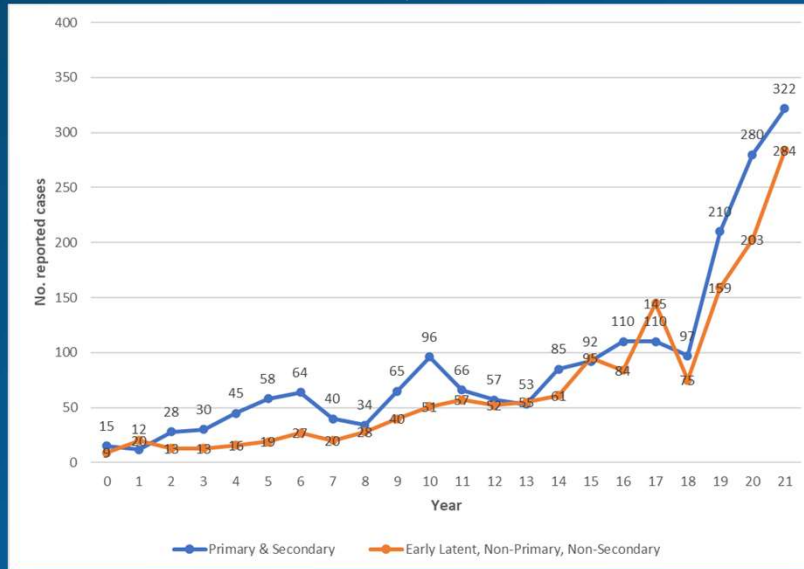
Years 2020 & 2021: CT Electronic Diseases Surveillance System (CTEDSS). Data retrieved January 9, 2023. Analyzed by A. Nepaul.

Gonorrhea



There was a 39.4% increase in reported gonorrhea between 2017 and 2021, up from 109.1 to 149.9 per 100,000

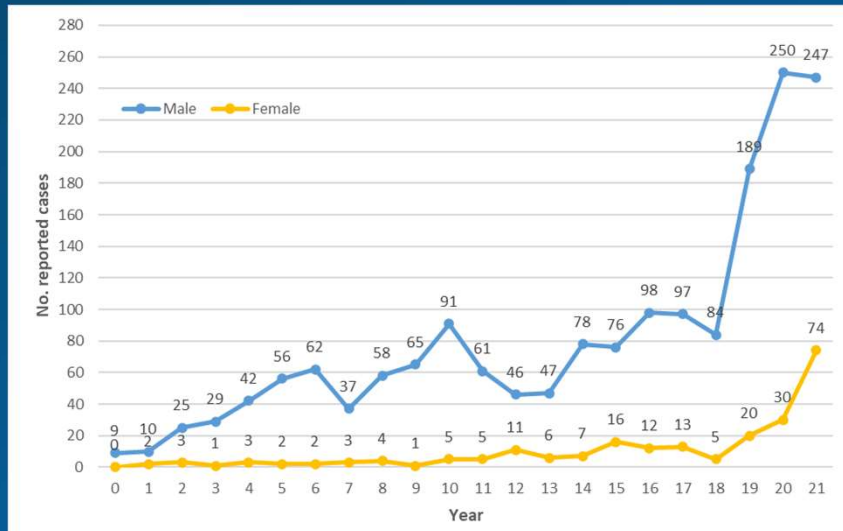
Primary & Secondary, and Early Non-Primary, Non-Secondary Syphilis, Connecticut, 2000 - 2021



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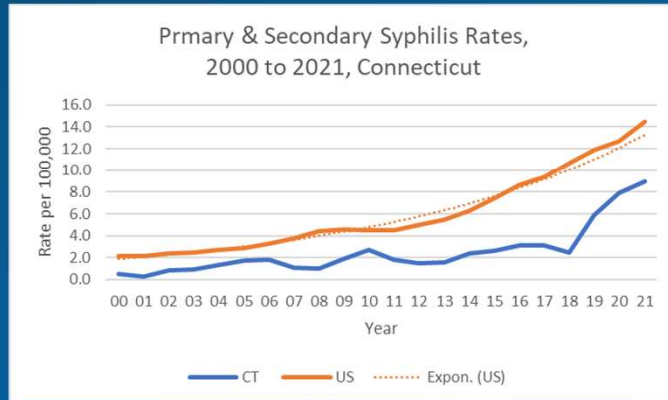
Males account for the bulk of primary and secondary syphilis cases during 2000 to 2021. Men who have sex with men account for most primary and secondary cases among males. Please note the steading risk in primary and secondary syphilis in females since 2018.

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.

Primary & Secondary Syphilis

There was a 193.5% increase in primary and secondary syphilis from 2017 to 2021, from 3.1 to 9.1 per 100,000 persons.

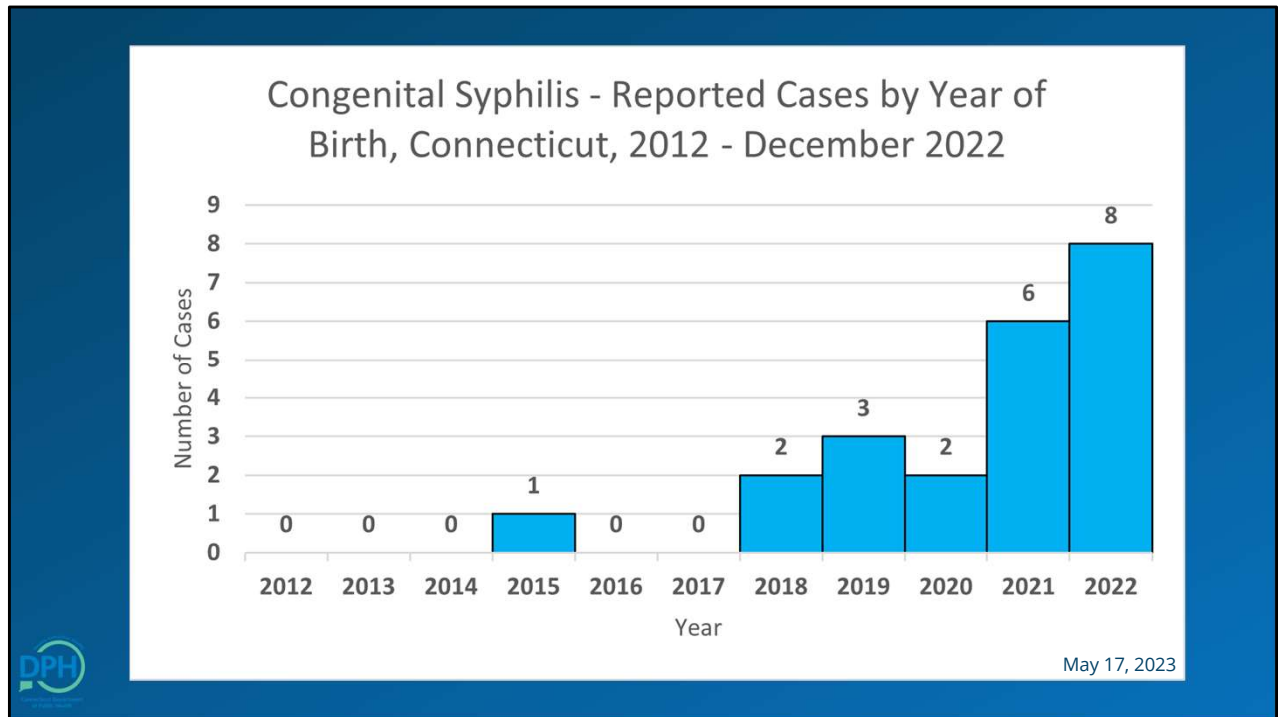
From 2000 to 2021, there has been a 1,720% increase in reported, symptomatic cases, from 0.5 to 9.1 per 100,000.



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Note the rise in reported primary and secondary syphilis cases since 2019, mirroring the national trend.

There was a 193.5% increase in primary and secondary syphilis from 2017 to 2021.



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

This chart shows that the number of congenital syphilis cases in Connecticut is increasing. This is expected with the rise in new cases among women of reproductive age.

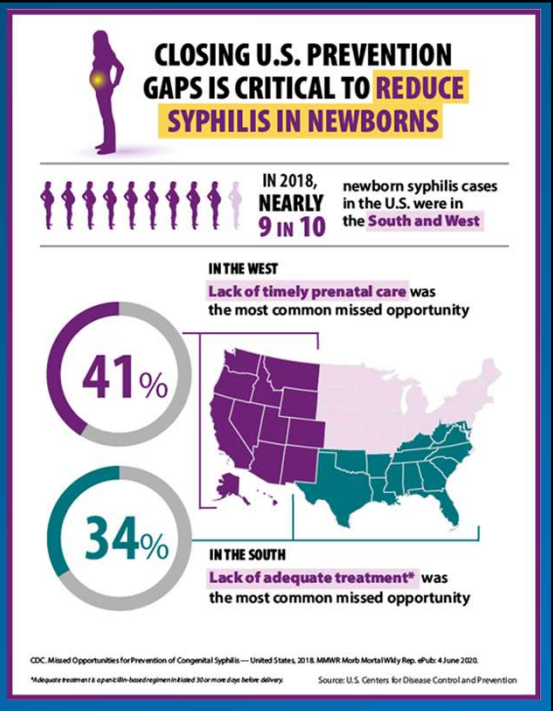
Hartford and New Haven counties account for all cases shown here.

Congenital Syphilis

Maternal Risk Factors in Connecticut

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

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Connecticut STI Data Summary, 2019 -2021

Chlamydia

- Highest prevalence in persons aged 15 – 24 years old
- More cases reported in females than in males
- Non-Hispanic Black/African Americans 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

STD Surveillance

Connecticut STI Data Summary, 2019 -2021 (continued)

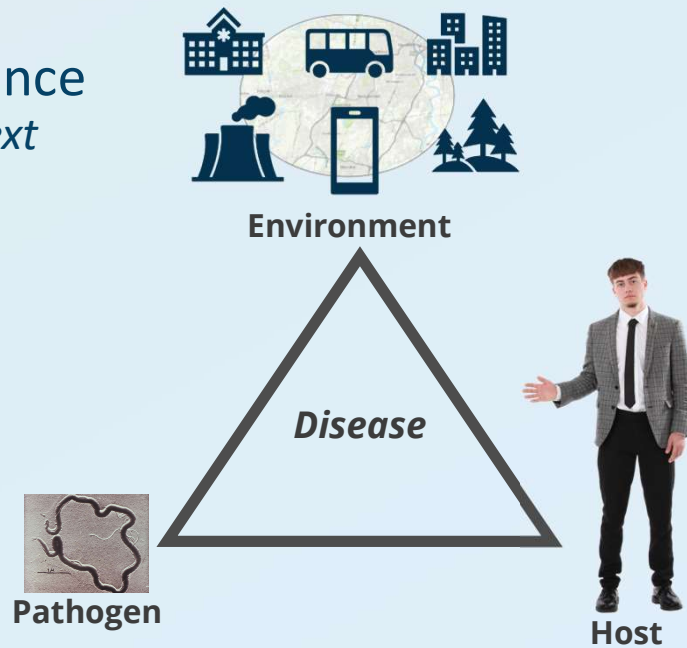
Syphilis

- Increasing in females of reproductive age
- Rate surge coincident with the COVID-19 pandemic continues

Congenital Syphilis

- Increasing in Connecticut
- Associated with inadequate prenatal care
- Cases in New Haven and Hartford Counties

STD Surveillance *Data in context*



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References

Map image is an aerial photo from 2008 from the UCONN Map & Geographic Information Center (MAGIC).

Microscope image of *T. pallidum* from the Public Health Image Library and available at: <https://phil.cdc.gov/Details.aspx?pid=14966>