



# CONNECTICUT DEPARTMENT OF PUBLIC HEALTH



# Connecticut STI Surveillance Landscape

**Connecting for Sexual Health: The CT STI Clinical Management Series**  
**May 2, 2024**

Ava Nepaul, MA, MPH, CPH  
*Epidemiologist 4 – STD Surveillance Coordinator*  
*Connecticut Department of Public Health*

# STD or STI?



- **STD** : distinctive symptoms resulting from infection with a pathogen spread by sexual contact
- **STI** : infection with a pathogen transmitted during sexual contact which may result in symptoms (i.e. disease) or not (i.e. asymptomatic infection)
- The Connecticut Department of Public Health (DPH) STD Control Program uses both terms
- Disease Intervention Specialists (DIS) who routinely speak with infected persons find they are more responsive to testing, treatment, and partner notification services when the term “STD” is used.

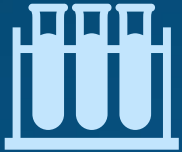
# Contents

- STI Surveillance Overview
  - Data sources
  - Data collection and reporting
  - Caveats to 2022 data
- National & Connecticut statistics
  - Chlamydia
  - Gonorrhea
  - Syphilis
  - Congenital syphilis
- Summary

# STI 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

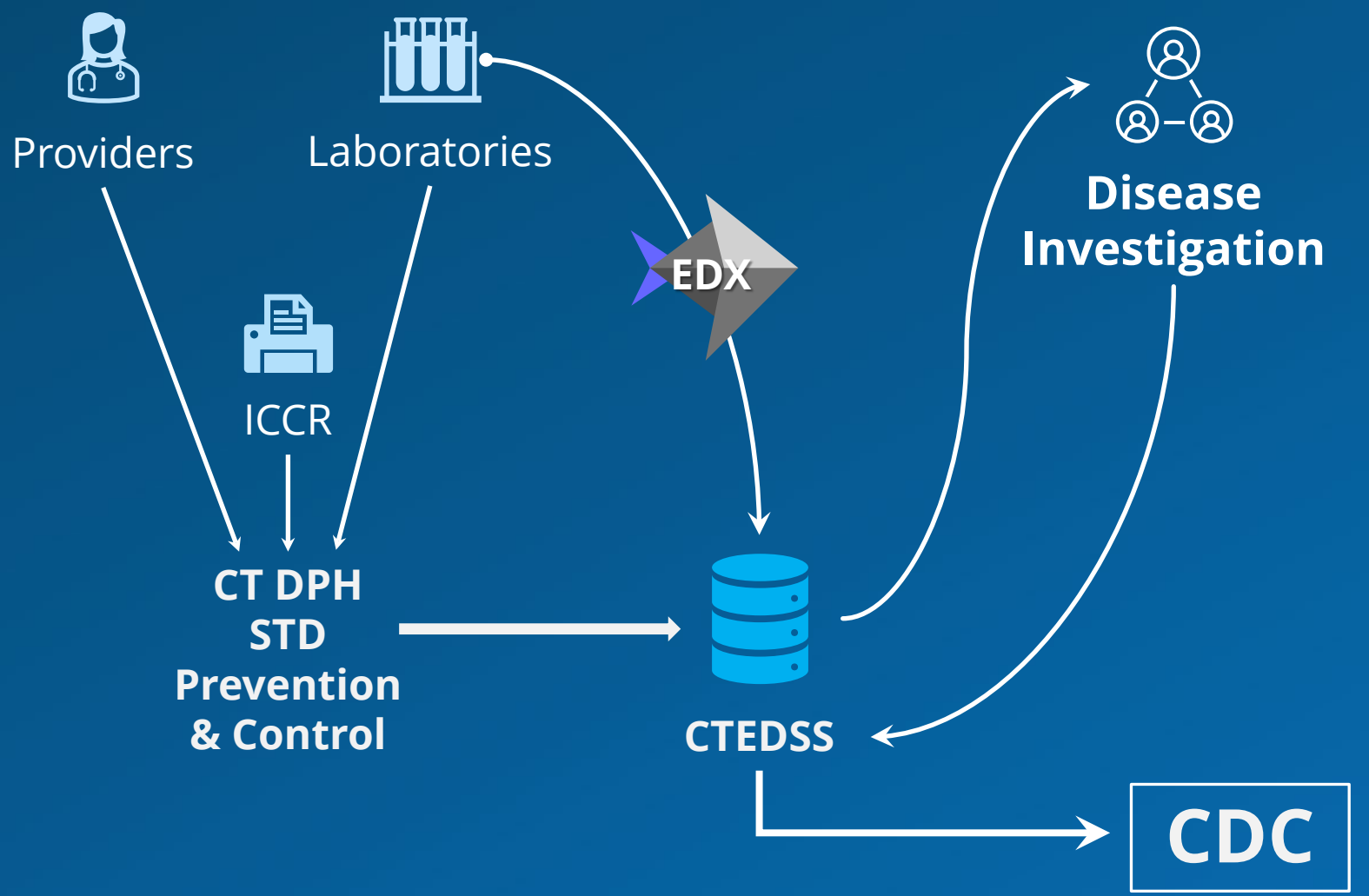


- Interstate Communication Control Records (ICCR)



# STI Surveillance Overview

*Data collection and reporting*



- Educational Materials
- Surveillance Reports
- QA & QI
- Social Marketing

STIs are common, but  
some groups are more  
affected than others

Data presented herein were published in *Sexually Transmitted Infections Surveillance, 2022*

Centers for Disease Control and Prevention. Sexually Transmitted Infections Surveillance 2022. Atlanta: US Department of Health and Human Services; 2024.

# STI Surveillance

## National Statistics, 2022 – At A Glance

Infection or Disease	Number of cases	Rate per 100,000 population	Change since 2018
Chlamydia	1,649,716	495.0	-6.2% ↓
Gonorrhea	648,056	194.4	11.1% ↑
Syphilis (all stages)	207,255	62.2	78.9% ↑
Primary & Secondary (P&S) Syphilis	59,016	17.7	68.3% ↑
Congenital syphilis	3,755	102.5	183.4% ↑↑

Source:

Centers for Disease Control and Prevention (2024). *Sexually Transmitted Infections Surveillance, 2022*. Available at: <https://www.cdc.gov/std/statistics/2022/default.htm>. Accessed March 13, 2024.

# STI Surveillance

## Connecticut Statistics, 2022 – At A Glance

Infection or Disease	Number of cases	Rate per 100,000 population	Change since 2018
Chlamydia	12,738	351.3	-23.8% ↓
Gonorrhea	4,979	137.3	0.4% ↑
Syphilis (all stages)	760	21.0	187.9% ↑↑
Primary & Secondary (P&S) Syphilis	248	6.8	172.5% ↑↑
Congenital syphilis	7	19.6	250.0% ↑↑

Source:

Centers for Disease Control and Prevention (2024). *Sexually Transmitted Infections Surveillance, 2022*. Available at: <https://www.cdc.gov/std/statistics/2022/default.htm>. Accessed March 13, 2024.



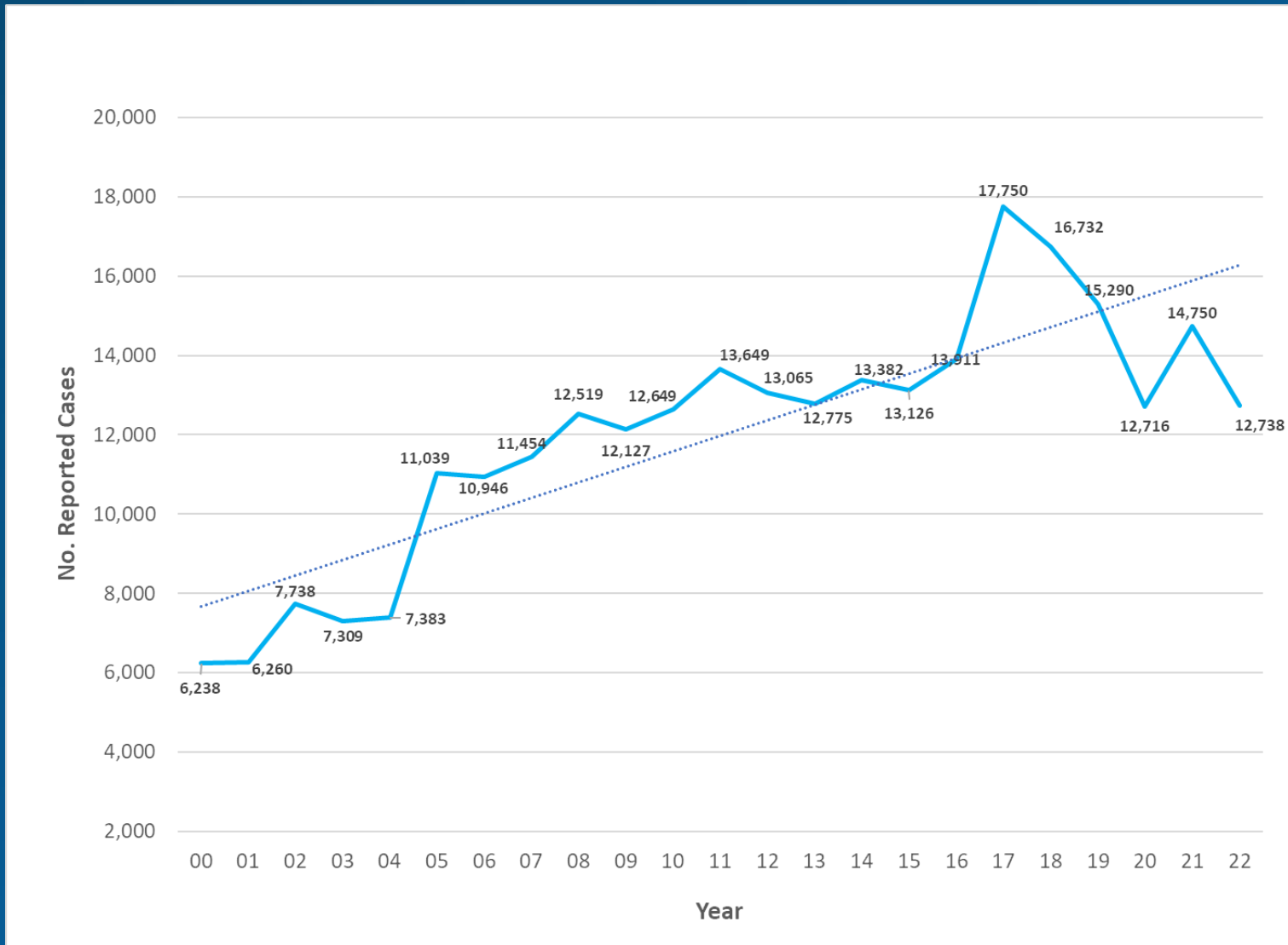
# Reported STI Cases & Rates – State Rankings, 2022

Rank	Chlamydia	Gonorrhea	P&S Syphilis	Congenital Syphilis
1	Louisiana	Mississippi	South Dakota	New Mexico
2	Mississippi	South Dakota	New Mexico	South Dakota
3	Alaska	Louisiana	Arkansas	Arizona
4	South Carolina	Alaska	Oklahoma	Texas
5	Georgia	Georgia	Mississippi	Oklahoma
6	Alabama	South Carolina	Arizona	Mississippi
7	North Carolina	Alabama	Montana	Louisiana
8	Arkansas	North Carolina	Nevada	Nevada
9	Illinois	Missouri	Louisiana	Arkansas
10	South Dakota	Nevada	Oregon	Hawaii
	Connecticut (43)	Connecticut (36)	Connecticut (45)	Connecticut (45)

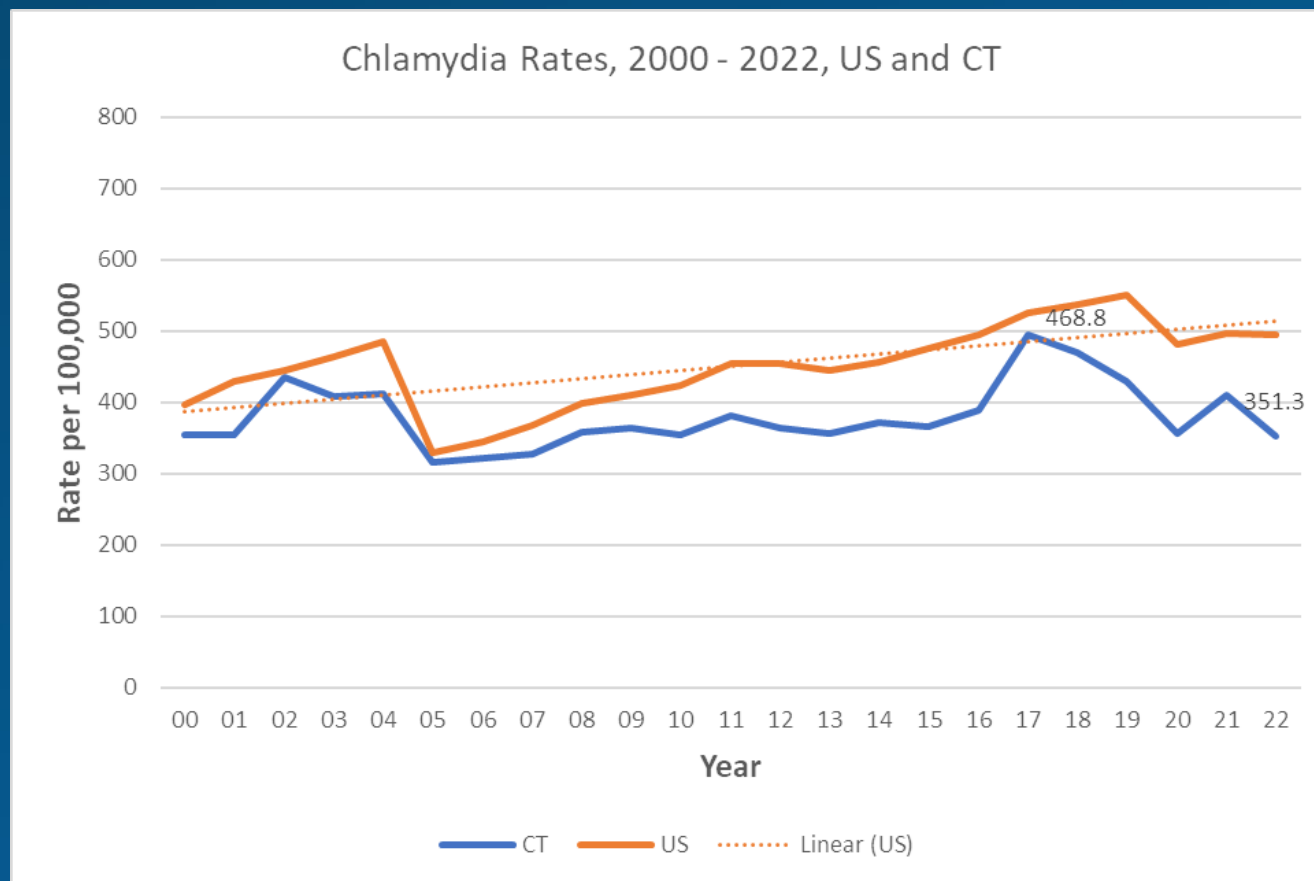


# Chlamydia

# Chlamydia – Reported Cases, Connecticut 2000 - 2022



# Chlamydia



From 2018 to 2022, Connecticut experienced a decrease in the rate of reported chlamydia from 468.3 to 351.3 per 100,000 population.

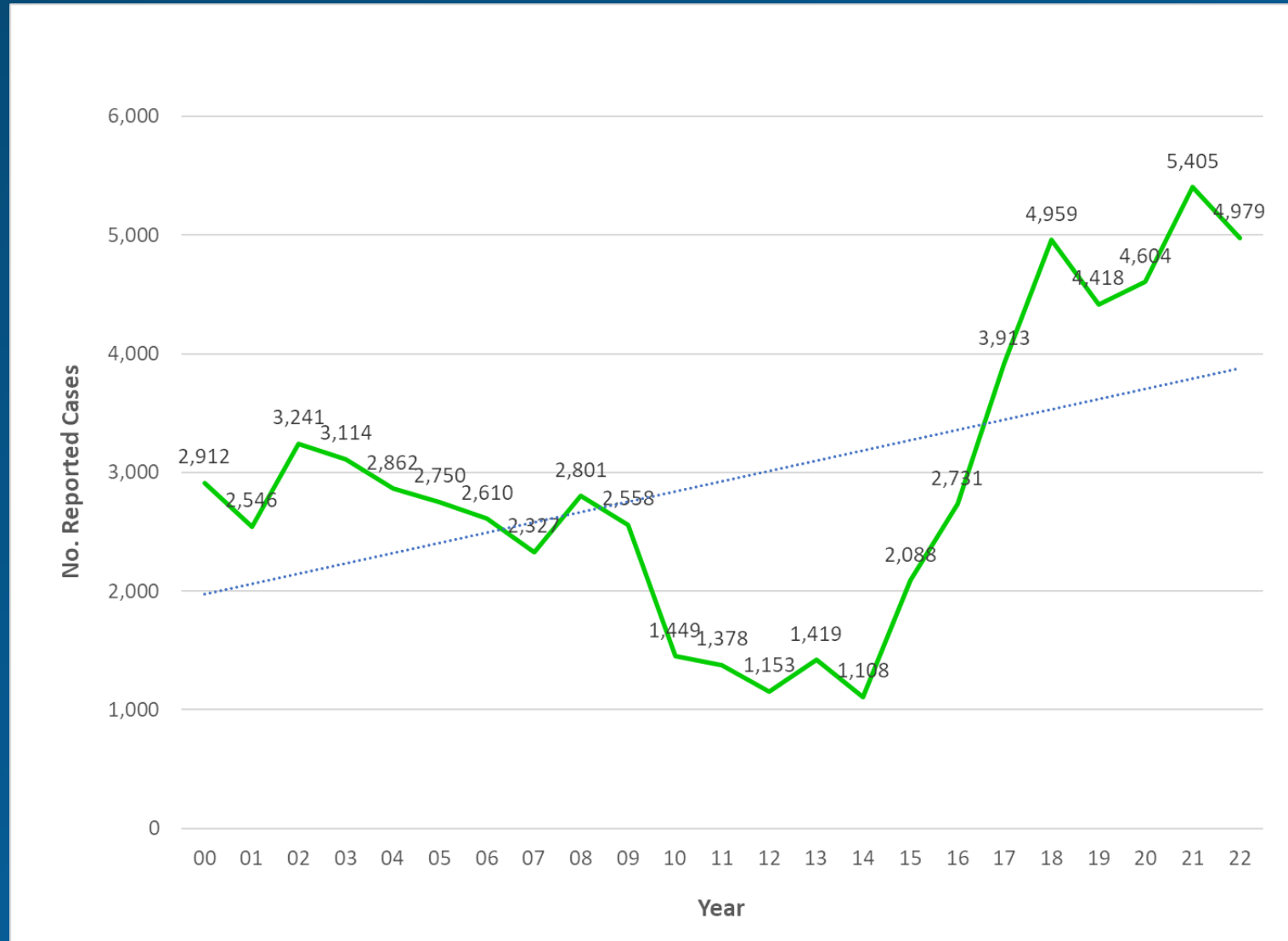
In 2022, the rate of chlamydia infection in females was 1.8 times that of males (450.9 versus 247.3 per 100,000)

Work is ongoing to update 2022 chlamydia case counts.

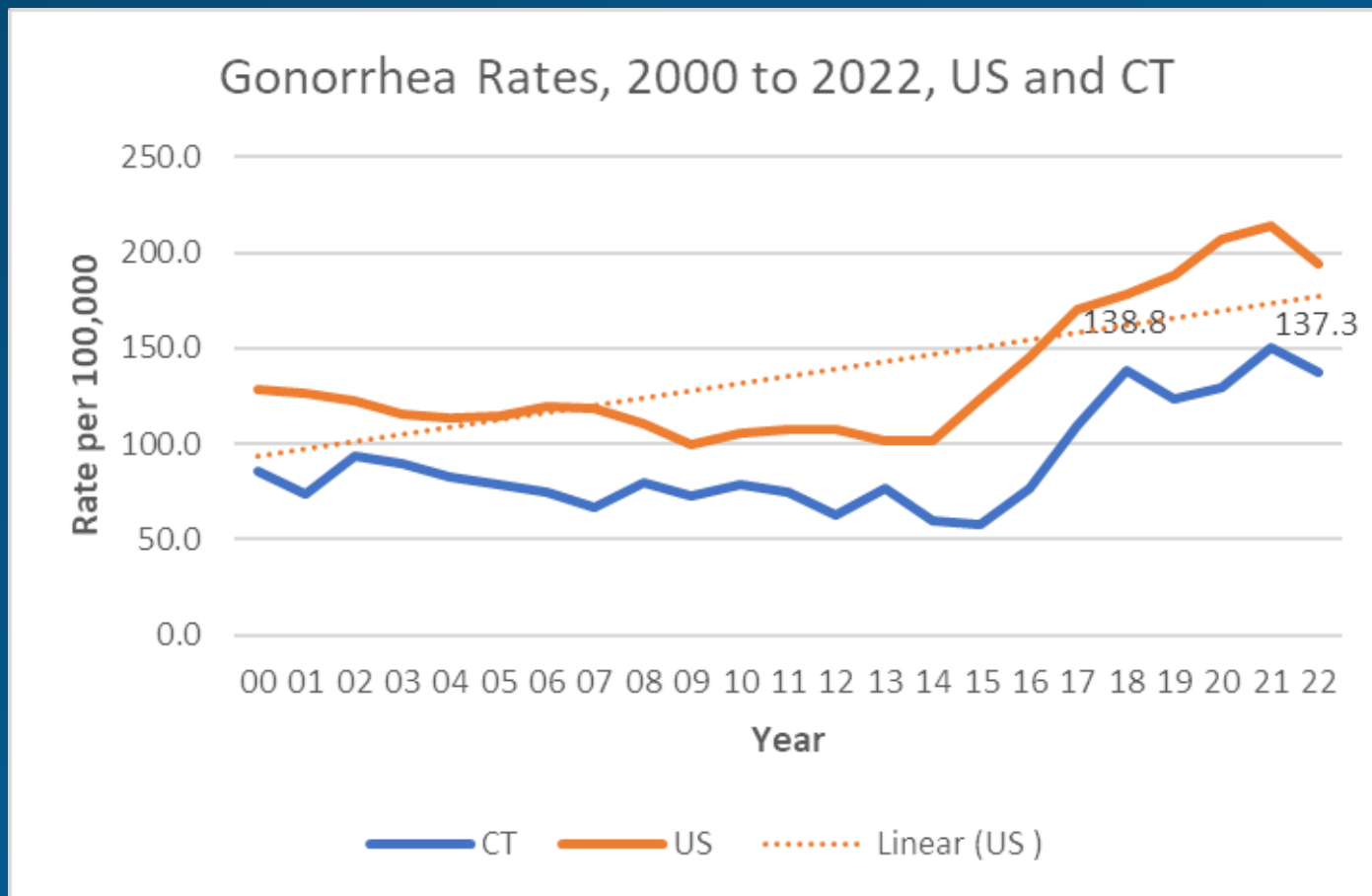
# Gonorrhea



# Gonorrhea – Reported Cases, Connecticut 2000 - 2022



# Gonorrhea



The rate of gonorrhea in Connecticut was lowest in the year 2015 at 58.1 per 100,000 population. Since then, it has gradually increased, with a decline observed during the COVID-019 pandemic.

Work is ongoing to update 2022 gonorrhea case counts.

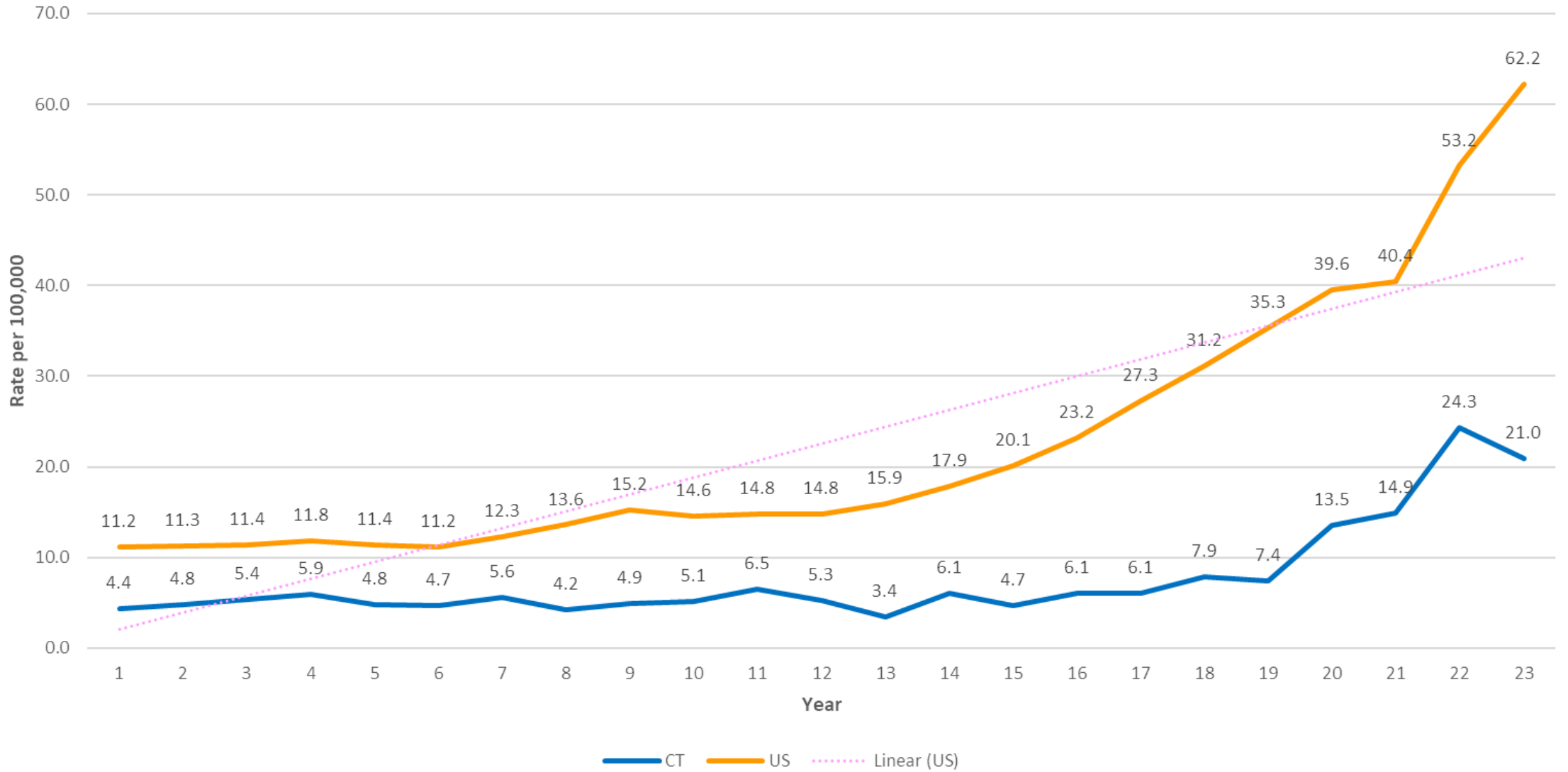
# Syphilis



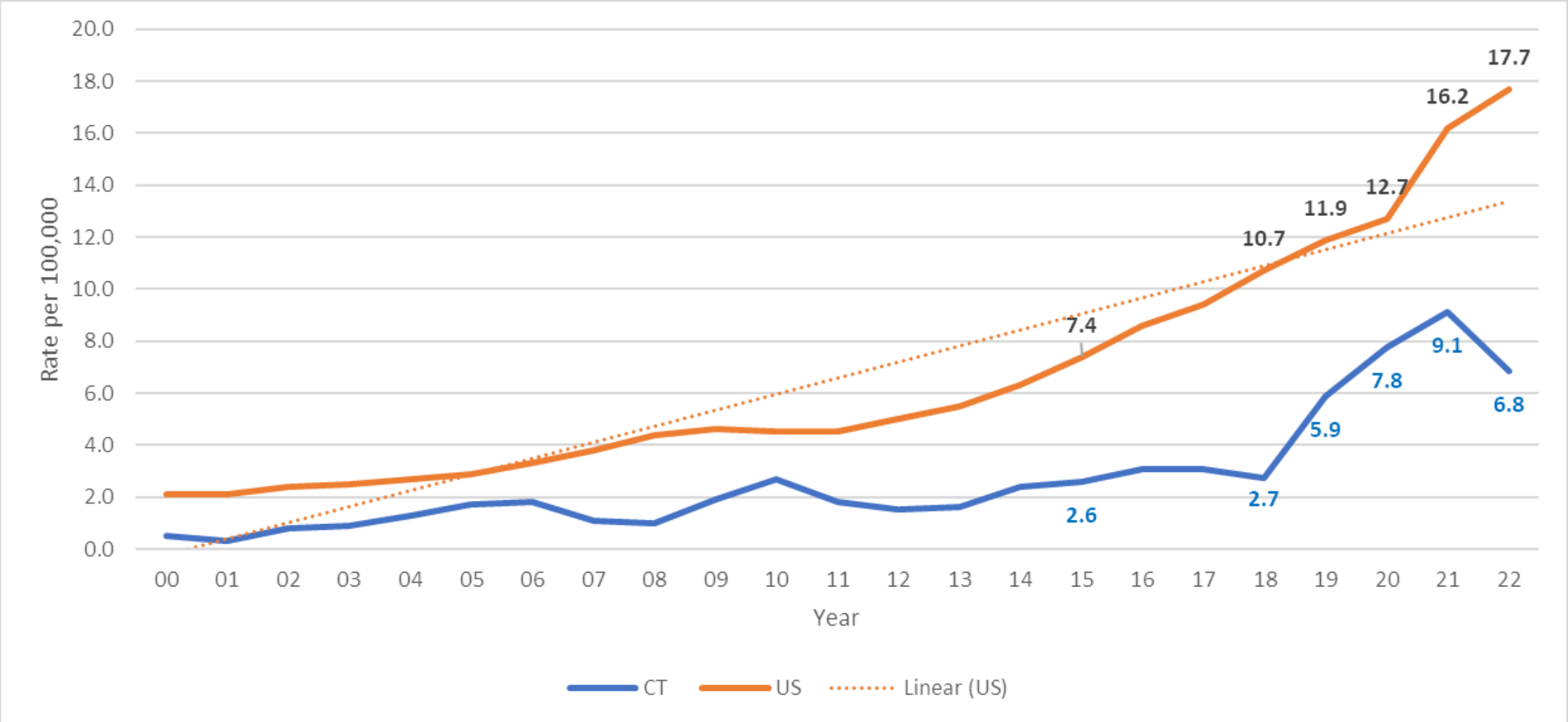




All Syphilis Rates, 2000 to 2022, US and CT



# Rates of P&S Syphilis, United States & Connecticut, 2000 - 2022



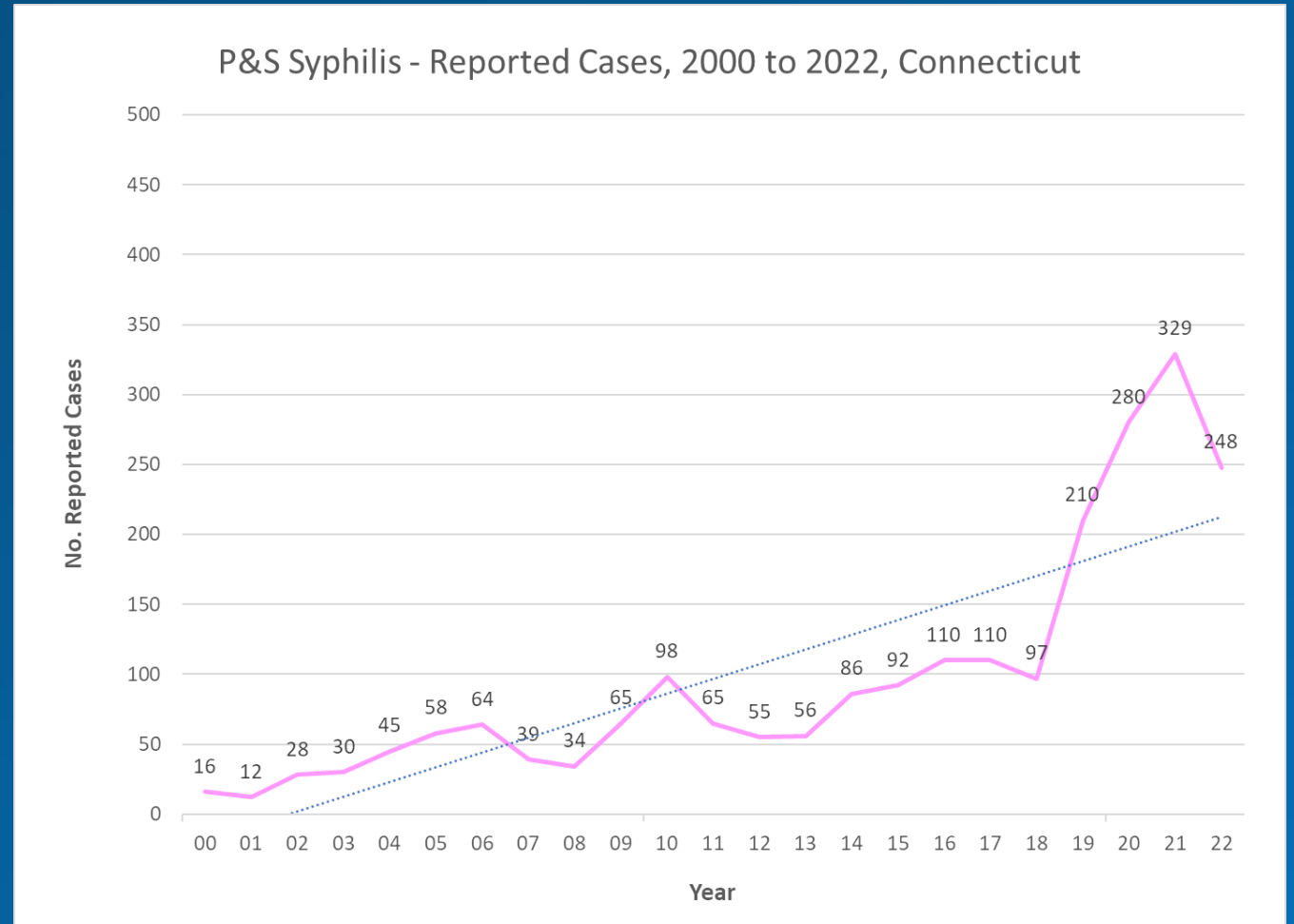


# Primary & Secondary Syphilis

Most P&S syphilis in Connecticut occurs among men with male sex partners.

Since 2018 in Connecticut, there has been an increase in P&S syphilis among women.

An undercount of 2022 cases due to errors in classification is under investigation.



# Congenital Syphilis

Syphilis is increasing among newborn babies in the U.S.

In 2022:



**3,755**

**CASES OF NEWBORN SYPHILIS**  
183% increase since 2018



**282**

**DEATHS AND STILLBIRTHS FROM SYPHILIS**  
194% increase since 2018

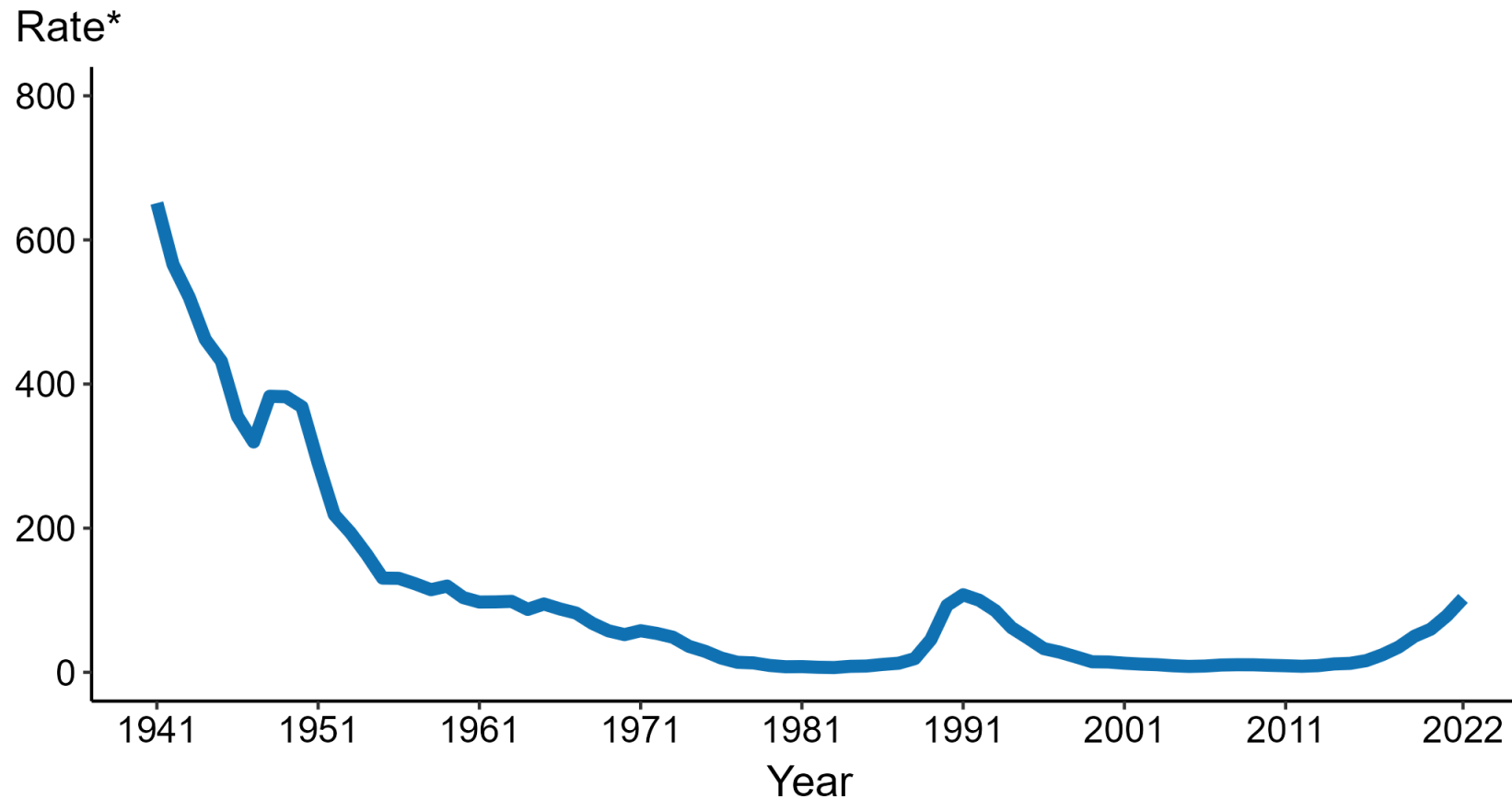


**48**

**JURISDICTIONS WITH AT LEAST ONE CASE**  
up from 42 in 2018

Every case is one too many when we have the tools to prevent it

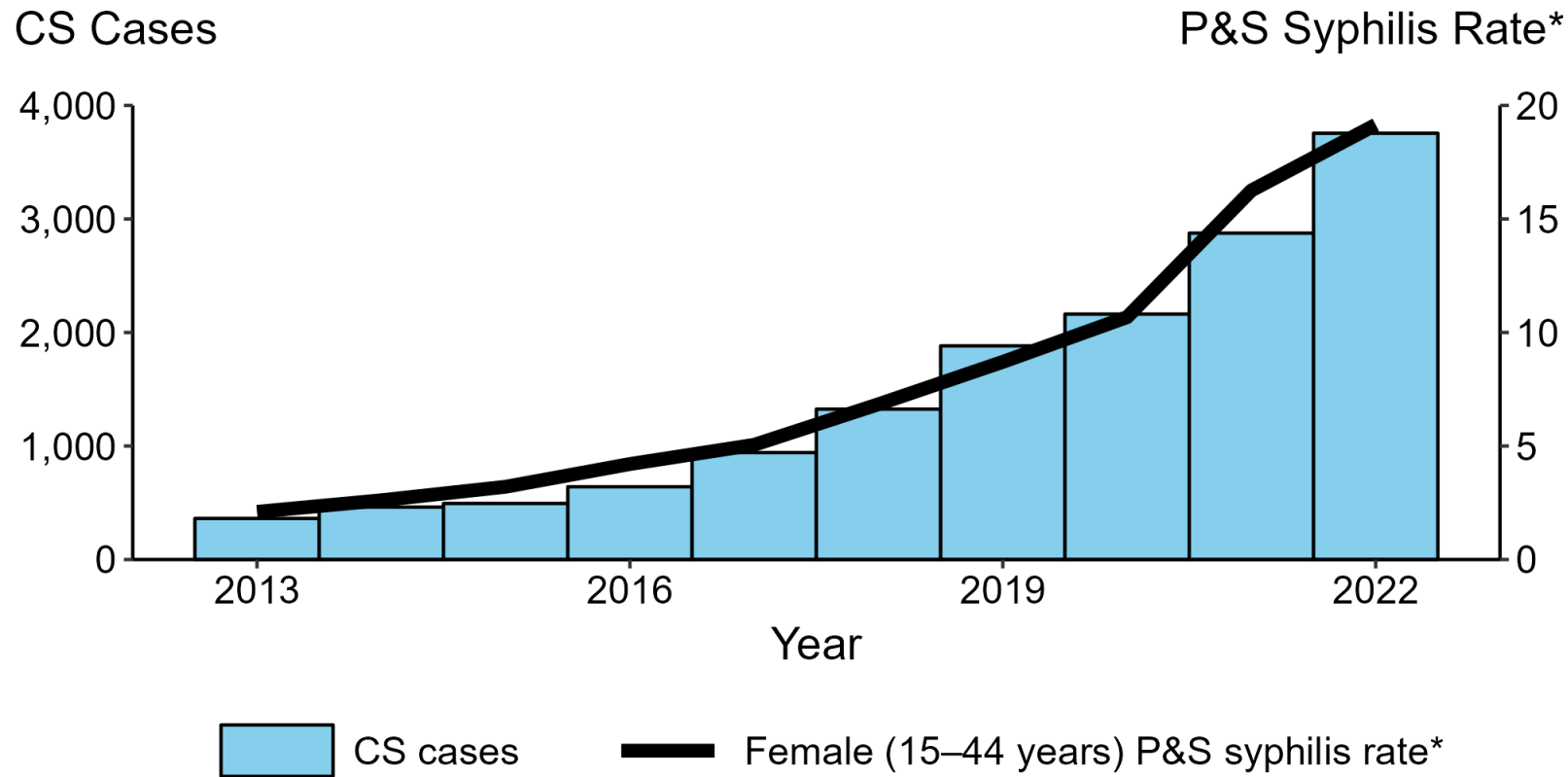
# Congenital Syphilis — Rates of Reported Cases by Year of Birth, United States, 1941–2022



\* Per 100,000 live births



# Congenital Syphilis — Reported Cases by Year of Birth and Rates of Reported Cases of Primary and Secondary Syphilis Among Women Aged 15–44 Years, United States, 2013–2022



\* Per 100,000

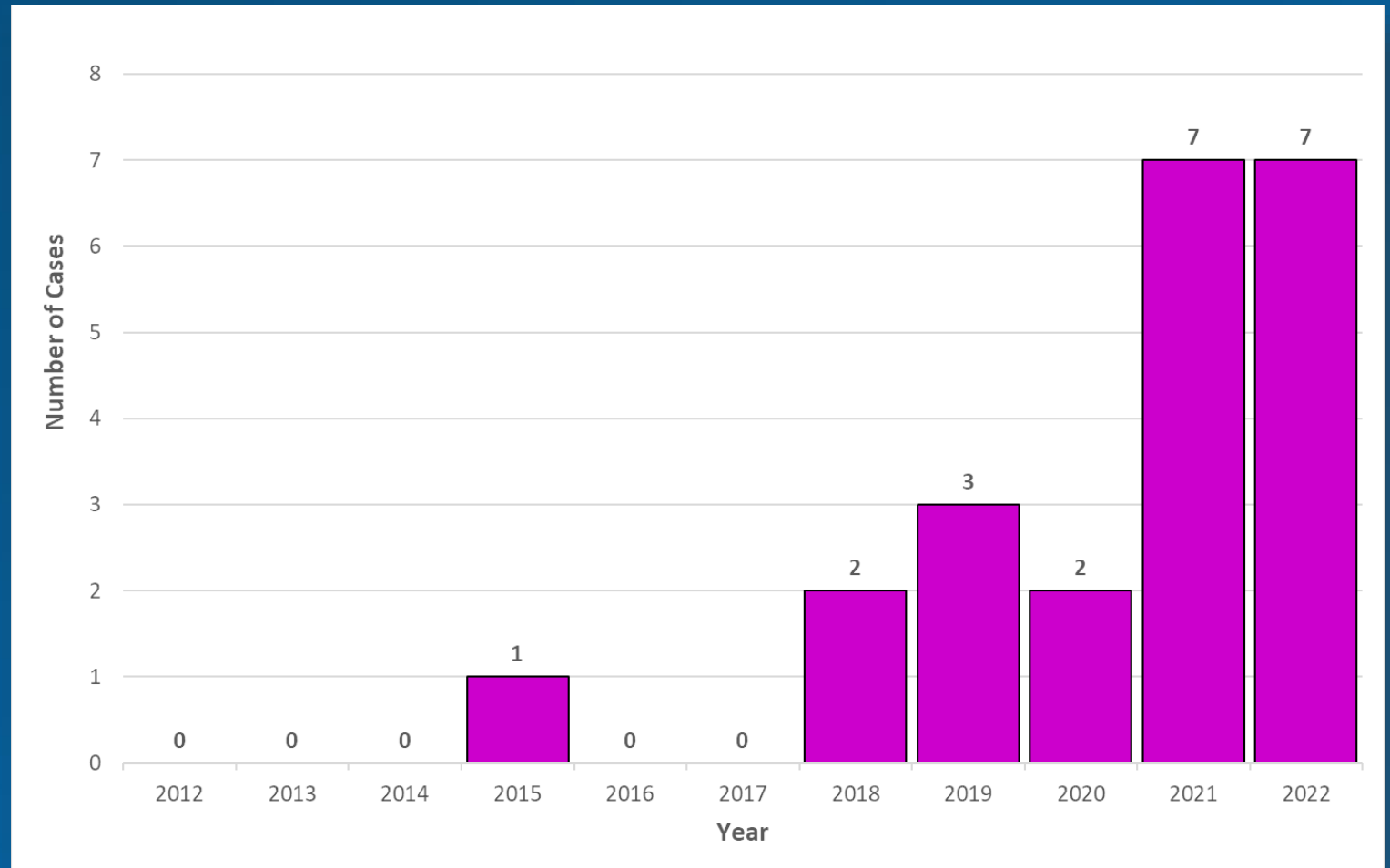
**ACRONYMS:** CS = Congenital syphilis; P&S Syphilis = Primary and secondary syphilis





# Congenital Syphilis – Reported Cases, Connecticut, 2012 - 2022

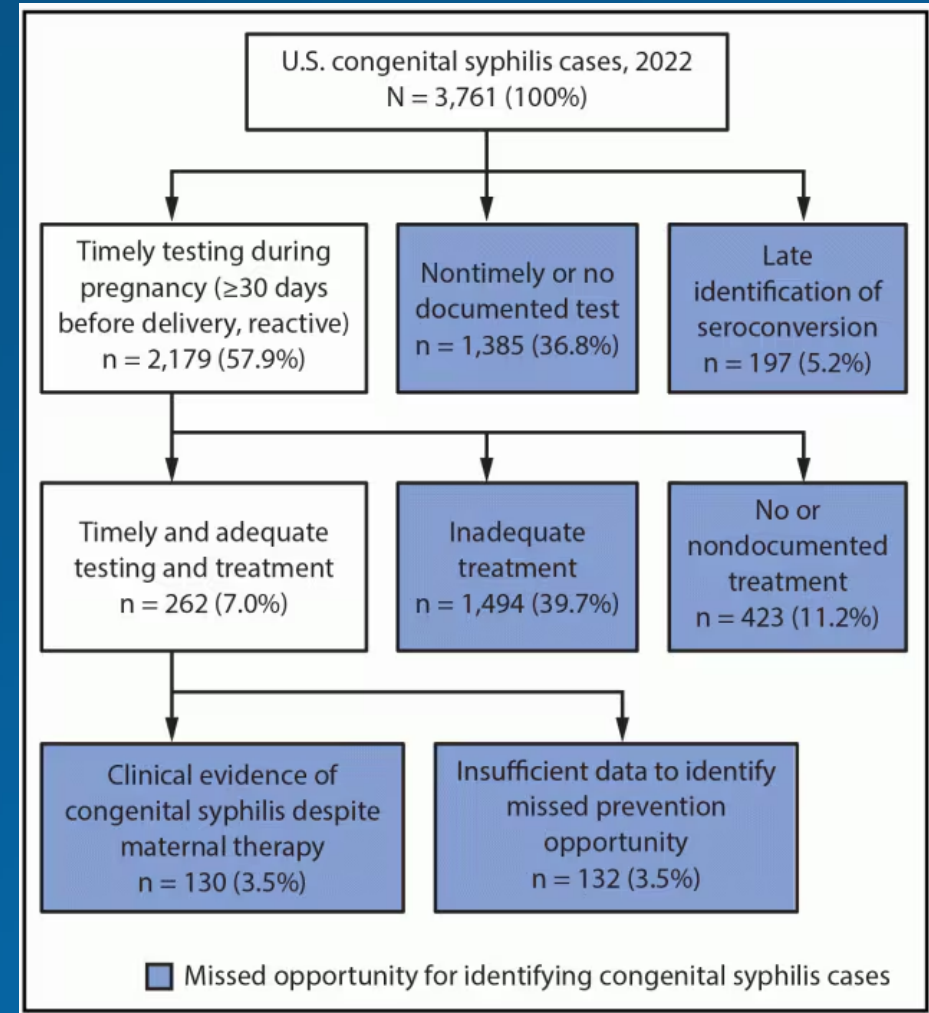
- Category 1 reportable since January 2023
- 600% increase in number of CS cases since 2015
- Active surveillance since April 2022
- Maternal risk factors:
  - Little or no prenatal care
  - Polysubstance use
  - Housing instability





# Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022

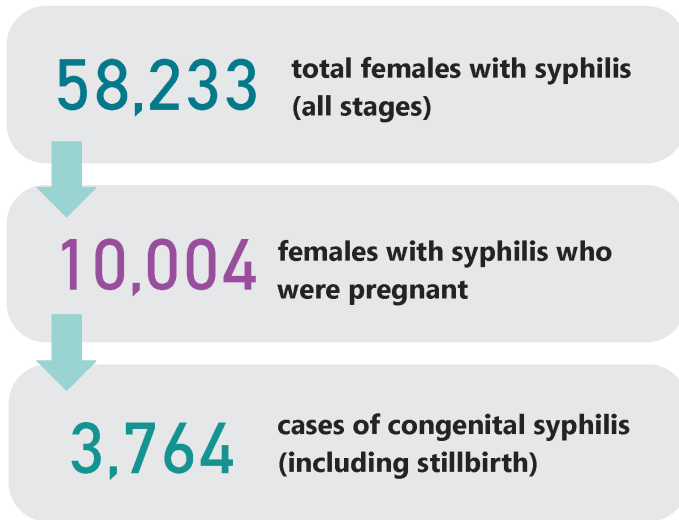
- Lack of timely testing and adequate treatment during pregnancy contributed to 88% of congenital syphilis cases in 2022 and represent missed opportunities to prevent maternal syphilis-associated morbidity.
- Among the 1,385 cases of congenital syphilis for which no test/non-timely test was recorded, no prenatal care was documented for 969 (70.0%)



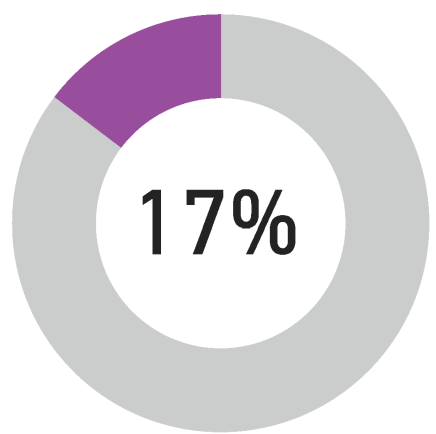
Citation: McDonald R, O’Callaghan K, Torrone E, et al. Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022. MMWR Morb Mortal Wkly Rep 2023;72:1269–1274.



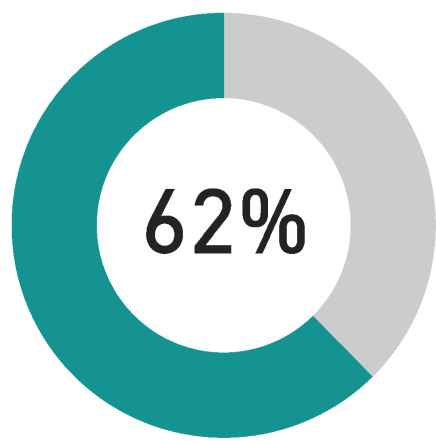
# Although congenital syphilis cases continue to rise, **62% of potential congenital syphilis cases were averted** in 2022.



Females with syphilis who were pregnant



Potential congenital syphilis cases averted



Summary (N=59)	Minimum	Mean	Maximum
Percent of potential congenital syphilis cases averted	25%	67%	100%
Number of pregnant females with syphilis reported	4	176	1,707
Number of congenital syphilis cases reported	0	66	922

### KEY TAKEAWAYS

- Since the start of the Cooperative Agreement in 2019, the number of females with syphilis who were pregnant as well as the number of congenital syphilis cases have been increasing each year.
- Among potential congenital syphilis cases, the **percent** cases averted **decreased** from 64% in 2021 to 62% in 2022, while the total absolute **number** of cases averted **increased** (4,785 to 6,240 cases).
- The percent of females with syphilis who were pregnant was 17% in both 2021 and 2022.
- The burden of congenital syphilis varies greatly across recipients, with the total number of cases ranging from 0 to 922 in 2022.

### PUBLIC HEALTH IMPLICATIONS

- Timely and adequate treatment of females with syphilis can help avert potential congenital syphilis cases.

### CONSIDERATIONS FOR ACTION

- Continue to prioritize active follow-up of pregnant females with syphilis.
- Ensure partner interviews and referrals are made to partner services as appropriate.
- Screenings should occur at first prenatal visit, at 28-week, and at delivery for syphilis. Screen according to CDC guidelines.
- Conduct periodic reviews of the causes of congenital syphilis cases to identify gaps.

**Note:** Vermont and US Virgin Islands are excluded from the visuals in this report because they reported zero or one pregnant female with syphilis.

# Congenital Syphilis in Connecticut

## *Challenges to prevention & early detection, 2021 & 2022*

- Lack of provider familiarity with ordering diagnostic versus monitoring tests
- Delayed report of significant laboratory results to ordering provider or DPH
- Failure to report to DPH by:
  - Birthing hospital or NICU provider
  - Infection Control Practitioners
  - Maternal Fetal Medicine specialists
  - Department of Corrections

# Congenital Syphilis Prevention

## *Connecticut, 2022*

- Potential CS cases averted: Events among pregnant persons which did not result in CS due to either

No congenital syphilis case (live or stillbirth) linked to a pregnant person within nine months of the person's confirmed syphilis test result

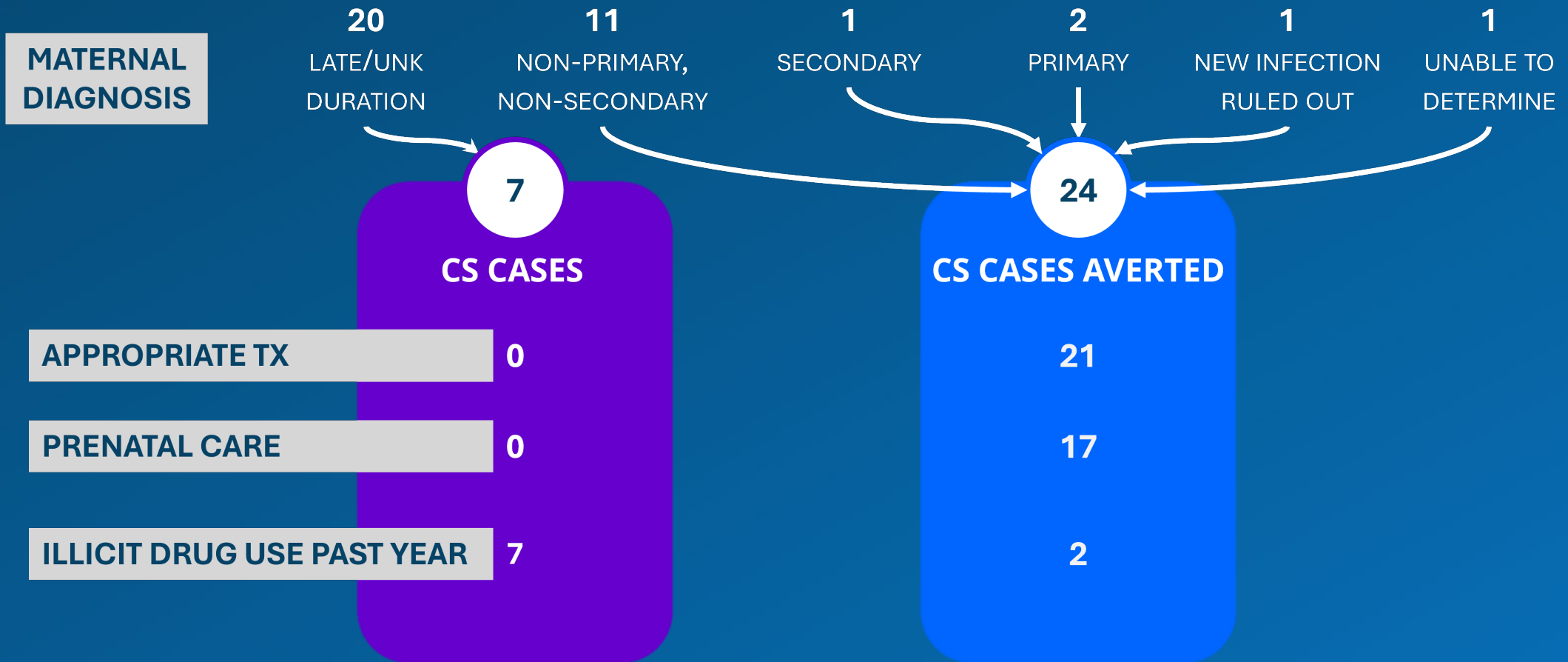
OR

Adequate treatment (tx) of pregnant person >30 days before delivery and no signs of CS in newborn

Adequate tx is treatment in accordance with current CDC STI treatment guidelines (e.g., treatment of late latent/unknown duration syphilis in a pregnant person with Benzathine penicillin G 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 7-day intervals

# POTENTIAL CONGENITAL SYPHILIS CASES AVERTED IN CONNECTICUT, 2022

34 PREGNANT FEMALES



# Connecticut STI Data Summary, 2018 - 2022

## Chlamydia

- Highest prevalence in persons aged 15 – 24 years old
- More cases reported in females than males

## Gonorrhea

- Highest prevalence in persons aged 15 – 24 years old

## Syphilis

- Increasing prevalence in females of reproductive age

## Congenital Syphilis

- Associated with no prenatal care, polysubstance use, and incomplete/no treatment



Environment



Pathogen



*Disease*



Host



**Thank You**

STD Control Program  
(860) 509-7920