

A Local Health Department’s Approach to Addressing a Rise in Congenital Syphilis in Northeast Ohio

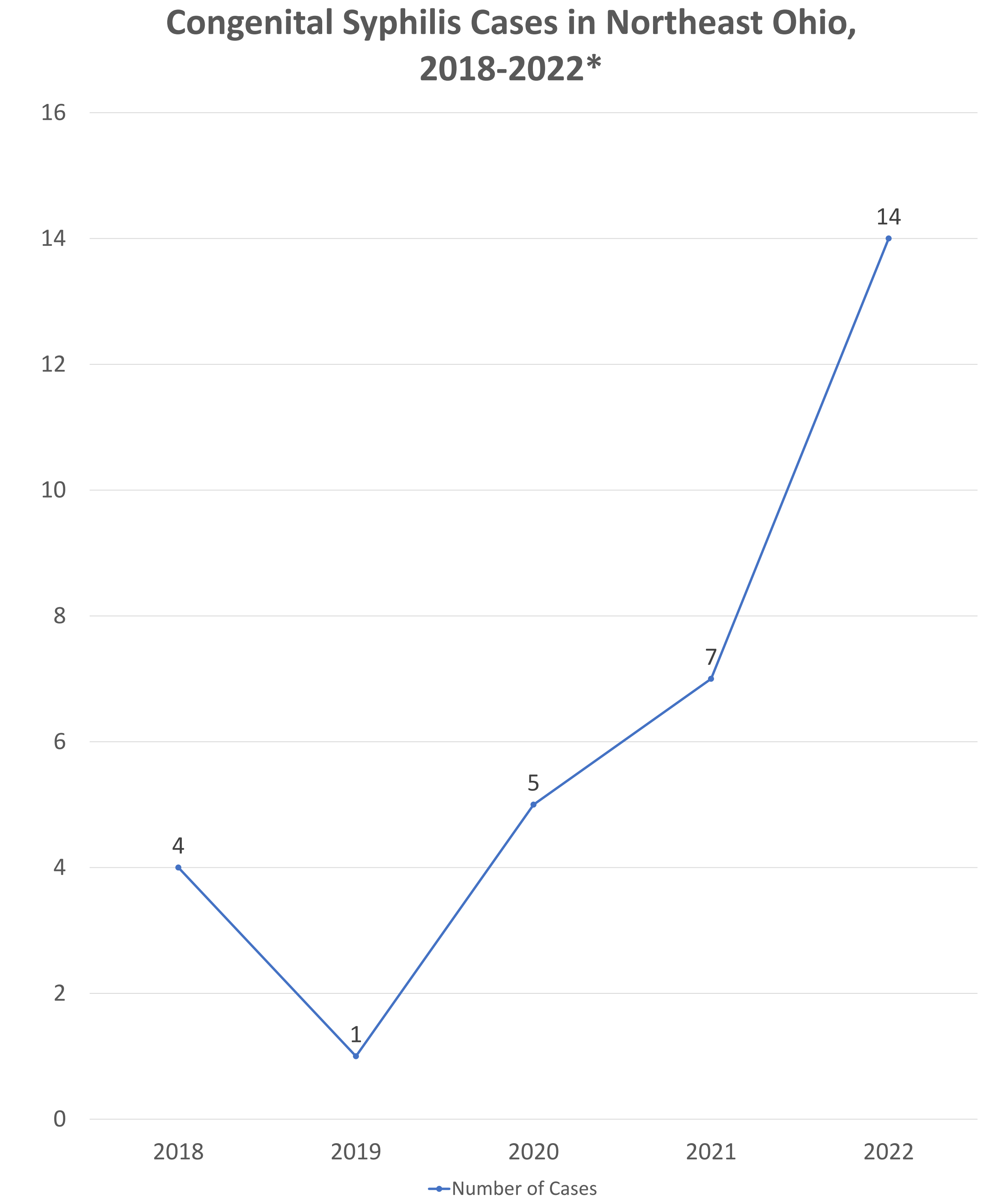
Alisha Cassady, MPH¹, Vinothini Panakkal¹
¹Cuyahoga County Board of Health, Parma, OH

Problem Statement

Northeast (NE) Ohio, including Cuyahoga County, has seen a sharp increase in congenital syphilis (CS) cases in the last several years. CS can cause numerous side effects on the mother and baby, including miscarriage, stillbirth, deformed bones, and brain/nerve abnormalities. Cuyahoga County Board of Health (CCBH) aims to reduce CS incidence in the region by analyzing data to evaluate measures that have been implemented to reduce the burden of disease.

Methods

- Five-year retrospective review of all CS cases in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina counties in NE Ohio from 2018-2022.
- Demographic information obtained from Ohio Disease Reporting System (ODRS) on infants and mothers.
- Univariate and multivariate analysis on incidence data.
- Measures evaluated for effectiveness in reducing CS burden.



Intervention Strategies, such as gas cards to assist with transportation to care appointments, in-person field interviews, and a Congenital Syphilis Review Board, raise awareness and help to reduce the incidence of Congenital Syphilis in NE Ohio.

Data

- Cases of CS doubled from 2021 to 2022.
- Total of **31** CS cases in the last 5 years, with 68% occurring in the last 2 years.
- Two syphilitic stillbirths**, with both occurring in the last two years (2021 & 2022)

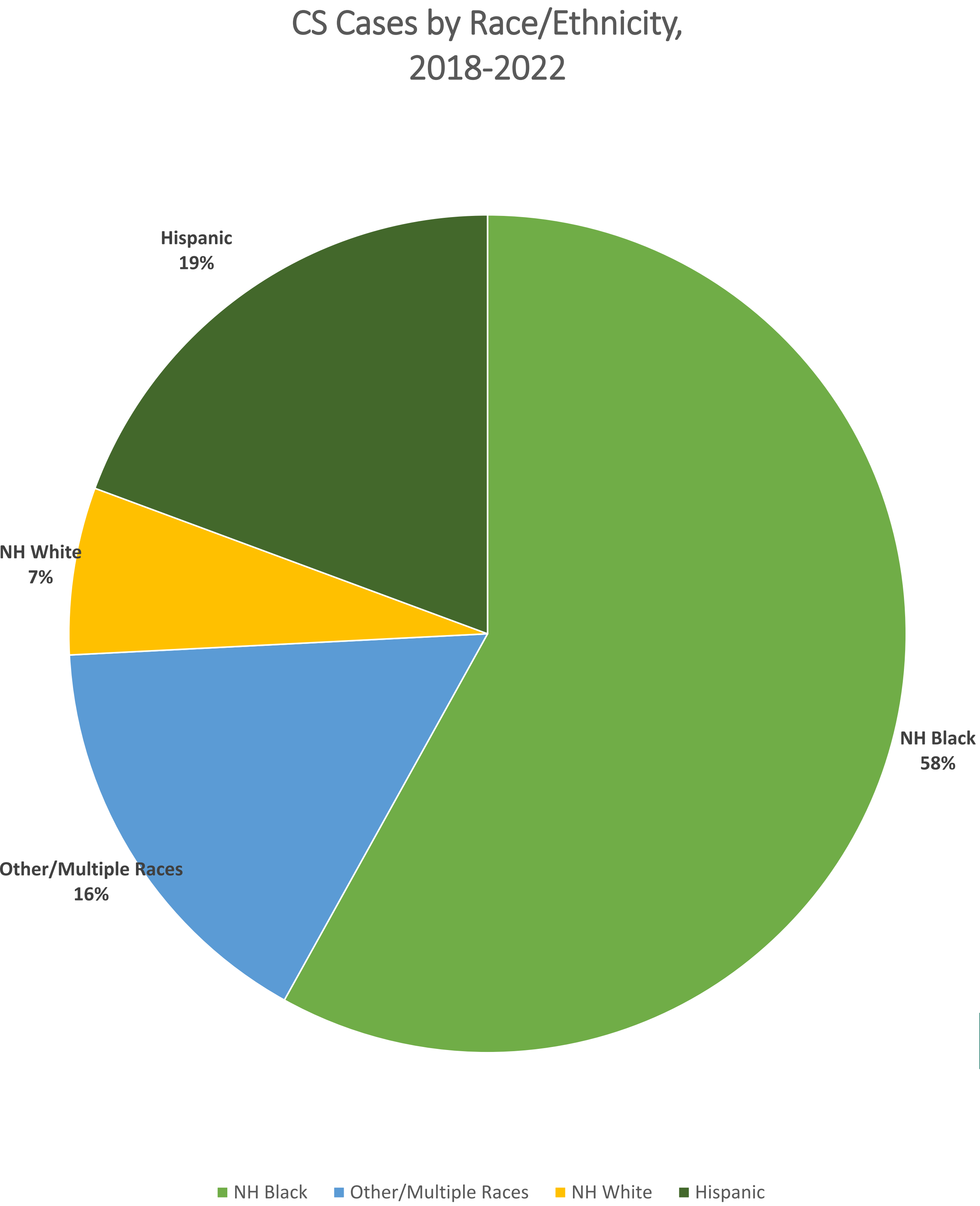


Table 1. Characteristics of Mothers and Infants

	N(%) (N=31)
Infant Demographics	
Sex – Female	16 (52%)
Race – Non-Hispanic Black	18 (58%)
Deceased	2 (7%)
Maternal Demographics	
Prenatal Care	22 (71%)
Visit for Prenatal Care in First Trimester	15 (48%)
Syphilis Testing at 28-32 weeks gestation - No	18 (58%)
Syphilis Diagnosis – At time of delivery	13 (42%)
Evidence of Substance Abuse	4 (13%)
Age Group – 20-24 years	13 (42%)
Syphilis Treatment Before Birth – No	15 (48%)

Females of Child-Bearing Age in Cuyahoga County, Ohio

- In 2022, **168** females between 15-44 years old with syphilis.
- 47%** had a history of another **sexually transmitted infection (STI)**.
- 50%** of female syphilis cases of child-bearing age reported **only sometimes or never using condoms for vaginal sex**.
- Females of child-bearing age comprised **20%** of all syphilis cases in Cuyahoga County in 2022.

Strategies to Reduce CS Burden

- In-person field interviews:** Disease Intervention Specialists (DIS) visit syphilis positive persons in-person to obtain partner information and educate the mother about syphilis and safer sex practices.
- Transportation Assistance:** Gas cards are provided by DIS to pregnant persons to support them getting to and from prenatal and infectious disease appointments.
- Care Provider Education:** DIS aim to ensure all infectious disease and prenatal care providers have the most up-to-date syphilis treatment guidelines from the CDC for females of child-bearing age. DIS will also provide educational sessions for care providers to communicate updates, if needed.
- Increase in testing:** Currently, Ohio law only requires syphilis screening at the first prenatal care visit for a pregnant person. DIS and physicians are advocating for an increase in testing throughout the course of pregnancy.
- CS Review Board:** Care providers for syphilis and prenatal care convene quarterly to discuss current CS cases and pregnant persons, determine missed opportunities for treatment and testing, and discuss any updates to treatment recommendations.

Evaluation

- In-person field interviews most effective** in reducing burden and treating pregnant persons.
- Increase in testing**, especially in the 3rd trimester, has led to discovery of syphilis cases earlier when treatment is most effective.
- CS Review Board** increases care provider compliance with testing and treatment.
- Future utilization of **Partner Services and social media** for outreach to partners of syphilis cases.
- Current bicillin shortage** – only treatment approved for pregnant persons. Potential for increase in CS incidence.

Recommendations

- All pregnant persons should be screened for syphilis at their first prenatal visit. 28-weeks gestation prenatal visit, during the 3rd trimester, and at the time of delivery.
- Syphilis testing should occur at the time of pregnancy testing.
- HIV and syphilis testing should occur for any pregnant person presenting to an urgent care or emergency room for any reason.