

Identifying Promising Practices for Congenital Syphilis Prevention Project

NACCHOSM

National Association of County & City Health Officials



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Background

Since 2013, congenital syphilis cases have steadily increased each year.¹ According to 2021 data from the Centers for Disease Control and Prevention, a total of 2,855 cases of congenital syphilis were reported, including 220 congenital syphilis-related stillbirths and infant deaths.¹ It is expected that these cases will continue to rise across the country if effective prevention and detection measures are not implemented.

According to the *2021 Sexually Transmitted Infections Treatment Guidelines*², effective prevention and detection measures place an emphasis on screening during the first prenatal visit, at 28 weeks gestation, and during delivery for pregnant people who reside in communities with high rates of syphilis, living with HIV, or at an elevated risk for contracting syphilis.² Local health departments play a critical role in the prevention, detection, and treatment of congenital syphilis, but these efforts require innovative and unique interventions to address the disease.

Project Overview

Traditionally, prevention and control efforts for congenital syphilis have included screening/testing, treating, providing wraparound services to pregnant people with syphilis as well as their partners, and policy changes to strengthen those efforts. While these efforts have been impactful, there is a demonstrated need for additional interventions to be implemented at the state and local level as the numbers of congenital syphilis cases have continued to increase.

The "*Identifying Promising Practices for Congenital Syphilis Prevention*" project provided funding to local health departments (LHDs) across the country to implement and evaluate new interventions to address rising congenital syphilis cases. Specifically, this funding was designed to support the implementation and evaluation of interventions that focused on one or more of the following areas of congenital syphilis prevention:

- Improving support for pregnant people with syphilis
- Improving support for pregnant people without syphilis
- Improving support for individuals with syphilis who could become pregnant but who are not currently pregnant

The first year of the project funded six jurisdictions (cohort 1) and additional funding was added to support two more jurisdictions in the second year (cohort 2). The LHDs represented in both cohorts included:

Cohort 1

- Georgia: Gwinnett, Newton, and Rockdale County Health Department (GNR)
- Arizona: Maricopa County Department of Public Health (MCDPH)
- Florida: Department of Health in Miami-Dade County (DOH-Miami Dade)
- New York City: Department of Health and Mental Hygiene (NYCDOHMH)
- Texas: San Antonio Metropolitan Health District (SAMHD)
- California: Tulare County Health and Human Services Agency (TCHSA) Public Health Department

Cohort 2

- Florida: Department of Health at Duval County (DOH-Duval)
- Texas: Tarrant County Public Health (TCPH)

This report focuses on best practices and lessons learned from all LHDs represented under Cohort 1, as well as Tarrant County Public Health represented under Cohort 2.* These lessons learned were gathered from each LHDs' interim and final reports, which included the evaluation of their interventions. The project period was mid-2020 through mid-2022 and the evaluations were led by each site.

It is important to acknowledge that there were significant limitations with the project due to the COVID-19 pandemic. The pandemic impacted staff's ability to implement and offer sexual health services at their local health departments, as well as report on the project activities, and contributed to extensive staff burnout and turnover. This is evident throughout this report as there are limited details for some of the sites.

Proposed Project Designs

Below is a description of each site's proposed innovation or improvement, the target population, and target location(s), as well as the site's evaluation design and data collection methods.

Georgia: Gwinnett, Newton, and Rockdale (GNR) County Health Departments

The site proposed that the program, the Pregnancy Panel, would be implemented and further improved for disease detection aimed at improving disease surveillance, ensuring early diagnosis and thorough treatment, and provision of holistic care for patients. Through this model, all women that requested a pregnancy test at the health department's clinic would also be tested for STIs, including HIV, syphilis, gonorrhea, and chlamydia. In addition to testing, each patient would also be provided access to a case management team that delivered STI education and ensured that patients understood the importance of regular testing. Patients would also be linked to prenatal providers throughout the community, as well as to various health department programs. In essence, under the Pregnancy Panel program, patients would be provided with ongoing support and connection to various resources and services to improve STI and pregnancy outcomes for the population served.

The evaluation goals and objectives included:

Goal 1: To determine the impact of COVID-19 on health department STI service provision and uptake.

- **Objective 1:** To measure the extent of staff turnover, including the timeliness required to rebuild sufficient pre-COVID capacity.
- **Objective 2:** To assess patient willingness to seek STI services, including examining barriers to testing uptake.

*Florida Department of Health at Duval County was unable to complete the study due to staff turnover.

Goal 2: To determine the effectiveness of the Pregnancy Panel in identifying syphilis and HIV among pregnant persons.

- **Objective 1:** To measure the number of pregnant persons newly identified with syphilis.
- **Objective 2:** To measure the number of pregnant persons newly identified with HIV.

Goal 3: To assess the effectiveness of Pregnancy Panel case management in connecting pregnant persons with STIs to wrap-around services.

- **Objective 1:** To measure what proportion of pregnant persons are receiving appropriate first and third trimester testing and treatment for syphilis and HIV.
- **Objective 2:** To determine what other health department support services are successfully utilized by pregnant persons.

The evaluation design in Appendix 1 included a set of questions to guide the evaluation, including associated indicators, data sources, and data analysis techniques (e.g., frequencies, counts, thematic). The evaluation questions also reflected process and outcomes measures. In addition to the evaluation goals and design, the site designed a logic model (Appendix 2) which included the project's resources, activities, outputs, and outcomes.

Arizona: Maricopa County Department of Public Health (MCDPH)

MCDPH proposed a program to directly partner with CAN Community Health by providing point-of care (POC) syphilis testing and treatment supplies via a mobile clinic and street outreach. Utilizing CAN's pre-existing healthcare model to integrate syphilis testing, rapid diagnosis, and treatment for women of childbearing age, MCDPH built an impactful community partnership to increase accessibility to syphilis testing and to prevent congenital syphilis (CS). The focus was to perform testing and screening on individuals ages 18-to-50 with no previous history of syphilis and this determined their eligibility for point-of-care syphilis testing.

This site had several evaluation goals, questions, and indicators which included the following:

Goal 1: To determine the feasibility of the program

- **Question 1:** Were the CAN provider and key stakeholders satisfied with their feedback on the implementation of the program?
 - **Indicator:** Percent of key staff satisfied with their feedback on program implementation.
- **Question 2:** Clients identified through CAN that had a history of syphilis had to have blood drawn for further RPR testing at MCDPH. How do program outcomes and patient characteristics differ between those CAN tested and treated in the field and those referred to Maricopa County?
 - **Indicator:** Number/percentage and characteristics of participants tested and treated in the field.

Goal 2: To determine if program goals were met:

- **Question 1:** To what extent was Maricopa able to reach those who are pregnant and those who may become pregnant? *Note: "Maricopa" refers to those tested by CAN and referred to Maricopa.*
 - **Indicator:** Number of women who identify as pregnant and those who indicate they may become pregnant in the future

- **Question 2:** To what extent were the participants willing to get tested for syphilis?
 - **Indicator 1:** Number of total participants who accessed the program.
 - **Indicator 2:** Number of syphilis tests completed.
 - **Question 3:** To what extent were the participants willing to receive treatment for syphilis?
 - **Indicator:** Number of people that received treatment in the field.
 - **Question 4:** To what extent did participants return to complete recommended treatment series/doses?
 - **Indicator 1:** Number of people that required additional treatment.
 - **Indicator 2:** Number of people who are willing to return for additional recommended treatment.
 - **Question 5:** To what extent did participants agree to pregnancy testing in the field?
 - **Indicator 1:** Number of pregnancy tests completed.
 - **Indicator 2:** Number of people who wanted to be linked to prenatal care
- Goal 3: To determine barriers and facilitators that affected successful program implementation:**
- **Question 1:** What were the challenges to program implementation?
 - **Question 2:** What were the barriers to participation?
 - **Question 3:** What enhanced participation or assisted in overcoming barriers?

Appendix 3 and 4 contain site evaluation framework and logic model. Appendix 3 includes additional information regarding the site's evaluation, including indicators/measures, and data collection methods/sources. In addition to the evaluation goals and design, the site designed a logic model (Appendix 4) which included the project's resources, activities, outputs, and outcomes.

Florida: Department of Health in Duval County (DOH-Duval)

Duval County's proposed innovation was designed to include syphilis and pregnancy screening in non-STD care and clinical settings. Specifically, the site planned to enhance family planning services and conduct the screenings at a substance use treatment center that recently formed a partnership with the county. Duval County also provided HIV education, testing, and treatment to clients, as well as partner services, case management, and linkage to prenatal care.

This site had several evaluation goals and objectives which included the following:

Goal 1: Demonstrate that providing syphilis and pregnancy screening to women of child-bearing age (WCBA) at a community-based recovery center aids in the identification of syphilis, HIV, and other STDs.

- a. Objective 1.1: By June 30, 2022, sexual health education will be provided to 250 number of WCBA at Gateway Community Services (Baseline = 0).
- b. Objective 1.2: By June 30, 2022, 250 WCBA at Gateway Community Services will be screened for syphilis (Baseline = 0)
- c. Objective 1.3: By June 30, 2022, 250 WCBA at Gateway Community Services will be screened for gonorrhea and chlamydia (Baseline = 0).
- d. Objective 1.4: By June 30, 2022, 250 WCBA at Gateway Community Services will be screened for HIV (Baseline = 0).

Goal 2: Demonstrate that WCBA at a community-based recovery center are successfully linked to prenatal care and HIV/STD treatment services.

- a. Objective 2.1: By June 30, 2022, 100% of women that screen positive for pregnancy will be referred and linked to prenatal care.
- b. Objective 2.2: By June 30, 2022, 90% of WCBA at Gateway Community Services that screen positive for syphilis will receive treatment within 14 days
- c. Objective 2.3: By June 30, 2022, 90% of WCBA at Gateway Community Services that screen positive for gonorrhea and/or chlamydia will receive treatment within 14 days.
- d. Objective 2.4: By June 30, 2022, 90% of WCBA at Gateway Community Services that screen positive for HIV will be referred and linked to treatment and care within 14 days.

Goal 3: Demonstrate that providing DIS services to WCBA at a community-based recovery center ensures that sexual partners are tested and treated.

- a. Objective 3.1: By June 30, 2022, 100% of partners will be treated for syphilis and/or other STDs.

Goal 4: Develop an understanding of 1) how the program helps prevent cases of congenital syphilis, 2) barriers and facilitators to implementation, and 3) opportunities for program improvement.

- a. Objective 4.1: By December 31, 2021, at least 95% will report satisfaction with the services received.
- b. Objective 4.2: By December 31, 2021, an understanding will be gained about 1) how the program aids in the prevention of congenital syphilis, 2) barriers to program implementation, and 3) opportunities for program improvement.

The evaluation design consisted of collecting a combination of qualitative and quantitative data similar to other sites in this report. Additional information regarding the site's evaluation, including indicators/measures, and data collection methods/sources can be found in Appendix 13. A logic model (Appendix 14) was designed and included inputs, activities, outputs, and outcomes.

Florida: Department of Health in Miami-Dade County (DOH-Miami Dade)

This site decided to enhance an already existing routine HIV/hepatitis C virus (HCV) "opt-out" screening infrastructure at Jackson Main Emergency Department (JMH) to include a Syphilis Smart Screening Algorithm. The target population included individuals at high risk of congenital syphilis (pregnant individuals, individuals that presented with syphilitic symptoms, and individuals with a history of STIs found in Cerner Medical Records).

The site had several process and outcome evaluation goals including:

Process Evaluation Goals

Goal 1: To identify components of the project implementation that are sufficient and components that need improvement:

- a. **Objective 1:** Identify what went well and areas for improvement for JMH implementation of the smart screening system with JMH Information Technology (IT) team
- b. **Objective 2:** Identify what went well and areas for improvement for JMH implementation for emergency department (ED) staff
- c. **Objective 3:** Identify what went well and areas for improvement for Florida DOH staff/ DIS

Goal 2: To analyze and remove unintended risks and barriers and methods for removal or diminishment:

- a. **Objective 1:** Identify risks/ barriers and opportunities for removal for JMH IT
- b. **Objective 2:** Identify risks/ barriers and opportunities for removal for JMH ED
- c. **Objective 3:** Identify risks/ barriers and opportunities for removal for Florida DOH

Goal 3: To assure that all parties involved receive adequate resources and support to implement the program successfully:

- a. **Objective 1:** Identify resources used/still needed and adequacy of support from Florida DOH needed for JMH IT
- b. **Objective 2:** Identify resources used/still needed and adequacy of support from Florida DOH needed for JMH ED
- c. **Objective 3:** Identify resources used/still needed and adequacy of support from Florida DOH needed for other Florida DOH staff

Goal 4: To assess if this program is reaching the women it intended to reach:

- a. **Objective 1:** Assess the demographics of the women being reached by zip code, race, ethnicity, and age
- b. **Objective 2:** Analyze demographics of women being reached compared to the demographics of past congenital syphilis cases.

Goal 5: To determine satisfaction among those women that receive services and identify processes for improving the patient experience:

- a. **Objective 1:** Collect information on patient satisfaction with testing, treatment, partner services and referrals

Outcome Evaluation Goals

Goal 1: To increase syphilis testing rates at Jackson Memorial Hospital (JMH) among pregnant women and high-risk women of reproductive age:

- a. **Objective 1:** Increase syphilis screening for pregnant women through JMH
- b. **Objective 2:** Increase syphilis screening for women with symptoms through JMH
- c. **Objective 3:** Increase syphilis screening for women with past STD history through JMH

Goal 2: To improve the treatment rates for syphilis for pregnant women and women of reproductive age

- a. **Objective 1:** Improve treatment rates for pregnant women screened at JMH
- b. **Objective 2:** Improve treatment rates for high-risk women screened at JMH

Goal 3: To provide partner services to an increased number of pregnant women and high-risk women of reproductive age:

- a. **Objective 1:** Provide partner services for pregnant women screened at JMH
- b. **Objective 2:** Provide partner services for high-risk women screened at JMH
- c. **Objective 3:** Increase partner screening and treatment

Goal 4: To refer an increased number of pregnant women to prenatal care and other needed services:

- a. **Objective 1:** Increase number of prenatal care referrals
- b. **Objective 2:** Increase number of family planning referrals
- c. **Objective 3:** Increase number of other referrals as needed

Goal 5: To Identify and avert congenital syphilis cases:

- a. **Objective 1:** Assess number of cases discovered by this program that could have potentially led to congenital syphilis
- b. **Objective 2:** Assess how many of those cases were prevented by this program

The site's evaluation design consisted of a mixed-method methodology to include quantitative and qualitative data collection and analysis. Appendix 5 includes additional information regarding the site's evaluation, including indicators/measures, and data collection methods/sources for both the process and outcome evaluation goals.

New York City: Department of Health and Mental Hygiene (NYCDOHMH)

NYCDOHMH's innovation included piloting and evaluating a Congenital Syphilis Prevention Investigator (CPI) Model to designate one CPI per region, for a total of eight across NYC to improve disease investigation and intervention outcomes. It was proposed that each of the eight specialized CPIs would be assigned to all syphilis investigations among persons who were or could become pregnant. To support the implementation of this model, DIS would also be engaged throughout implementation and able to provide input/feedback on the design of interview guides, referral protocols, and other program materials.

This site had several evaluation goals and objectives including:

Goal 1: To measure the Bureau of Sexually Transmitted Infections (BSTI) staff perceptions of the appropriateness, acceptability, and feasibility of the CPI model

- a. **Objective 1:** Characterize BSTI staffs' perceptions of the acceptability and appropriateness of the CPI model to prevent CS
- b. **Objective 2:** Estimate BSTI staff interest in becoming a CPI
- c. **Objective 3:** Identify barriers and training needs

Goal 2: To estimate the extent to which the CPI model increases BSTI staff knowledge and confidence in conducting investigations among persons who are, or could become, pregnant

- a. **Objective 1:** Estimate and compare changes in pre- and post-implementation knowledge, attitudes, and perceptions among CPI staff, specifically:
 - i. Knowledge of investigation protocols, third trimester screening mandate, CS case definition, CS chart review, Maven documentation
 - ii. Familiarity with social work's role in CS prevention and the referral process
 - iii. Confidence, comfort conducting investigations among target population

Goal 3: To estimate the extent to which the CPI model improves case investigation outcomes among pregnant persons with syphilis in NYC

- a. **Objective 1:** Estimate and compare changes in pre- and post- implementation case investigation outcomes among pregnant persons with syphilis

Goal 4: To characterize the major barriers, facilitators, and contextual factors that influence implementation of the CPI model

- a. **Objective 1:** Conduct a focus group with CPIs to characterize barriers, facilitators, and contextual factors that influence implementation of the CPI model
- b. **Objective 2:** Synthesize information from all evaluation sources (staff pre- and post-implementation surveys, focus groups, training evaluations, case investigation outcomes) to characterize the impact of the CPI model from the staffing and patient outcomes' perspectives

The site's evaluation design consisted of a mixed methods approach to achieve multiple evaluation objectives, including adaptation of the CPI model for the BSTI context, analysis of how the new model impacted investigation and partner services outcomes, and enhanced understanding of the experience of CPIs. Appendix 6 includes additional information regarding the site's evaluation questions, indicators/measures, and data collection methods/sources. In addition to the evaluation goals and design, the site designed a logic model (Appendix 7) which included the project's resources, activities, outputs, and outcomes.

Texas: San Antonio Metropolitan Health District (SAMHD)

SAMHD's innovation focused on enhancing efforts to assess pregnancy intention, increase syphilis testing and adequate treatment, and expand referrals and linkage to prenatal care services for a total of 120 pregnant women, as well as women of child-bearing age. The site proposed that the population would be continuously engaged through multiple efforts, including follow-up referrals, healthcare fairs and outreach events, as well as through home visits conducted by SAMHD's Healthy Beats Program (HBP) staff.

During the home visits, HBP staff would conduct a post-partum assessment that included a HBP evaluation questionnaire, a pregnancy intention survey, and staff would also provide clients with referrals for pediatric care, family planning, and other social services. Throughout the process, clients would receive incentives to participate. Aside from the client-focused activities of the project, SAMHD also planned to focus on provider education to provide information on adequate syphilis treatment guidelines, appropriate surveillance syphilis diagnosis, syphilis testing laws for women during pregnancy, and timely disease reporting. Additional project activities would focus on expanding efforts to support syphilis treatment to prevent future congenital syphilis diagnoses. For those individuals that completed treatment, they would be provided with a gift card incentive for their participation.

This site had several evaluation goals and objectives including:

Goal 1: 90% of women, of child-bearing age, diagnosed with latent syphilis who are receiving services from the SAMHD STD/HIV Program will complete timely, adequate treatment.

- a. **Objective 1:** Patients will complete a series of three Benzathine Penicillin G (Bicillin), 2.4 mu doses. Each dose must be completed within 6-10 days of previous dose.
- b. **Objective 2:** Women who have a history of non-completion of syphilis treatment (prior to current diagnosis) or are non-compliant to treatment for current syphilis diagnosis will receive an incentive of a \$10 gift card for completion of second and third dose of Bicillin (a maximum of \$20).

Goal 2: SAMHD will link 90% of pregnant women to prenatal care within two weeks of Healthy Beats enrollments.

- a. **Objective 1:** Healthy Beats will screen patients upon enrollment into program if patient is currently in prenatal care with a licensed OBGYN.
- b. **Objective 2:** Healthy Beats will make an appointment with a licensed OBGYN for enrollees who are not currently in prenatal services.
- c. **Objective 3:** Healthy Beats will confirm if patient attended the first prenatal care appointment with the licensed OBGYN.
- d. **Objective 4:** Healthy Beats will ensure pregnant women complete recommended syphilis screening at first OB appointment where labs are drawn, during third trimester (between 28-32 weeks), and day patient is admitted to hospital for delivery

Goal 3: SAMHD will provide 120 Healthy Beats enrollees with referral counseling during the grant term.

- a. **Objectives 1:** Healthy Beats will provide social service referrals, based on patient's need, at initial enrollment into the program.
- b. **Objective 2:** Healthy Beats will provide social service referrals, based on patient's need, at the home visit scheduled after delivery for the postpartum assessment.

Goal 4: SAMHD will collect postpartum pregnancy intention surveys from 120 Healthy Beats enrollees during the grant term

- a. **Objective 1:** Healthy Beats will conduct a postpartum assessment at the home visit to include an assessment on pregnancy intention.
- b. **Objective 2:** Healthy Beats will provide mothers with a “Welcome Baby” bundle (\$30 value) as an incentive to mothers to participate in the postpartum assessment.

Similar to other sites, Appendix 8 consisted of designing a set of questions to guide the evaluation, including associated indicators, data sources, and data analysis techniques (e.g., frequencies, counts, thematic). The evaluation questions also reflected process and outcomes measures. In addition to the evaluation goals and design, the site designed a logic model (Appendix 9) which included the project’s resources, activities, outputs, and outcomes.

California: Tulare County Health and Human Services Agency (TCHHSA) Public Health Department

Tulare County Health Department designed its innovation to focus on providing support to pregnant individuals with syphilis, as well as pregnant individuals without syphilis, through telehealth. As many residents across the county have mobility issues and/or limited access to transportation, the telehealth method provided clients with access to case management, referral, and linkage to care. It is through the telehealth method that the county planned to actively engage with, and expand services to, patients. Beyond the telehealth method, the county also proposed to continue using an in-person service model to conduct assessments through the Communicable Disease department and with the assistance of DIS, as well as other key program staff.

This site had several evaluation goals and objectives including:

Goal 1: To improve access to syphilis and congenital syphilis case management/care

- a. **Objective 1:** By the fourth month of implementation, Disease Investigation Staff will see an increase in client engagement/care.
- b. **Objective 2:** By the fifth month of implementation, Disease Investigation Staff will see an increase in the number of encounters for telehealth clients compared to clients not participating in telehealth.

Goal 2: To reduce costs associated with delivering care to syphilis and congenital syphilis clients

- a. **Objective 1:** By the fourth month of implementation, an analyst will see a decrease in travel expenses.

Goal 3: To improve outcomes in client adherence to a treatment plan

- a. **Objective 1:** By the second month of implementation, Disease Investigation Staff will see an increase of at least 10% in client adherence to their individualized treatment plan.

Goal 4: To increase partner elicitation

- a. **Objective 1:** By the fifth month, Disease Investigation Staff will see an increase in the number of partners interviewed per syphilis case.

Appendix 15 consisted of designing a set of questions to guide the evaluation, including associated indicators, data sources, and data analysis techniques (e.g., frequencies, counts, thematic). The evaluation questions also reflected process and outcomes measures. In addition to the evaluation goals and design, the site designed a logic model (Appendix 16) which included the project's resources, activities, outputs, and outcomes.

Texas: Tarrant County Public Health (TCPH)

Tarrant County's proposed innovation focused on expanding an existing continuous quality improvement project that was designed to improve DIS response to conducting congenital syphilis follow up. The county decided to intervene with simple communications (i.e., text, voice message, email) to prompt the patient to adhere to current guidance for syphilis positive pregnant people. The rationale behind this approach was that intervening at defined intervals during pregnancy would reduce negative birth outcomes or a diagnosis of confirmed/probable congenital syphilis at birth.

The site had several evaluation goals and objectives including:

Goal 1: To decrease the number of negative Congenital Syphilis Investigation (CSI) determinations

- a. Objective 1:** From 09/01/2021 to 08/31/2022, TCPH will reduce the number of negative CSIs (Congenital Syphilis Investigation) by 5% compared to 2020 CSI submissions submitted during the same timeframe.

Goal 2: To track the partnership communication activities between community and population health navigators.

- a. Objective 1:** From 09/01/2021 to 08/31/2022, TCPH will collect and report the number of external stakeholder interactions with TCCSL related to positive CSI determinations. Note: Purpose of this objective is to collect baseline data for interventions.

The goal of the evaluation was to examine the effectiveness of gestational syphilis follow-up and the site decided to use a mixed methods approach with sequential data collection before, during, and post-implementation. A logic model (Appendix 11) was designed and included inputs, activities, outputs, and outcomes. Appendix 12 includes additional information regarding the site's evaluation questions, indicators/measures, and data collection methods/sources.

Interim Report Findings

All sites submitted interim reports on the progress of the implementation and evaluation of their innovations at the "mid-point" of their project. This time varied across the project sites because of the impacts of COVID-19 on the individual LHD and their proposed intervention. These reports highlighted that majority of the sites experienced significant challenges and barriers.

Georgia: Gwinnett, Newton, and Rockdale (GNR) County Health Departments

Due to staff changes and limitations associated with the COVID-19 pandemic, the program was not able to consistently be offered to patients. In the report, the site highlights the importance of

training additional staff and ensuring that there are always staff available to continue oversight of a program during an emerging public health incident or emergency.

The site also stated that it is important for staff to be made aware that some pregnant people are not engaged in prenatal care which demonstrates the need for programs and activities that focus on the prevention of congenital syphilis.

Arizona: Maricopa County Health Department of Public Health (MCDPH)

The launch of the program was delayed by several months, due to the COVID-19 pandemic, and changes in the project design were made in order to increase the number of clients that could receive services. CAN Community Health experienced limitations in conducting outreach and recruiting participants. CAN also experienced privacy issues when administering Bicillin and this issue was addressed by using privacy screens on the mobile unit. Due to staff changes, there were challenges with the completion and sending of forms which led to an inability to validate that testing was performed and some patients did not have telephone numbers for follow-up, if necessary. CAN also had challenges with performing and reading the POC syphilis tests in the field due to the absence of natural light in the evening/late hours when outreach took place. To address this, the site purchased lighting and provided additional staff training.

Florida: Department of Health in Duval County (DOH-Duval)

Due to significant staff changes and shortages, Duval County was unable to complete an interim report for their innovation. This supports one of the many lessons learned at the conclusion of this report which highlights that LHDs must have the capacity to successfully implement their programs from beginning to end.

Florida: Department of Health in Miami-Dade County (DOH-Miami Dade)

The start of the project was delayed due to the COVID-19 pandemic, as the partnering hospital shifted priorities to focus on patients with COVID-19 and subsequently on vaccine distribution. In turn, staff were unable to focus on the project as planned and data collection/reporting for the site was challenged due to overwhelmed staff and communication difficulties.

Similar to other sites, this highlights the importance of ensuring that staff have the capacity and resources to support programs during a public health emergency while also making clear how impacted all aspects of healthcare and public health were by this unexpected global pandemic.

New York City: Department of Health and Mental Hygiene (NYCDOHMH)

The evaluation of the project was slightly impacted due to COVID-19 as many staff members were reassigned to assist with the COVID-19 response efforts. Despite those reassignments, the project staff were understanding of these changes and adjusted as best as they could to properly evaluate the program.

Texas: San Antonio Metropolitan Health District (SAMHD)

The original start date for the site's community advisory board was impacted due to COVID-19, but eventually took place virtually. Despite proceeding with the first meeting in a virtual setting, there

were only two external participants able to attend. This highlighted the need for exploring additional communication methods and potentially reach out to other parties that could provide valuable insight on the program's evaluation.

Unfortunately, many patients did not enroll into the program, and this impacted the completion of program evaluation/satisfaction surveys. This required the program to explore other opportunities to collect data.

California: Tulare County Health and Human Services Agency (TCHHSA) Public Health Department

Staff experienced challenges with recruiting participants, but this was addressed through providing program participants with incentives of up to \$40 per client once the client completed their individual plan of care. Additionally, it was identified that many individuals were unable to use the telehealth system as designed (for smartphones or computers) so there was also a shift to provide services via simple phone calls without video capacities.

The monitoring and collection of data was impacted due to the COVID-19 pandemic as staff were assigned to high priority COVID-19 projects.

Texas: Tarrant County Public Health (TCPH)

The implementation of the project was seamless, but the monitoring of the project was challenging due to key staff heavy workloads which included the Tarrant County Congenital Syphilis Liaison (TCCSL) as well as the investigating DIS.

There were delays with case entry or the assignment of a final case syphilis staging. In turn, this led to delays in confirming if the patient was treated for staging and if further follow up was needed.

Final Report Findings

At the completion of their projects, all sites submitted final reports to capture any changes in the implementation and evaluation of their innovations since the submission of the interim reports and the initial project concept proposal. Similar to the interim report submissions, it is important to note that the sites experienced many challenges due to the COVID-19 pandemic, as well as the emerging Mpox outbreak.

Georgia: Gwinnett, Newton, and Rockdale (GNR) County Health Departments

Due to the COVID-19 pandemic and the Mpox outbreak emergency response, many clinics closed and/or experienced staff shortages which contributed to a decline in patient volume. These same circumstances also contributed to challenges with supporting ongoing evaluation of the program. The site stated that this indicated the need for more educated and available staff to provide testing and treatment services to patients (even during a public health emergency), as well as to be able to support the evaluation of programs. Additionally, the site highlighted that more providers must be made aware of testing requirements and strategies as time is often mainly spent on educating patients.

Arizona: Maricopa County Department of Public Health (MCDPH)

Since the submission of the interim report, the project timeline was adjusted twice (the first extension was to July 2021 and the second extension was to June 2022) due to the ongoing COVID-19 pandemic. These changes were implemented in order to increase participation of clients to meet project design goals. The design of the project was changed and this included removing the medical provider from the Mobile Health Unit when outreach was being performed and treatment was instead facilitated through transporting the patient via UBER to a facility. If the transporting of the patient was unable to take place, the patient received follow-up by phone and was scheduled for treatment. These program changes highlight the need for flexibility especially during unplanned circumstances and events.

Although patients were contacted by staff for follow-up and the scheduling of treatment, staff indicated that they were unable to contact some patients as they became hard to reach after the initial contact. Some patients were unable to be contacted after the initial visit due to not having a telephone or web access. That said, it is critical that programs have additional mechanisms in place to stay in contact with patients.

This project helped to further identify the barriers experienced by vulnerable populations and those at risk of delivering a CS infant. Regardless of these challenges, 295 women accessed the program, and 277 participants were tested by CAN Community Health. CAN identified 5 women as pregnant and 6 participants received treatment in the field. The site will continue to explore and evaluate innovative ways to improve access to syphilis testing and treatment for hard-to-reach populations.

Florida: Department of Health in Duval County (DOH-Duval)

This report was unable to include findings from Duval County as this site was unable to implement their proposed intervention because of staff changes and shortages.

Florida: Department of Health in Miami-Dade County (DOH- Miami Dade)

The site indicated that they were unable to test all women of childbearing capacity that entered the hospital's emergency department due to a legal consent issue. This resulted in only being able to fulfill one of the desired screening criteria: pregnant women. There were also challenges with being unable to establish a case definition like what was coded for Cohort 1. Additionally, the site was unable to work closely with the Targeted Outreach for Pregnant Women Act (TOPWA) community partner to provide pop-up testing throughout the community. Instead, the health department decided to distribute educational materials throughout the community.

In addition, the previously established testing procedure was not followed as the emergency room protocol (requiring syphilitic antibody (IgG/IgM) testing prior to rapid (RPR testing) took precedence. However, the program was able to address this through negotiations with the hospital which required the hospital to cover costs of the antibody reagents that were necessary to follow the hospital's testing procedures. The site also experienced challenges with the organization and coordination of the focus groups due to stakeholders' availability, but the site was still able to proceed.

In the final report, the site identified some program barriers which included personnel capacity during the COVID-19 pandemic, stakeholder engagement timing, work priorities, and general consent in automated testing.

New York City: Department of Health and Mental Hygiene (NYCDOHMH)

The final report highlighted that there were improvements in staff knowledge and outcomes among those who are or may become pregnant. These improvements regarding staff knowledge were attributed to the site's desire to allow for staff to identify and participate in trainings related to the case investigation process. The improvements among the outcomes of the target population were due to several enhancements to the citywide STI surveillance registry. Some of those enhancements included the implementation of a date stamp for pregnancy ascertainment, and the ascertainment and automatic assignment of pregnant people with syphilis to a social worker.

In regards to challenges, the site highlighted in the report that there was a need for additional support to implement the project and decided to create a Program Manager position. This individual would support the coordination of congenital syphilis prevention activities.

An additional challenge identified by the site was regarding medical providers engagement in the identification of cases, as well as the treatment of people with syphilis and their partners. That said, the site planned to address these challenges by creating various toolkits that focused on DIS work and treatment and screening guidelines for people who are or may become pregnant. The site also considered engaging safety net providers to identify additional cases.

Despite some challenges and barriers, the site was able to collect and report on data from staff surveys which examined attitudes towards the CPI model pre and post implementation. Findings highlighted that nearly all staff agreed that the CPI model is an important programmatic change both before and after implementation (55/59; 93% and 14/15; 93%, respectively). Additionally, staff stated that the CPI model "made sense" to address congenital syphilis pre-implementation (50/57; 88%), which highlighted the relevance of the program.

The site also conducted pre- and post-implementation surveys exploring staff knowledge, attitudes, perceptions, and practices related to congenital syphilis prevention work. Through the surveys, staff reported changes in self-efficacy when conducting syphilis investigations for people who are or may become pregnant. In fact, the post-implementation survey's findings highlighted that 100% of staff felt more comfortable and confident conducting syphilis investigations.

There was an assessment of key investigation outcomes among syphilis cases in people who are or may become pregnant both pre and post implementation which highlighted a 33% increase in the proportion of people who are or may become pregnant with key sex behavior variables documented.

The site provided additional pre and post implementation evaluation data and results (Appendix 10).

Texas: San Antonio Metropolitan Health District (SAMHD)

Despite the challenges associated with the COVID-19 pandemic, the site was able to exceed its program goals. In fact, the Healthy Beats Program was able to exceed the goal of 125 enrollees and enrolled a total of 177 pregnant women into the program, and provided referral services to those program participants.

The program was also able to link 93% of pregnant women to prenatal care within two weeks of enrollment and provided 139 baby bundles to mothers at their post-natal visit for completing the program evaluation/satisfaction survey.

A total of 120 postpartum pregnancy intention surveys were collected from program participants and the program was able to offer syphilis treatment to 39 pregnant women. The program decided to expand the initial risk criteria and to increase the value of the total amount of gift cards received. At the conclusion of the program, 260 gift cards were distributed to eligible patients.

Throughout the implementation of this project, there were two major updates released by the Centers for Disease Control and Prevention and the Texas Department of State Health Services for treatment of late-latent syphilis in pregnant women. As a result of these changes, many patients were confused about the treatment process, and this led to the unsuccessful completion of treatment for one patient. The site addressed this by educating patients and providers.

Additionally, patients continued to express concern with coming to the clinic due to the possibility of exposure to COVID-19. As a result of this, the site decided to expand their field treatment and to continue to be mindful of best practices in preventing the spread of COVID-19. While some patients appreciated the home visits, some others were resistant, but the program staff addressed this by contacting patients via phone. Staff were also able to administer the program evaluation and satisfaction survey over the phone.

California: Tulare County Health and Human Services Agency (TCHSA) Public Health Department

In the final report, the site indicated that the COVID-19 pandemic continued to serve as a barrier that affected program implementation. The site mentioned that there were staff changes, including deployment to other projects, which made it more challenging to implement the program.

The site also stated that there were issues with implementing the telehealth approach as Tulare County is a rural area that often experiences low cell phone reception which made it difficult to reach patients.

Texas: Tarrant County Public Health (TCPH)

Similar to the other sites, Tarrant County experienced some challenges with program implementation.

For instance, the monitoring of follow up for investigations, treatment completion, as well as prenatal care was challenging for the site due to delays in case entry and an increasing workload experienced by DIS.

Additionally, the innovation's outcome timeframe was not a full year which contributed to only 50 confirmed deliveries and additional outcomes were not able to be captured until after the implementation period.

Through the implementation of this innovation, the site was able to form a partnership with Tarrant County's Family Health Services (Maternal Child Health Division). This partnership allowed for the site to provide 161 OBGYN providers with Texas' Call to Action which outlined the rise in Congenital Syphilis and Testing and Pregnancy State Requirements.

As far as evaluation results, the site had a total of 13 confirmed deliveries during the project period (two occurring out of Tarrant County's jurisdiction). Negative CS determinations accounted for 7% of confirmed births.

The site was able to achieve 100% of follow-up through provider related calls (n=12) regarding 28-32 weeks appointment attendance. Eighty-four percent of eligible clients attended their 28-32 weeks gestation appointment and 83% were treated.

Lessons Learned

As highlighted throughout this report, the COVID-19 pandemic impacted the implementation and evaluation of the sites involved in this project. Across all sites, there are still lessons learned that can help to inform best practices for similar interventions and improvements across the country that aim to address rising congenital syphilis cases.

Lesson #1: Strengthening and building organizational capacity for program implementation and during outbreak responses is critical.

Many of the participating sites indicated that ongoing staffing changes and shortages due to seen and unforeseen circumstances including the COVID-19 pandemic and Mpox outbreak posed a challenge to the implementation of their interventions. Staff play a critical role in supporting program implementation which emphasizes that it is important that programs have plans and back-up plans in place to avoid any program disruptions for staff changes, deployment, or departures.

Additionally, some of the sites across both cohorts suggested that programs prioritize responsiveness to staff needs and concerns as this is critical to retain staff throughout program implementation and beyond. They also recommended that staff are continuously educated to provide the best support to patients and clients, as well as to be able to support the program's activities.

Obviously the COVID-19 and Mpox situations were highly unique in their scope of impact on health departments, but they highlighted an ongoing issue of staff changes/turnover causing projects to stall or fail completely when occurring. It is important for LHD programs to have greater internal support from across their agency, as well as from external and partnering organizations with the implementation of programs as public health emergencies and events are inevitable.

Lesson #2: Key stakeholders and partnerships are necessary to contribute to the success of congenital syphilis prevention programs.

Building relationships with key stakeholders and partners plays an important role in the successful implementation of congenital syphilis prevention programs, as well as similar public health programs. Some of the sites for this project were successfully able to implement their program due to the strong partnerships that they developed with other partners and collaborating agencies. For instance, one of the sites worked closely with a community health organization to provide services to clients both in a clinical and mobile setting through this project. In turn, this helped the site to broaden its reach and target audience. Another site worked closely with an emergency department at a leading hospital in the site's area to provide testing and treatment services to patients. This proved to be a very successful strategy and partnership as many patients receive routine care through the emergency department rather than in a primary or urgent care setting. This same site also partnered closely with an existing outreach program to conduct screening within high morbidity areas which helped to expand the site's

reach to pregnant people that do not seek care through the emergency department.

Lesson #3: Ongoing barriers to care pose a challenge to patients and this in turn affects timely access to services.

Some participating sites expressed that there were challenges with ensuring that patients and clients were provided with timely access to services. This was due to many factors, including but not limited to the patient or client's inability to stay in contact with the sites due to the absence of a phone and/or laptop, transportation issues, and the COVID-19 pandemic. It is important that additional resources are made available to address these challenges, as well as maintaining the flexibility to pivot when necessary. For instance, one of the sites decided to adjust their program by deciding to conduct field visits to allow for patients to have their treatment done in their home and this proved to be successful.

Conclusion

The activities of the sites involved in the project were disrupted by the COVID-19 pandemic and emerging Mpox outbreak, and it is difficult to determine the overall impact of the interventions. Although the sites experienced many challenges as mentioned throughout this report, it is evident that congenital syphilis is best addressed through tailored interventions and programs. Some sites provided services through telehealth while other sites used other methods, including mobile and clinical outreach, to reach the target population. Similar interventions and improvements could potentially be replicated across the country to improve congenital syphilis prevention and control efforts. To be successful, these potential interventions and improvement will need to be tailored to the communities that they plan to reach. Additionally, it is encouraged that the lessons learned within this report are considered. In turn, we will be able to address rising rates of congenital syphilis which has greatly impacted U.S. populations for a lengthy amount of time and will continue to do so.

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Appendix 1: GNR Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/Sources
Evaluation Goal 1: Determine the impact of COVID-19 on health department STI service provision and uptake		
Question 1: To what extent has COVID-19 affected health department STI staff capacity?	Indicator 1.1: # of fully trained STI staff members	Clinic employment records (quantitative)
Question 2: To what extent has COVID-19 affected patient willingness and intention to seek and use health department STI services?	Indicator 1.2: % of clients refusing STI testing services at each clinic	Clinic patient records (qualitative)
	Indicator 2.1: # of clients visiting health department clinics each month	Phone survey (qualitative)
	Indicator 2.2: # of clients reporting COVID as a barrier or delay to seeking services	
Evaluation Goal 2: Determine the effectiveness of the pregnancy panel in identifying syphilis and HIV among pregnant persons		
Question 1: To what extent are pregnant persons receiving appropriate first and third trimester testing and treatment for syphilis and HIV?	Indicator 1.1: # of patients that report receiving first trimester testing	Self-report text message survey (quantitative)
Question 2: How many cases of HIV among pregnant persons were newly found via the pregnancy panel?	Indicator 2.1: # of newly diagnosed HIV cases among pregnant persons quarterly	
Evaluation Goal 3: Assess the effectiveness of pregnancy panel case management in connecting pregnant persons with STIs to wrap-around services		
Question 1: To what extent are pregnant persons receiving appropriate first and third trimester testing and treatment for syphilis and HIV?	Indicator 1.1: # of patients that report receiving first trimester testing	Self-report text message survey (quantitative)

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Question 2: To what extent are pregnant persons with STIs connected to FP and WIC service?	Indicator 1.2: # of patients that report receiving treatment after a positive test result	Clinic patient records (quantitative)
Question 3: To what extent do pregnant persons with STIs use other services in the center due to their interactions with the pregnancy panel program?	Indicator 1.3: # of patients that report receiving third trimester testing	
	Indicator 1.4: # of patients that report receiving treatment after a positive test result	
	Indicator 2.1: # of pregnant persons with STIs receiving FP services	
	Indicator 2.2: # of pregnant persons with STIs enrolled in WIC services	
	Indicator 3.1: # of pregnant persons with STIs receiving prenatal care in HD clinics	
	Indicator 3.2: # of pregnant persons with STIs receiving TDAP and flu vaccinations	

Appendix 2: GNR Logic Model

Inputs What resources will go into the project (e.g., staff, money, time, partnerships)?	Activities What activities, events, or strategies will be implemented?	Outputs What and how many products will result from the activities?	Outcomes (Outcomes should ideally have associated baseline and follow-up data to measure change)		
			<i>Short</i> 3-6 months	<i>Medium</i> 6-9 months	<i>Long</i> 9-12 months
<ul style="list-style-type: none"> • HD staff time, including RNs and NPs for treatment and ID nurses and program directors for management • Money for testing and case management • Leveraging ongoing HD HIV and PrEP programs for overall STI prevention, testing and treatment activities 	<p><u>Strategy 1</u></p> <p>TEST: Implement comprehensive STI and HIV testing for all individuals seeking a pregnancy test at GNR HD clinics</p> <p><u>Strategy 2</u></p> <p>TREAT: Provide full case management services to pregnant persons and treatment to those with positive STI and HIV tests</p> <p><u>Strategy 3</u></p> <p>PREVENT: Offer prevention education and supplies to pregnant persons</p>	<p><u>Strategy 1</u></p> <p>100 estimated panels provided each month</p> <p><u>Strategy 2</u></p> <p>20 estimated cases managed each month</p> <p><u>Strategy 3</u></p> <p>20 people reached with prevention education and supplies each month</p>	<p><u>Strategy 1</u></p> <p>Train clinicians in STI clinical protocols</p> <p>Identify new cases of STIs and HIV and enroll in treatment</p> <p><u>Strategy 2</u></p> <p>Successfully treat pregnant persons with positive STI and HIV tests</p> <p><u>Strategy 3</u></p> <p>Increase use of condoms and increase uptake of regular STI testing</p>	<p><u>Strategy 1</u></p> <p>Identify new cases of STIs and HIV and enroll in treatment</p> <p><u>Strategy 2</u></p> <p>Successfully treat pregnant persons with positive STI and HIV tests and connect them to wrap-around support services</p> <p><u>Strategy 3</u></p> <p>Increase use of condoms and increase uptake of regular STI testing</p>	<p><u>Strategy 1</u></p> <p>Streamline and standardize STI and HIV testing for those seeking pregnancy tests and those presenting for first and third trimester appointments</p> <p><u>Strategy 2</u></p> <p>Limit transmission of syphilis from mother to child</p> <p><u>Strategy 3</u></p> <p>Reduce rate of STIs in the community</p>

Appendix 3: MCDPH Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Evaluation Goal 1: Determine the feasibility of the program		
What are the challenges experienced in the program?	Number of syphilis testing completed	Survey- questionnaire / feasibility survey
What improvements need to be made?	Number of participants who accessed the program	Survey- questionnaire / feasibility survey
How well did the program work?	Number/percent of participants satisfied with the program	
	Number of participants linked to prenatal care	
	Number of participants attending clinic after referral	
Evaluation Goal 2: To what extent did the program reach its targets and outcomes?		
To what extent did we meet our program goals?	Number of tests administered	Syphilis Assessment Tool
To what extent are participants more aware of services available?	Percentage of positive Point of Care Syphilis Tests	Syphilis Assessment Tool
	Percent tested with syphilis	PRISM-MCDPH STI Case Management System
	Percent with positive pregnancy test	Syphilis Assessment Tool
	Number of resulting CS cases	PRISM-MCDPH STI Case Management System

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Evaluation Goal 3: Determine barriers and facilitators that affected successful implementation		
To what extent were the budget goals met?	Percent of budget used	Budget document review
To what extent were tests performed and treatment administered?	Percent of testing completed	Quantitative- barriers and facilitators survey
To what extent did the clinicians explain the process to the participants?	Number of participants participated	Focus groups
	Number of CS cases prevented	
	Number of participants favor the program	
	Key themes of identified barriers and facilitators	

Appendix 4: MCDPH Logic Model

Inputs	Activities	Outputs	Outcomes		
			(Outcomes should ideally have associated baseline and follow-up data to measure change)		
			<i>Short</i> 3-6 months	<i>Medium</i> 6-9 months	<i>Long</i> 9-12 months
<p>What resources will go into the project (e.g., staff, money, time, partnerships)?</p> <p>Funding</p> <p>Resources:</p> <ul style="list-style-type: none"> pregnancy test kits syphilis test kits Uber <p>Clinic Partners</p> <ul style="list-style-type: none"> CAN Staff MCPHD Staff <p>Time</p> <ul style="list-style-type: none"> CAN MCPHD Service Deliveries 	<p>What activities, events, or strategies will be implemented?</p> <p><u>Training</u></p> <ul style="list-style-type: none"> Train clinician on point of care testing for syphilis <p><u>Schedule Meetings</u></p> <ul style="list-style-type: none"> Conference calls pertaining to grant proposal- with key stakeholders <p><u>Review with NACCHO</u></p> <ul style="list-style-type: none"> Networking to develop proposal – Review with key stakeholders 	<p>What and how many products will result from the activities?</p> <p><u>Testing and Treatment</u></p> <p>100% satisfaction on CAN's ability to perform point of care testing. Patient were satisfied with testing, and treatment procedures.</p> <p><u>Improved access</u></p> <p>MCPHD improved access to hard-to-reach population for syphilis testing and treatment by 65%. Completed 65% of point-of care syphilis test.</p> <p><u>Link-to-Care</u></p> <p>Completed 100% of pregnant test. 80% of pregnant women will be linked to care.</p>	<ul style="list-style-type: none"> Improved awareness for Congenital Syphilis and steps towards prevention Increased intention to seek care if pregnant Women were more motivated to get tested 	<ul style="list-style-type: none"> More providers are apt to completed testing and treatment to prevent CS 	<ul style="list-style-type: none"> Reduced/ No cases on CS syphilis

Inputs	Activities	Outputs	Outcomes		
			(Outcomes should ideally have associated baseline and follow-up data to measure change)		
			<i>Short</i> 3-6 months	<i>Medium</i> 6-9 months	<i>Long</i> 9-12 months
<p>What resources will go into the project (e.g., staff, money, time, partnerships)?</p> <p>Funding</p> <p>Resources:</p> <ul style="list-style-type: none"> Pregnancy test kits Syphilis test kits Uber <p>Clinic Partners</p> <ul style="list-style-type: none"> CAN Staff MCPHD Staff <p>Time</p> <ul style="list-style-type: none"> CAN MCPHD Service Deliveries 	<p>What activities, events, or strategies will be implemented?</p> <p><u>Protocol Development</u></p> <p>Develop & review proposal with key stakeholders</p> <p>Implement project protocol</p> <p><u>Training</u></p> <p>Train clinician on point of care testing for syphilis and project protocol</p> <p><u>Schedule Meetings</u></p> <p>Conference calls with key stakeholders for project updates and modification</p>	<p>What and how many products will result from the activities?</p> <p>Project protocol approved by key stakeholders</p> <p>x</p> <p>CAN clinician(s) successfully trained in syphilis poc testing and project protocol</p> <p>CAN clinician(s) confident in ability to conduct syphilis poc testing</p> <p>Routine (monthly? Biweekly)? meetings with project stakeholders held and action items for project modification identified</p>	<p>CAN clinician(s) remain supportive of project</p> <p>Improved awareness of congenital syphilis and steps towards prevention among (CAN providers? Women?...?)</p> <p>100% satisfaction (among who? – providers? Stakeholders? Clients?) with CAN's ability to perform point of care testing</p> <p>Participants highly satisfied with testing, and treatment procedures</p> <p>Increased motivation for syphilis and pregnancy testing among [???] women</p>	<p><u>Testing and Treatment</u></p> <p>Completed 65% of point-of care syphilis test.</p> <p>Completed 100% of pregnant test Treatment?</p> <p><u>Link-to-Care</u></p> <p>Increased intention among high risk women to seek care if pregnant</p> <p>80% of pregnant women will be linked to care.</p>	<p><u>Improved access</u></p> <p>More CAN(?) providers are apt to conduct testing and provide treatment to prevent CS</p> <p>MCPHD improved access to syphilis testing and treatment for hard-to-reach population by 65%</p> <p><u>Future Impact</u></p> <p>Reduced/ No cases of CS syphilis in Maricopa County (?)</p>

Appendix 5: Florida Department of Health in Miami-Dade County Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Goal 1: Identify components of the project implementation that are sufficient and components that need improvement		
<p>What worked well and what could have been done better for the JMH IT team to implement the Smart Syphilis Screening Algorithm? What was done well and what could have been improved?</p>	<p>Qualitative analysis of challenges, successes and lessons learned</p>	<p>Focus group with IT staff at JMH</p>
<p>What worked well and what could have been done better to implement for the ED staff at JMH to implement the new screening algorithm? What was done well and what could have been improved?</p>	<p>Qualitative analysis of challenges, successes and lessons learned</p>	<p>Focus group with ED staff at JMH</p>
<p>What worked well and what could have been done better for FDOH to implement this new program? What was done well and what could have been improved?</p>	<p>Qualitative analysis of challenges, successes and lessons learned</p>	<p>Focus group with all FDOH staff involved (DIS and admin)</p>
Goal 2: Analyze unintended risks and barriers and methods for removal or diminishment		
<p>What barriers arose in implementing the algorithm? Did any risks to the EMR system arise? How could these barriers and risks be removed?</p>	<p>Qualitative analysis of barriers and risks</p>	<p>Focus group with IT staff at JMH</p>

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
What barriers arose in to implementing the new screening method in the ED? Did any risks in the ED arise? How could these risks be removed?	Qualitative analysis of barriers and risks	Focus group with ED staff at JMH
What barriers arose in to implementing the new program at FDOH? Did any risks arise? How could these barriers and risks be removed?	Qualitative analysis of barriers and risks	Focus group with all FDOH staff involved (DIS and admin)

Goal 3: Assure that all parties involved receive adequate resources and support to implement the program successfully.

What resources did the JMH IT dept. use for this project implementation? What resources were still needed or could have helped for implementation to go more smoothly?	Qualitative analysis of resources used, and resources needed	Focus group with IT staff at JMH
What resources did the JMH ED use for this project implementation? What resources were still needed or could have helped for implementation to go more smoothly?	Qualitative analysis of resources used, and resources needed	Focus group with ED staff at JMH
What resources did FDOH use for this project implementation? What resources were still needed or could have helped for implementation to go more smoothly?	Qualitative analysis of resources used, and resources needed	Focus group with all FDOH staff involved (DIS and admin)

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Did the JMH IT dept. receive adequate support from FDOH? What support could have made implementation more successful?	Qualitative analysis of support received, and support needed	Focus group with IT staff at JMH
Did the JMH ED receive adequate support from FDOH? What support could have made implementation more successful?	Qualitative analysis of support received, and support needed	Focus group with ED staff at JMH
Did FDOH staff receive adequate support from FDOH admin? What support could have made implementation more successful?	Qualitative analysis of support received, and support needed	Focus group with all FDOH staff involved (DIS and admin)

Goal 4: Assess if the program is reaching the targeted population of women it was intended to reach.

What are the zip codes, race, ethnicity, and age of the women that receive screening through this program?	<p>-#/% of women from each zip code that were screened</p> <p>-#/% of women of each race that were screened</p> <p>- #/% of women of each ethnicity that were screened</p> <p>-#/% of women of each age group that were screened</p>	STARS Field Records
What are the zip codes, race, ethnicity, and age of the women that receive treatment through this program?	<p>-#/% of women from each zip code that received treatment</p> <p>-#/% of women of each race that received treatment</p> <p>- #/% of women of each ethnicity that received treatment</p> <p>-#/% of women of each age group that received treatment</p>	STARS Field Records

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
<p>What are the zip codes, race, ethnicity, and age of the women that receive referrals and other services through this program?</p>	<p>-#/% of women from each zip code that received a referral or other service</p> <p>-#/% of women of each race that received a referral or other service</p> <p>- #/% of women of each ethnicity that received a referral or other service</p> <p>-#/% of women of each age group that received a referral or other service</p>	<p>STARS Field Records and Interview Records</p>
<p>How do the demographics of the women being served by this program compare to the demographics of past congenital syphilis cases?</p>	<p>Analysis of statistics from previous box compared to same statistics for previous congenital syphilis cases.</p>	

Goal 5: Determine satisfaction among those women that receive services and identify processes for improving the patient experience.

<p>Were patients satisfied with each step of the process: screening, treatment, partner services and referrals?</p>	<p>-#/% satisfied with screening process</p> <p>-#/% satisfied with treatment process</p> <p>-#/% satisfied with partner services process</p> <p>-#/% satisfied with referrals process</p>	<p>STARS Interview records/ patient satisfaction survey</p>
<p>What could be improved in the process to increase patient satisfaction?</p>	<p>What could be improved in the process to increase patient satisfaction?</p>	<p>STARS Interview records/ patient satisfaction survey</p>

Outcome Evaluation

Evaluation Questions

Indicators/Measures

Data Collection Methods/ Sources

Goal 1: Increase syphilis testing rates at Jackson Memorial Hospital (JMH) among pregnant women and high-risk women of reproductive age.

How many pregnant women and women of reproductive age were screened through this new system?	-# of pregnant women screened for syphilis at JMH ED	-EMR data from JMH ED
	-# of high-risk women of reproductive age screened at JMH	-Monthly report
How many women screened by the new algorithm were positive?	-#/% of pregnant women screened for syphilis at JMH ED that had a reactive test	-EMR data from JMH ED
	-#/% of high-risk women of reproductive age screened at JMH ED that had a reactive test	-STARS tests and Field Records

Goal 2: Improve treatment rates for syphilis for pregnant women and women of reproductive age.

How many pregnant women and women of reproductive age received treatment for syphilis?	-#/% of pregnant women screened at JMH that received treatment	STARS field record data
	-#/% of high-risk women of reproductive age that received treatment	
Did providing bus passes to patients help improve treatment rates?	-#/% of women that received bus passes that completed treatment.	STARS field record data

Goal 3: Provide partner services to an increased number of pregnant women and high-risk women of reproductive age

How many women identified through JMH screening received partner services?	-#/% pregnant women that received partner services	STARS field record and interview record data
How many of their partners were testing and treated?	-#/% pregnant women partners that received screening and treatment	

Outcome Evaluation

Evaluation Questions

Indicators/Measures

Data Collection Methods/ Sources

-#/% of high-risk women
that received partner services

-#/% of high-risk women's
partners that received
screening and treatment

Goal 4: Increase number of women in prenatal care and referrals to prenatal care and other needed services

How many possible congenital
syphilis cases were identified by
JMH screening and
how many were averted?

-# of possible congenital
syphilis cases identified

STARS

-#/% of possible congenital
syphilis cases averted

Appendix 6: NYCDOHMH Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Evaluation Goal 1: Measure BSTI staffs' perceptions of the appropriateness, acceptability and feasibility of the CPI model		
Do BSTI perceive the CPI model to be an effective way of preventing CS?	<ul style="list-style-type: none"> • Proportion of staff who agree/ strongly agree the CPI model is an important change • Proportion of staff who agree/ strongly agree the CPI model makes sense as a way to address congenital syphilis 	<ul style="list-style-type: none"> • Jan 2020 pre- survey, all staff • Jan 2021 post- survey, CPI
Are BSTI staff interested in being assigned as a CPI?	<ul style="list-style-type: none"> • Proportion of BSTI staff indicating willingness to work as a CPI 	<ul style="list-style-type: none"> • Jan 2020 pre- survey, all staff
What are the training needs to implement the CPI model?	<ul style="list-style-type: none"> • Key training needs identified from qualitative feedback 	<ul style="list-style-type: none"> • Jan 2020 pre- survey, all staff
Evaluation Goal 2: Estimate the extent to which the CPI model increases BSTI staff knowledge and confidence in conducting investigations among persons who are, or could become, pregnant		
Does the CPI model increase CPIs' comfort and confidence in conducting investigations among persons who are or could become pregnant?	<ul style="list-style-type: none"> • Mean scores for comfort and confidence in conducting investigations among target population • Mean scores for knowledge regarding: CS case definition, chart review, documentation 	<ul style="list-style-type: none"> • May 2020 pre- survey, CPIs • Jan 2021 post- survey, CPIs

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Did CPIs gain knowledge in investigation protocols and documentation?	<ul style="list-style-type: none"> • Proportion of CPIs knowledgeable about third trimester screening mandate in NYC • Mean scores for knowledge regarding: CS case definition, chart review, documentation 	<ul style="list-style-type: none"> • May 2020 pre- survey, CPIs • Jan 2021 post- survey, CPI
To what extent does the CPI model strengthen the relationship between CPIs and BSTI social workers?	<ul style="list-style-type: none"> • Mean scores for familiarity with social work role pre- and post -implementation 	<ul style="list-style-type: none"> • May 2020 pre- survey, CPIs • Jan 2021 post- survey, CPIs

Evaluation Goal 3: Estimate the extent to which the CPI model improves case investigation outcomes among pregnant persons with syphilis in NYC

To what extent does the CPI model improve: data quality and completeness; timeliness; and outcomes?	<ul style="list-style-type: none"> • Completeness of pregnancy status and key investigation variables • Timeliness of investigations, interviews, and treatment • Contact index; disease intervention rate • Mandated third trimester screening rates 	Maven analysis, pre- and post-implementation
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Evaluation Goal 4: Characterize the major barriers, facilitators, and contextual factors that influence implementation of CPI protocol

What are the potential barriers and challenges in implementing the CPI model?	<ul style="list-style-type: none"> • Key barriers identified from qualitative feedback 	<ul style="list-style-type: none"> • Jan 2020 pre- survey, all staff • Jan 2021 post- survey, CPIs
What are staff’s desired training needs?	<ul style="list-style-type: none"> • Training needs identified from qualitative feedback 	<ul style="list-style-type: none"> • Jan 2020 pre- survey, all staff • May 2020 pre- survey, CPIs
What do staff perceive as the major facilitators in implementing the CPI model?	<ul style="list-style-type: none"> • Facilitators identified from qualitative feedback 	<ul style="list-style-type: none"> • Jan 2020 pre- survey, all staff • Jan 2021 post- survey, CPIs

Appendix 7: NYCDOHMH Logic Model

Inputs	Activities	Outputs	Short-term Outcomes	Intermediate Outcomes	Long-term Outcomes
<p><u>Collaborations:</u> BSTI DIS and CIPS staff, BSTI Surveillance team, BSTI Social Work team, BSTI Evaluation and Implementation team.</p> <p><u>Data sources:</u> Findings from CPI evaluations; case investigation outcomes pre-, during-, and post-implementation (Maven)</p> <p><u>Target populations:</u> Pregnant persons and persons who could become pregnant for whom syphilis investigations are conducted</p>	<ul style="list-style-type: none"> Engaging BSTI CIPS staff in the development of the CPI model Selecting CPI for each NYC region Refining CPI investigation materials and training schedule Training CPI in new program, rationale, intended outcomes, and documentation Evaluating outcomes of CPI model through DIS evaluations, as well as analyses of investigation and partner services outcomes Summarizing and disseminating lessons learned and best practices from the CPI model to CIPS staff, BSTI leadership, and external audiences (via conferences, etc.) 	<ul style="list-style-type: none"> CIPS stakeholder feedback on CPI model gathered and synthesized CPI training schedule formulated, according to feedback on training needs CPIs selected and trained on protocol, rationale, and intended outcomes CPI investigation materials (interview guides, checklists, patient and provider materials) 	<ul style="list-style-type: none"> Increased knowledge and confidence among CPIs in conducting syphilis investigations among those who are or may become pregnant Improved documentation within Maven Strengthened referral relationships between each region's CPIs and Social Work staff Greater and more timely referrals to social work staff 	<ul style="list-style-type: none"> More complete pregnancy status More timely investigations More complete interview variables Improved timeliness and adequacy of syphilis treatment for persons who are or could be pregnant Increased disease intervention rates for syphilis Greater sex partners identified and investigated (contact index) Increased mandated third trimester screening rates among pregnant persons (via the Social Work team) 	<ul style="list-style-type: none"> Greater congenital syphilis cases averted Decreased syphilis morbidity among persons who are or could become pregnant, and their sex partners

Appendix 8: SAMHD Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/Sources
<p>Evaluation Goal 1: 90% of women, of child-bearing age, diagnosed with latent syphilis who are receiving services from the SAMHD STD/HIV Program will complete timely, adequate treatment.</p>		
<ul style="list-style-type: none"> To what extent were program activities implemented as planned? To what extent have the number of CS cases decreased among the target population? 	<ul style="list-style-type: none"> Date of 1st syphilis screening during pregnancy. Date of third trimester screening during pregnancy Date of delivery syphilis screening Date patient received first Bicillin dose Date patient received second Bicillin dose Date patient received third Bicillin dose total amount of congenital syphilis cases reported during grant period # of incentives provided to non-compliant women 	<ul style="list-style-type: none"> Data will be collected from OBGYN/outside providers for dates of syphilis screening and treatment or Data will be collected from SAMHD clinicians for dates of syphilis screening and treatments Patient chart abstractions from OBGYN/outside provider, Hospital L&D unit, SAMHD EMR # of incentives provided to non-compliant women

<p>Evaluation Goal 2: SAMHD will link 90% of pregnant women to prenatal care within two weeks of Healthy Beats enrollments.</p>		
<ul style="list-style-type: none"> How did awareness of or access to prenatal services change for women enrolled in Healthy Beats? 	<ul style="list-style-type: none"> Is the patient aware they need to be enrolled in prenatal care while pregnant Is the patient enrolled in prenatal care? Did the patient receive a prenatal care referral? Locations patients were referred for prenatal care Did the patient go to OB appt. 	<ul style="list-style-type: none"> Enrollment Assessment Form Postpartum Assessment

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
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Evaluation Goal 3: SAMHD will provide 120 Healthy Beats enrollees with referral counseling during the grant term.

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| <ul style="list-style-type: none"> • How did access to social services available to pregnant women change for Healthy Beats enrollees? | <ul style="list-style-type: none"> • What Healthy Beats Program services would you recommend to a woman you know who is pregnant? • What social service referrals were provided at initial enrollment? • What social service referrals were provided at the post-partum assessment? | <ul style="list-style-type: none"> • Enrollment Assessment Form • Postpartum Assessment (qualitative and quantitative questions) |
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Evaluation Goal 4: SAMHD will collect postpartum pregnancy intention surveys from 120 Healthy Beats enrollees during the grant term.

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| <ul style="list-style-type: none"> • Are patients aware of how to access family planning/contraception options? • Are patients interested in utilizing family planning/contraception options? • What is the pregnancy intention of the patients? | <ul style="list-style-type: none"> • Are patients aware of where they can receive family planning/contraception assistance? • Did the patient receive a family planning/contraception referral? • Were patients made aware of family planning/contraception options? • How soon do patients intend to get pregnant? | <ul style="list-style-type: none"> • Postpartum Assessment (qualitative open-ended questions) |
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Appendix 9: SAMHD Logic Model

Inputs	Activities	Outputs	Outcomes		
			(Outcomes should ideally have associated baseline and follow-up data to measure change)		
What resources will go into the project (e.g., staff, money, time, partnerships)?	What activities, events, or strategies will be implemented?	What and how many products will result from the activities?	<i>Short</i> 3-6 months	<i>Medium</i> 6-9 months	<i>Long</i> 9-12 months
Healthy Beats Staff <ul style="list-style-type: none"> - LVNx2 - Health Program Specialist - Management Analyst Congenital Syphilis Specialist Administrative Leadership: <ul style="list-style-type: none"> - Program Manager - Field Operations Manager - First Line Supervisor - Senior Management Analyst Community Action Board FIMR	<u>Strategy 1:</u> Healthy Beats will continue to enroll patients who are pregnant into the program. <u>Strategy 2:</u> Healthy Beats will enroll patients who are eligible into the Congenital Syphilis Preventative Treatment program. <u>Strategy 3:</u> Healthy Beats will implement a postpartum home visit for patients enrolled in the program.	<u>Strategy 1:</u> 120 patients will be enrolled into the program to include: <ul style="list-style-type: none"> - Education on congenital syphilis - Social services referrals - Linkage to Prenatal/Postnatal/Pediatric Care - Timely Syphilis testing during pregnancy - STD/HIV Screening and treatment <u>Strategy 2:</u> Patients who are eligible will receive a \$10 gift card (\$20 maximum) for completion of timely, adequate syphilis treatment. <u>Strategy 3:</u> Patients will receive social service referrals and complete the postpartum assessment at the postpartum home visit.	<u>Strategy 1:</u> Increased awareness and acceptance among participants of <ul style="list-style-type: none"> - risk of congenital syphilis, - recommended syphilis testing intervals during pregnancy, - importance of prenatal care during pregnancy. Improved linkage to prenatal care and STD/HIV screening/treatment <u>Strategy 2:</u> Increased initiation of syphilis treatment <u>Strategy 3:</u> Increased awareness among participants of prenatal services and of family planning/contraceptive options available to them	<u>Strategy 1:</u> Increased access by participants to <ul style="list-style-type: none"> - postnatal care and pediatric services available to them, - postnatal social services available to them. <u>Strategy 2:</u> Patients will complete recommended syphilis testing during pregnancy and at delivery. <u>Strategy 2:</u> Increased completion of timely, adequate syphilis treatment <u>Strategy 3:</u> Increased referrals/linkages provided to post/prenatal services and family planning/contraceptive options as requested. and be	<u>Strategy 1:</u> <u>Strategy 2:</u> Program will see <ul style="list-style-type: none"> - an increase in women of child-bearing age completing timely, adequate syphilis treatment, - a decrease in congenital syphilis in the community. <u>Strategy 3:</u> Increased access to family planning/contraceptive options

Appendix 10: NYCDOHMH Pre and Post Implementation Evaluation Data and Results

Domain	Definition	Implementation			Post-Implementation			Pre- vs. Post-Change in %
		(Jun 2019 to May 2020)			(June 2020 to May 2021)			
		N	D	%	N	D	%	
Data quality and completeness								
Completeness of pregnancy status	Proportion of PWAMBP with known pregnancy status	568	608	93%	859	888	97%	3.5%
Completeness of estimated due date	Proportion of people who are pregnant with non-missing estimated due date documented	69	123	56%	101	162	62%	11.1%
Completeness of first prenatal care date	Proportion of people linked to a congenital syphilis case with non-missing first date of prenatal care	10	13	77%	17	21	81%	5.2%
Completeness of substance use variables	Proportion of PWAMBP with key substance use variables (heroin, methamphetamine, crack, cocaine, nitrates/poppers, injection drug use, erectile dysfunction medications, other drugs) answered as: Yes, No, or Refused	367	608	60%	650	888	73%	21.3%

Domain	Definition	Implementation			Post-Implementation			Pre- vs. Post-Change in %
		(Jun 2019 to May 2020)			(June 2020 to May 2021)			
		N	D	%	N	D	%	
Completeness of sex behavior variables	Proportion of PWAMBP with key sex behavior variables (sex with male, female, or MSM partners, sex in exchange for drugs/money, sex with anonymous partners, sex while high, sex with a partner who injects drugs, sex with partners met on-line) answered as: Yes, No, or Refused	328	608	54%	637	888	72%	33.0%
Completeness of incarceration variable	Proportion of PWAMBP with incarceration status answered as: Yes,	368	608	61%	693	888	78%	28.9%

Timeliness

Timeliness of investigations	Proportion of syphilis investigations conducted within 14 weekdays of initiation among PWAMBP	423	608	70%	689	888	78%	11.5%
Timeliness of partner services interviews	Proportion of partner services interviews conducted within 30 weekdays of initiation among PWAMBP	285	608	47%	520	888	59%	24.9%

Appendix 11: Tarrant County Logic Model

Inputs	Activities	Outputs	Outcomes		
<p>What resources will go into the project (e.g., staff, money, time, partnerships)?</p> <p>Staff: HIV/STD/TB Program Manager, HIV/STD Operations Manager, Arlington First Line Supervisor, TCCSL (DIS), HIV/STD Surveillance Team</p> <p>Data Sources: TCPH CS Tracker, TCPH Project Data spreadsheet, case investigation outcomes pre/during/post implementation (Maven)</p> <p>Target population: Pregnant women newly diagnosed or re-infected with Syphilis (identified by TCPH Surveillance)</p> <p>Other Resources: Twenty-five thousand dollars to be utilized for project interventions.</p>	<p>What activities, events, or strategies will be implemented?</p> <ul style="list-style-type: none"> ✓ Develop & maintain the TCPH Project Data spreadsheet ✓ TCCSL follow-up (phone calls) to confirm appointment attendance & treatment completion prior to delivery ✓ TCCSL provide intervention (phone calls/field visits) to non-compliant patients ✓ Provide CS education materials to OBGYN facilities in Tarrant County. 	<p>What and how many products will result from the activities?</p> <ul style="list-style-type: none"> ✓ 1 TCPH project data spreadsheet ✓ 2 follow-ups (on average) to the prenatal care provider ✓ 2 follow-ups (on average) to pregnant women that do not attend 28 – 32wk appt. or complete treatment. ✓ 5 Tarrant County OBGYN facilities provided education materials 	(Outcomes should ideally have associated baseline and follow-up data to measure change)		
			<i>Short</i> 3-6 months	<i>Medium</i> 6-9 months	<i>Long</i> 9-12 months
			<ul style="list-style-type: none"> ✓ Identified barrier trends for missed appointments. (collection of baseline data to occur during this project) ✓ Disseminate Congenital Syphilis Infographic to provider(s) on prevalence of CS in Texas & Tarrant Co. along with current CDC treatment recommendations. 	<ul style="list-style-type: none"> ✓ Increase in the number of newly infected pregnant women receiving adequate treatment prior to delivery. ✓ Increased reporting/communication between OBGYN providers and TCCSL. ✓ Increase in the number of newly infected pregnant women testing at 28th wks of gestation. 	<ul style="list-style-type: none"> ✓ Decreased Congenital Syphilis Morbidity in Tarrant County. ✓ Decrease in the number of negative CSI determinations (Confirmed, Probable, Stillbirth)

Appendix 12: Tarrant County Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/Sources
Evaluation Goal 1: Decrease the number of negative Congenital Syphilis investigation determinations.		
<ul style="list-style-type: none"> • <i>Has the number of Congenital Syphilis cases in Tarrant County decreased?</i> 	<ul style="list-style-type: none"> • <i>Number of negative vs. positive CSI determinations</i> 	<ul style="list-style-type: none"> • <i>2020, 2021, 2022 TCPH CS Tracker</i>
<ul style="list-style-type: none"> • <i>How many patient follow-ups were connected to positive determinations?</i> 	<ul style="list-style-type: none"> • <i>Number of patients received follow-ups</i> 	<ul style="list-style-type: none"> • <i>2021, 2022 Project Data Spreadsheet</i>
<ul style="list-style-type: none"> • <i>What is the leading cause of negative determinations?</i> 	<ul style="list-style-type: none"> • <i>Number of patients following through after TCCSL intervention</i> 	<ul style="list-style-type: none"> • <i>2021, 2022 Project Data Spreadsheet</i>
	<ul style="list-style-type: none"> • <i>Number of patients not adhering to treatment plan, late diagnosis (<30 to delivery) or provider treatment regimen</i> 	
	<ul style="list-style-type: none"> • <i>Number of patients that tested for syphilis at 28-32 weeks gestation</i> 	
Evaluation Goal 2: Define the communication regularity between community sector and population health navigators.		
<ul style="list-style-type: none"> • <i>What is the average number of TCCSL and community partner calls resulting in a positive CSI determination?</i> 	<ul style="list-style-type: none"> • <i>Number of calls made to the community partner per case.</i> 	<ul style="list-style-type: none"> • <i>2021, 2021 Project Data Spreadsheet</i>
<ul style="list-style-type: none"> • <i>What type of provider training/education is needed to decrease CS cases?</i> 	<ul style="list-style-type: none"> • <i>Number of negative determinations due to inadequate treatment for staging by provider</i> • <i>Missed opportunities for testing during pregnancy</i> 	<ul style="list-style-type: none"> • <i>2021, 2022 Project Data Spreadsheet; Public Health Follow Up & CS Investigations</i>
<ul style="list-style-type: none"> • <i>How many diverse partners can we engage to increase positive determinations?</i> 	<ul style="list-style-type: none"> • <i>Types of facilities (ED, Family Planning, PCP, Urgent Care, etc.) client visited during pregnancy</i> 	<ul style="list-style-type: none"> • <i>2021, 2022 Project Data Spreadsheet;</i>
Evaluation Timeline		

Appendix 13: Duval County Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/Sources
Evaluation Goal 1: Demonstrate that providing syphilis and pregnancy screening to WCBA at a community-based recovery center aids in the identification of syphilis, HIV, and other STDs.		

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| <ul style="list-style-type: none"> • To what extent are WCBA at a community-based recovery center provided sexual health education? • To what extent are WCBA at a community-based recovery center provided pregnancy, syphilis, gonorrhea and chlamydia, and rapid HIV testing when receiving family planning services? • How has this program helped prevent cases of congenital syphilis? | <ul style="list-style-type: none"> • # receiving sexual health education • # of pregnancy tests • # of positive pregnancy tests • # of syphilis screenings • # of positive syphilis screenings • # of gonorrhea and chlamydia screenings • # of positive gonorrhea and chlamydia screenings • # of rapid HIV tests • # of positive rapid HIV tests | <ul style="list-style-type: none"> • Indicators will be tracked through existing data systems (HMS and STARS) |
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Evaluation Goal 2: Demonstrate that WCBA at a community-based recovery center are successfully linked to prenatal care and HIV/STD treatment services.		
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| <ul style="list-style-type: none"> • How has this program impacted linkage to prenatal care? • How has this program impacted treatment rates for syphilis, gonorrhea, chlamydia, and HIV? | <ul style="list-style-type: none"> • Number of referrals to prenatal care • Number of successful linkages to prenatal care • Number of women receiving first trimester prenatal care • Number of syphilis cases treated • % of syphilis cases treated within 14 days • Number of gonorrhea and/or chlamydia cases treated • Number referrals to HIV treatment and care • Number of successful linkages to HIV treatment and care | <ul style="list-style-type: none"> • Indicators will be tracked through existing data systems (HMS and STARS) |
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Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
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Evaluation Goal 3: Demonstrate that providing DIS services to WCBA at a community-based recovery center ensures that sexual partners are tested and treated.

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| <ul style="list-style-type: none"> To what extent has this program impacted partner services? | <ul style="list-style-type: none"> Number of partners tested Number of partners treated | <ul style="list-style-type: none"> Indicators will be tracked using existing data systems (HMS and STARS) |
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Evaluation Goal 4: Develop an understanding of 1) how the program helps prevent cases of congenital syphilis, 2) barriers and facilitators to implementation, 3) opportunities for program improvement.

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| <ul style="list-style-type: none"> To what extent are women served by this program satisfied with the services they received? How has this program helped prevent cases of congenital syphilis? What barriers impacted program implementation and what factors facilitated success? What opportunities for improvement exist and what lessons were learned? | <ul style="list-style-type: none"> % satisfied with services Description of how the program helped prevent cases of congenital syphilis Description of barriers and facilitators impacting program implementation Description of opportunities for program improvement | <ul style="list-style-type: none"> Customer feedback surveys Indicators 2-4 will be collected through brief interviews with program staff |
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Appendix 14: Duval County Logic Model

Inputs What resources will go into the project (e.g., staff, money, time, partnerships)?	Activities What activities, events, or strategies will be implemented?	Outputs What and how many products will result from the activities?	Outcomes (Outcomes should ideally have associated baseline and follow-up data to measure change)		
			Short 3-6 months	Medium 6-9 months	Long 9-12 months
Gateway Community Services DOH-Duval staff (health educator, DIS, evaluator) WCBA receiving recovery services at Gateway Community Services Health education Pregnancy tests and urine cups Syphilis screening Gonorrhea and chlamydia screening Rapid HIV tests	<p><u>Strategy 1: Services provided to WCBA at Gateway Community Services</u></p> <ul style="list-style-type: none"> Sexual health education Pregnancy screening Syphilis screening Gonorrhea and chlamydia screening Rapid HIV screening <p><u>Strategy 2: Link WCBA at Gateway Community Services to Prenatal Care and Treatment</u></p> <ul style="list-style-type: none"> Prenatal care referral and linkage to care 	<p><u>Strategy 1: Services provided to WCBA at Gateway Community Services</u></p> <ul style="list-style-type: none"> 250 women will receive sexual health education 250 women will be tested for pregnancy 250 women will be screened for syphilis 250 women will be screened for gonorrhea and chlamydia 250 women will be screened for HIV <p><u>Strategy 2: Link WCBA at Gateway Community Services to Prenatal Care and Treatment</u></p>	<p><u>Strategy 1: Services provided to WCBA at Gateway Community Services</u></p> <ul style="list-style-type: none"> Increase in the number receiving sexual health education (Baseline = 0) Increase in the number of pregnancy tests (Baseline = 0) Increase in the number screenings for 1) syphilis, 2) gonorrhea and chlamydia, and 3) HIV (Baseline = 0) <p><u>Strategy 2: Link WCBA at Gateway Community Services</u></p>	<p><u>Strategy 1: Services provided to WCBA at Gateway Community Services</u></p> <ul style="list-style-type: none"> Increase in syphilis case findings (Baseline = 0) Increase in gonorrhea and chlamydia case findings (Baseline = 0) Increase in positive HIV tests (Baseline = 0) <p><u>Strategy 2: Link WCBA at Gateway Community Services to Prenatal Care and Treatment</u></p> <ul style="list-style-type: none"> Increase in number of pregnant women 	<p><u>Strategy 1: Services provided to WCBA at Gateway Community Services</u></p> <ul style="list-style-type: none"> Decrease in congenital syphilis. Improved quality of family planning services and STD services <p><u>Strategy 2: Link WCBA at Gateway Community Services to Prenatal Care and Treatment</u></p> <ul style="list-style-type: none"> Improvements in quality and timeliness of linkage to prenatal care Improvements in timely and adequate

Linkage to prenatal care Treatment Partner services	<p><u>Strategy 3: Partner Services</u></p> <ul style="list-style-type: none"> Treatment for all positive cases DIS will provide partner services for all positive cases. 	<ul style="list-style-type: none"> 100% of pregnant women will be linked to prenatal care 90% of positive cases will be treated within 14 days <p><u>Strategy 3: Partner services</u></p> <ul style="list-style-type: none"> DIS partner services will be provided to 100% of positive cases 	<p><u>to Prenatal Care and Treatment</u></p> <ul style="list-style-type: none"> Increase in number of pregnant women referred and linked to prenatal care (Baseline = 0) Increase in number of women treated for: 1) syphilis, 2) gonorrhea and/or chlamydia, and 3) HIV (Baseline = 0) <p><u>Strategy 3: Partner services</u></p> <ul style="list-style-type: none"> Increase in number of DIS partner services provided 	referred and linked to prenatal care (Baseline = 0) <ul style="list-style-type: none"> Increase in number of women treated for: 1) syphilis, 2) gonorrhea and/or chlamydia, and 3) HIV (Baseline = 0) <p><u>Strategy 3: Partner services</u></p> <ul style="list-style-type: none"> Increase in the number of partners treated 	treatment for: 1) syphilis, 2) gonorrhea and chlamydia, and 3) HIV <p><u>Strategy 3: Partner services</u></p> <ul style="list-style-type: none"> Improvements in quality and timeliness of treatment for partners
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Appendix 15: Tulare Evaluation Design

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
Evaluation Goal 1: Measure utilization of and access to syphilis and congenital syphilis case management/care.		
<ul style="list-style-type: none"> • How many clients are received through the referral process (community organization, Maternal Child and Adolescent Health, or current client)? 	<ul style="list-style-type: none"> • Total scheduled encounters • Percentage of scheduled encounters completed • Total encounters through WIC telehealth kiosk 	<ul style="list-style-type: none"> • Client/telehealth utilization report • Question during initial assessment asking if the person was referred, or if they received an educational pamphlet/card
Evaluation Goal 2: Measure cost reduction associated with delivering care to syphilis and congenital syphilis clients.		
<ul style="list-style-type: none"> • Is there a cost reduction with the telehealth implementation? • How much time is spent on a telehealth client vs one not participating in telehealth services? 	<ul style="list-style-type: none"> • Estimated reduction or avoidance in travel costs • Time spent on telehealth client (sending reminder, encounter, charting, follow-up) • Time spent on non-telehealth client (reminders, in-person visit, calls made to schedule visit, follow-up) • Total time saved by not traveling to meet client 	<ul style="list-style-type: none"> • Total telehealth sessions held • Total travel miles avoided by DIS • Tracking log to compare average time spent on non-telehealth client to average time spent on telehealth client
Evaluation Goal 3: Assess outcomes in client adherence to treatment plan.		
<ul style="list-style-type: none"> • Are the telehealth clients maintaining more of their scheduled visits with the DIS? • Are the telehealth clients adhering to their treatment plan more than clients not using telehealth services? 	<ul style="list-style-type: none"> • Percentage of scheduled encounters completed • Percentage of telehealth clients (and non-telehealth clients) completing their treatment plan 	<ul style="list-style-type: none"> • Compare adherence rates to personalized treatment plan (per CDC guidelines) between clients using and not using telehealth services • Look at records for treatment plans

Evaluation Questions	Indicators/Measures	Data Collection Methods/ Sources
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Evaluation Goal 4: Assess any changes in partner elicitation

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| <ul style="list-style-type: none"> • Are telehealth clients referring their partners as a result of the use of the telehealth service? | <ul style="list-style-type: none"> • Number of partners referrals by telehealth client • Number of partners referred by non telehealth client | <ul style="list-style-type: none"> • Initial assessment (determine if their referral was from a telehealth or non-telehealth client) |
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Evaluation Goal 5: Determine facilitators or barriers to the implementation of telehealth services for syphilis and congenital syphilis clients.

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| <ul style="list-style-type: none"> • What clients are accessing the telehealth services? • What barriers are preventing the client from using the telehealth service? | <ul style="list-style-type: none"> • Client demographics <ul style="list-style-type: none"> • Total of clients with internet at home • Total of clients using WIC telehealth kiosk • Percentage of clients in rural community • Compile list of barriers expressed during initial assessment • Client refusals <ul style="list-style-type: none"> • Total refusals and total by type | <ul style="list-style-type: none"> • Patient demographics • Initial assessment • Monitor refusal rates <ul style="list-style-type: none"> • (Reasons: uncomfortable with technology, concerned about privacy, other specified) |
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Appendix 16: Tulare Logic Model

Inputs	Activities	Outputs	Outcomes		
			(Outcomes should ideally have associated baseline and follow-up data to measure change)		
			<i>Short</i> 3-6 months	<i>Medium</i> 6-9 months	<i>Long</i> 9-12 months
<p>What resources will go into the project (e.g., staff, money, time, partnerships)?</p> <ul style="list-style-type: none"> LHJ staff Time Money for telehealth subscription service Money to print discrete informational pamphlet. Partnership with WIC Technology 	<p>What activities, events, or strategies will be implemented?</p> <p><u>Strategy 1</u> Conduct Telehealth Feasibility Assessment to enroll client.</p> <p><u>Strategy 2</u> Develop informational pamphlet to educate and reassure clients that telehealth sessions are private and confidential.</p> <p><u>Strategy 3</u> Conduct 1-2 educational presentations quarterly to staff to</p>	<p>What and how many products will result from the activities?</p> <p><u>Strategy 1</u> Cost reduction</p> <p><u>Strategy 2</u> 75-100% of clients will have trust and confidence that their personal health information will not be disclosed.</p> <p><u>Strategy 3</u> 75-100% of staff will be able to list the benefits of using telehealth.</p>	<p><u>Strategy 1</u></p> <p><u>Strategy 2</u> Increase awareness and knowledge of telehealth services.</p> <p><u>Strategy 3</u> Change attitudes of telehealth services</p>	<p><u>Strategy 1</u></p> <p><u>Strategy 2</u></p> <p><u>Strategy 3</u></p>	<p><u>Strategy 1</u></p> <p><u>Strategy 2</u></p> <p><u>Strategy 3</u></p>

	<p>highlight the benefits of using telehealth.</p> <p><u>Strategy 4</u> Outreach with community partners to educate them about the new telehealth feature for syphilis clients.</p> <p><u>Strategy 5</u> Conduct 1-3 staff trainings on how to use the new telehealth technology</p>	<p><u>Strategy 4</u> 75-100% of community partners will be knowledgeable about the use and benefits of telehealth.</p> <p><u>Strategy 5</u> 75-100% of staff will feel confident in using telehealth technology</p>			
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