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Best Practices for Rapid Syphilis Testing in Outreach and Non-Clinical Settings

*Lessons Learned from an Evaluation of
Four Local Health Departments*



NACCHO
National Association of County & City Health Officials

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For more information on this project or to submit questions, contact NACCHO's HIV, STI, & Viral Hepatitis Team at hsvh@naccho.org.

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BACKGROUND

Left untreated, syphilis can cause severe medical issues. Increased testing and reduced time to treatment are essential for combatting rising syphilis rates. The rapid syphilis test (RST) stands to be an important tool for the expansion of syphilis testing in outreach and other non-clinical settings. Performing the RST in community settings can reduce barriers to testing, especially among populations at high risk for syphilis, and can provide additional access points for healthcare. This demonstration project was designed to evaluate use of the RST in non-clinical settings in order to determine best practices for its implementation and identify key factors to consider when planning for its use in outreach settings. This report summarizes project findings and includes two appendix items:

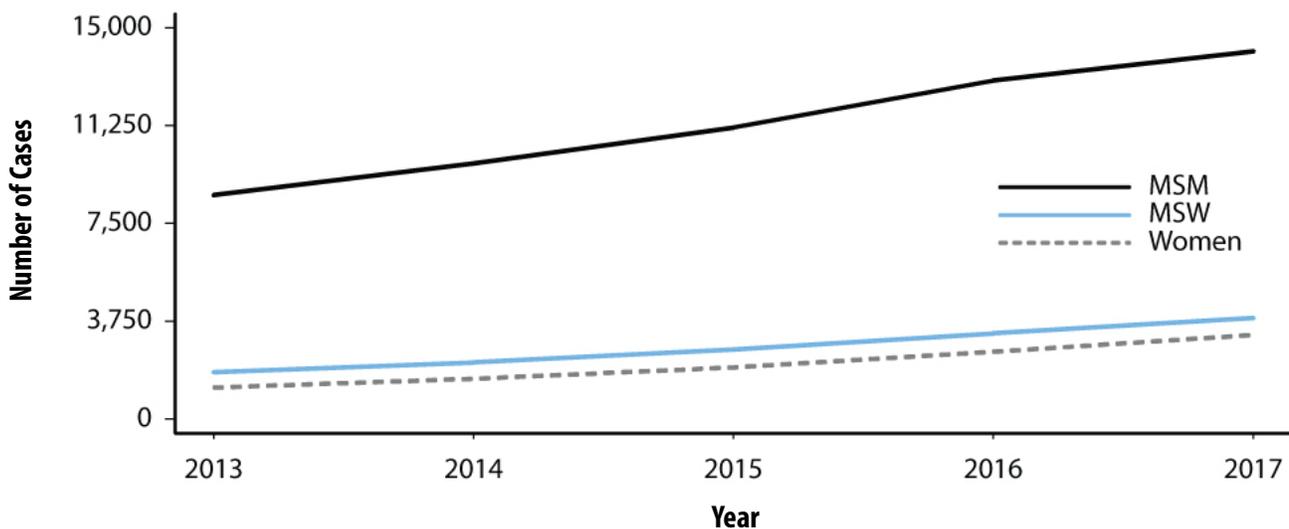
- [Appendix 1](#): Detailed results that highlight the specific aspects of each local health department’s RST implementation approach and testing results
- [Appendix 2](#): Questions to consider regarding implementation of RST in outreach and non-clinical settings

Syphilis in the United States

Syphilis is a sexually transmitted disease/infection (STD/STI) that can have very serious complications when left untreated, but it is simple to prevent and can be cured with the right treatment. Syphilis is divided into stages based on symptoms that present at each stage. The Centers for Disease Control and Prevention (CDC) generally combines the two stages that are most likely to show symptoms — primary and secondary syphilis — together for case counts. After a historic low in the late 1990s, there was an alarming 76% increase in reported cases of syphilis in the United States from 2013 to 2017.

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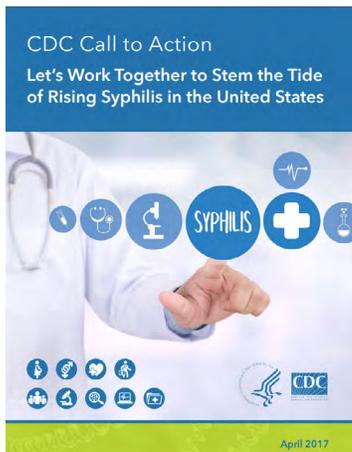
Figure 1. Primary and Secondary Syphilis – Reported Cases by Sex and Sexual Behavior, 37 States*, 2013- 2017¹



*37 states were able to classify $\geq 70\%$ of reported cases of primary and secondary syphilis as either MSM[†], MSW[†], or women for each year during 2013–2017.

[†] MSM = Gay, bisexual, and other men who have sex with men (collectively referred to as MSM); MSW = Men who have sex with women only.

As in previous years, in 2017 the rate of syphilis cases among men was significantly higher than the rate among women, with men accounting for 87.7% of syphilis cases, 58% of which were among men who had sex with men (MSM). While the rate among women is much lower, it more than doubled from 2013-2017, an increase of 155.6%. Additionally, since 2013, the rate of congenital syphilis — which is transmitted from mother to baby during fetal development or at birth - transmission to the fetus in utero) has increased each year. In 2017, there was a total of 918 reported cases of congenital syphilis, including 64 syphilitic stillbirths and 13 infant deaths, which represents a 153.3% increase relative to 2013.²



In April 2017, the CDC released their [Syphilis Call to Action](#) in response to these rising rates. The report calls for creating new tools to detect and treat syphilis, increasing testing for syphilis, controlling further spread of syphilis, and improving electronic medical records to improve patient outcomes. Specifically, for health departments, the Call to Action suggests strategies for both reducing congenital syphilis and syphilis in MSM including partnering with healthcare providers to support them in correctly screening, interpreting results, and diagnosing and treating syphilis, partnering with patient advocacy groups to engage communities and develop and promote programs directed towards educating individuals about the risks and prevention of

syphilis. Directly related to this implementation project, the CDC suggests public health departments should address barriers to obtaining care and conduct targeted screening in various settings.

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Rapid Syphilis Testing

Syphilis screening in outreach settings has historically used a combination of laboratory-based tests comprised of the rapid plasma reagin (RPR) assay, followed by a reflex confirmatory Treponema pallidum Particle Agglutination (TPPA) test when there was a positive RPR. RST using finger-stick sampling rather than a complete blood draw has emerged as an alternative to traditional laboratory-based testing methods. In 2014, the U.S. Food and Drug Administration granted Syphilis Health Check™ a Clinical Laboratory Improvement Amendments waiver. Syphilis Health Check™ is a rapid treponemal syphilis screening test and is currently the only commercially available RST in the U.S. It uses blood from a finger stick and delivers results in approximately 10 minutes. The test has limited sensitivity and specificity and will yield a positive result if a person has ever had syphilis, therefore requiring a confirmatory test to determine current syphilis infection.

PROJECT OVERVIEW: IDENTIFYING OPTIMAL USES OF THE RAPID SYPHILIS TEST IN OUTREACH AND NON-CLINICAL SETTINGS

There have been limited published studies on RST performance in outreach settings in the U.S., and those that have been conducted primarily focus on the performance of the test regarding its sensitivity and the degree to which it reduces time to treatment. To support health departments and other entities interested in using the test, it is also critical to better understand implementation practices and identify optimal uses for RST.

In 2016, NACCHO received funding from the CDC Division of STD Prevention to evaluate local health department RST implementation efforts in non-clinical settings. The evaluation was conducted with four competitively selected local health departments: Crater Health District (Virginia), Pima County Health Department (Arizona), Salt Lake County Health Department (Utah), and San Joaquin County Public Health Services (California).

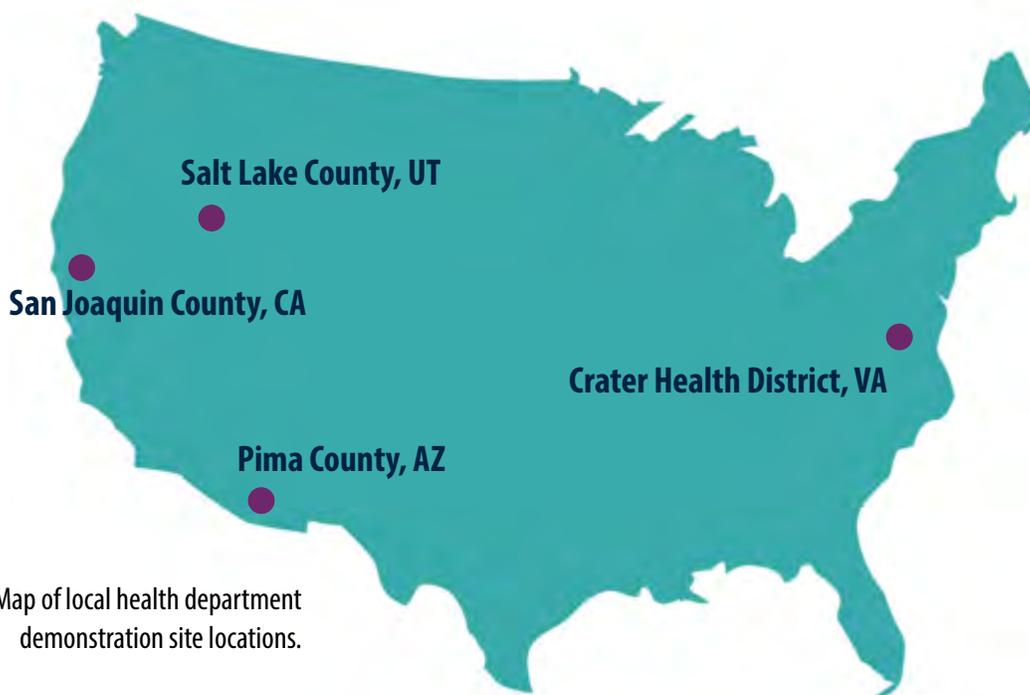


Figure 2. Map of local health department demonstration site locations.

The local health departments received subawards from NACCHO to support purchase of the RST, as well as other costs associated with project implementation. Trinity Biotech, the only distributor of the RST at the time, conducted on-site training for the test with each health department. NACCHO, in partnership with the CDC and Positive Health Impact, LLC (PHI), who was contracted to lead the evaluation, provided technical assistance.

The evaluation period for each local health department differed, however most sites initiated RST use in early- to mid-2017 and completed the evaluation by early 2018. Each health department selected the population(s) of focus and settings for testing. Data from client intake forms, test logs, and treatment records was collected and PHI conducted interviews with four to six staff at each health department to gather lessons learned.

Project Findings

Table 1 summarizes key information and findings by site, including the target populations for testing, where testing occurred, and the testing results. Although results and experiences were mixed across the four sites, current syphilis infections were identified by each and two of the four sites planned to continue use of the RST. For one of the sites not planning to continue use, the primary reason given was due to lack of funding and for the other, it was due to limited capacity to ensure linkage to confirmatory testing and treatment for those testing positive. See [Appendix 1](#) for site-specific information for each health department.

Table 1. Target Populations, Testing Sites, and Testing Results, by Local Health Department

	Crater County, VA	Pima County, AZ	Salt Lake County, UT	San Joaquin County, CA	Total
Target Population	<ul style="list-style-type: none"> • Persons in correctional facilities • People ages 18-24 years 	<ul style="list-style-type: none"> • MSM • Hispanic persons • People under 40 years 	<ul style="list-style-type: none"> • MSM 	<ul style="list-style-type: none"> • Persons experiencing homelessness 	--
Testing Sites	<ul style="list-style-type: none"> • Riverside Regional Jail • Virginia State University 	<ul style="list-style-type: none"> • Bars • LGBTQ festivals • Family planning clinics 	<ul style="list-style-type: none"> • Outreach testing events (Pride festival, Utah AIDS Foundation HIV testing) 	<ul style="list-style-type: none"> • Homeless shelters • Street outreach • Rehabilitation center 	--
Number of Tests Conducted	96	194	582	401	1,273
Number of Reactive Tests	8 (8%)	8 (4%)	19 (3%)	58 (14%)	93 (7%)
Number of People Who Received Confirmatory Testing	6 (75%)	6 (75%)	19 (100%)	34 (59%)	65 (70%)
Confirmed Cases	1	3	10	20	34
Individuals Treated	1	5 [^]	10	23 [#]	39
Confirmed Cases Among RSTs Conducted	1.0%	1.5%	1.7%	5.0%	2.7%
Plans to Continue RST at Time of Project Completion	No	Yes	Yes	No	--

[^] Individuals treated without confirmatory test and partner of confirmed individual treated presumptively

[#] Individuals treated regardless of diagnosis

Lessons Learned

Several lessons were learned from the experiences of the demonstration sites. These lessons provide critical information regarding best practices and optimal uses for the RST in outreach and non-clinical settings.

Support from leadership is essential for success, especially given the need for additional resources and staffing to conduct RST.



Adding RST to existing testing efforts requires additional resources, including staffing. If there is not an existing outreach testing structure for RST to be added to, resource needs are likely to be higher. In addition to purchasing the testing supplies, staff time is required to ensure training for RST use, coordinate logistics for testing events, manage relationships and responsibilities with partner organizations (if applicable), perform or arrange the blood draws, coordinate or ensure confirmatory testing and treatment for those that test positive, and manage the data and surveillance-related aspects of RST. Additionally, staff time and resources to develop messaging and strategies for educating and promoting the availability of RST could support the program's success. While multiple staff are likely to perform these functions, having a dedicated person to coordinate or oversee the process and promptly troubleshoot unexpected issues was recommended by sites, especially those working with multiple partners.

As with most decisions regarding funding and staffing, having support and buy-in from health department leadership, as well as others associated with decision-making around funding, will be critical to the success of an RST program. To gain their support, utilize local data and other resources, such as the CDC Syphilis Call to Action, to demonstrate need for increased access to syphilis testing and the role of RST in improving health outcomes for people with syphilis.

Leveraging existing resources, partnerships, and community trust by incorporating RST into existing outreach testing programs is optimal.



The experiences of the four demonstration sites showed that it is highly beneficial if there is an existing outreach STD/HIV testing structure that RST can be added to. Having an existing structure to build RST into reduces upfront resource investment and planning because staffing, partnerships, outreach strategies, processes for linkage to care and treatment, and space/venues for testing are already in place. Bundling RST with other STD/HIV testing helps to optimize time for both staff and clients, presenting opportunities for efficiency with resources, as well as the ability for multiple funding streams to support combined outreach testing efforts.

Partnering with entities that are well-respected and trusted in the community will support RST efforts by providing access to existing connections to and relationships with populations prioritized for RST. Through established outreach testing programs, some of these partnerships may already be in place, as well as existing testing events that reach the target population. Utilizing existing relationships and structures was helpful for uptake and buy-in regarding RST. To build and maintain partnerships and community trust, some of the demonstration sites were able to provide transportation to clinics for confirmatory testing and treatment and incentives for testing, such as food, gift cards, or health education "goodie bags" which they felt was helpful and other sites would consider doing this in the future.

Training, start-up planning, and quality improvement are necessary for successful RST programs.

In addition to the onsite training for the use of RST, which was provided by Trinity Biotech, each of the local health departments expressed the importance of additional training and preparation for implementing RST. For example, setting up a mock testing event before going into the field was recommended to ensure staff feel prepared and to identify potential issues. This is particularly important for outreach testing in venues or settings that are fast-paced and have a high volume of testing. Additional training may also be needed if the staff who will be performing the testing do not normally conduct the type of activities associated with outreach testing. For example, one of the sites planned to use Disease Intervention Specialists, or DIS, to conduct testing; however, their normal activities were primarily performed from the office via phone outreach. In such cases, additional training and ongoing support will be necessary to ensure staff are comfortable with field-based, in-person outreach and using the RST.

Once staff feel confident about using the test itself, it is important to plan for and walk through the logistics for the testing events, including tasks like client intake, testing, providing counseling/education, and conducting follow-up, among others. Clear roles and responsibilities are essential when multiple staff are involved at different stages of the process. Lastly, continuous quality improvement is crucial to successfully rolling out and maintaining an RST program. This should include monitoring staff workload to determine staffing patterns that work best for different testing sites.

A key issue for training, planning, and quality improvement was communication with individuals being tested. Effective use of the RST requires streamlined processes and protocols for communicating results to the individuals being tested, offering confirmatory testing, and providing treatment for those that test positive. For example, given the atmosphere and other considerations when testing at a bar or festival, one of the sites would call or text within 24-72 hours of testing to deliver the test results. Not only did this serve as a more efficient means for communicating the test results and coordinating follow-up if needed, it also addressed confidentiality concerns. Other processes or protocols used to support communication about RST testing results and follow-up included existing HIV linkage to care protocols and protocols for presumptive treatment in the case of a positive syphilis test in an outreach setting.



These lessons learned underscore the importance of assessing program infrastructure, capacity, and existing processes and protocols as part of the planning process for the RST. Table 2 highlights some of these key considerations and how they factored into the experiences of the four sites. For more detailed information, see [Appendix 1](#). Based on the experiences of project sites, a list of questions to consider was developed to inform and guide decision-making in regard to implementation of the RST in outreach and non-clinical settings (see [Appendix 2](#)).

Table 2. Key Infrastructure and Capacity Considerations for Rapid Syphilis Testing by Local Health Department

	Crater County	Pima County	Salt Lake County	San Joaquin County	Notes
Regular HIV/STD outreach program(s) into which RST can be integrated	✓	✓			Though Crater had existing STD outreach programs, in this case, RST was offered as a standalone test for the pilot.
Adequate staffing, including a point person to oversee process from client outreach through treatment		✓	✓	✓	Crater’s project was delayed by needing to hire staff, but all the sites recognized the essential role of adequate staffing and the need for someone to oversee the RST project.
Existing linkage to care protocol for syphilis	✓	✓	✓		The existence of established protocols for syphilis made the process smoother.
Existing protocol to rapidly assess prior infection of reactive RST clients			✓		Pima’s experience showed that existing client-matching and record-keeping processes originally developed for HIV may not be enough.
Additional funding to leverage	✓	✓	✓	✓	All sites leveraged existing funding to pay for staff time, supplies, surveillance, and/or administrative costs.

CONCLUSION

The experiences of the four local health departments participating in this project indicate that there are significant possibilities for the use of the RST in outreach and non-clinical settings. Optimal use of the RST will vary by setting and population but can provide great value to increasing syphilis testing. Data-driven decision-making about if, and how, to implement the RST is essential for success. Health departments must consider the populations most impacted by syphilis in their jurisdiction, trends in syphilis infection, infrastructure and capacity for outreach testing, and availability and access to care for confirmatory testing and treatment. For example, rapid syphilis testing may not be appropriate for populations facing significant barriers to follow-up, unless confirmatory testing and treatment can be provided in the field or otherwise facilitated.

Rapid syphilis testing in outreach and non-clinical settings stands to be an important tool for combatting rising syphilis rates by increasing testing and reducing time to treatment among high-risk populations. It offers health departments, as well as other community partners that conduct STD testing, an important opportunity to take syphilis testing to those communities who may not otherwise access STD testing services, interrupt the transmission of syphilis, and achieve better health outcomes for their communities.

REFERENCES

1. Centers for Disease Control and Prevention. (2018). Primary and secondary syphilis – Reported cases by sex and sexual behavior, 37 states*, 2013- 2017. [Graph]. Retrieved from <https://www.cdc.gov/std/stats17/figures/41.htm>.
2. Centers for Disease Control and Prevention. (2018). Sexually transmitted disease surveillance, 2017. Atlanta: U.S. Department of Health and Human Services.

Appendix 1: Detailed Project Results by Local Health Department Demonstration Site

Crater Health District (Virginia)

The Crater Health District in southern Virginia serves a population of approximately 150,000 residents, covering three small cities and five counties. It is a state-city/county cooperative health service agency which operates seven local health departments. Syphilis infections in the District have risen sharply since 2011. Between 2011 and 2015, the reported number of syphilis cases rose an average of 41.2% annually. Young adults age 18-24 and individuals in correctional facilities are among the populations at highest risk for syphilis infection in Crater. As such, the District selected a state university and a regional jail as the locations for RST implementation for this project.



The health department partnered with Minority Health Consortium (MHC) to conduct RST at each testing location. MHC is a private, not-for-profit organization that serves racial/ethnic minority populations, especially those at highest risk for HIV infection. MHC is a longstanding partner of the health department and is trusted and well-respected in the community. Both the health department and MHC leveraged existing relationships with Virginia State University and Riverside Regional Jail to facilitate RST implementation in each setting.

From September 2017 to February 2018, 96 RSTs were conducted. Eight individuals had a reactive test, six underwent confirmatory testing, and one was confirmed to have a current syphilis infection (a young male from the correctional facility). More than half of the people tested were under 25 years of age. Both males and females with reactive RST results were more likely than those with non-reactive RST results to report male sexual partners and having used injection drugs within the last 12 months.

If the RST was positive, MHC staff contacted the health department who assigned a Disease Intervention Specialist (DIS) to follow-up with the individual to draw blood for the confirmatory test. At Riverside Regional Jail, treatment for confirmed active syphilis could be received at the on-site clinic. For students at Virginia State University, they would be contacted by the DIS and given instructions on how to receive treatment at the health department clinic.

One of the key findings for the Crater Health District was the importance of strong partnerships and well-coordinated communication about implementing partners. The health district (as well as the Central Office at the state health department) and MHC each played a unique role in the testing process. During interviews conducted with project staff, it was reported that having a designated individual to coordinate the process from start to finish would likely have increased the efficiency of their approach to RST.

At the end of the project period, Crater Health District and its partners reported that they were interested in continuing RST. However, to do so, they would need additional resources, which were not available at the time.

Pima County Health Department (Arizona)

Pima County has more than 980,000 residents, includes the second largest city in Arizona – Tucson, and, at the same time, more than a third of its population live outside of any incorporated city or town. In 2014, the health department’s STD program noticed a dramatic increase in the number of syphilis cases being reported, prompting the development of a county-wide syphilis response plan. The groups most at-risk for syphilis in the county and that were the focus populations for the project were those under 40, those who identify as men who have sex with men (MSM), and those who identify as Hispanic.



Given the high rate of HIV and syphilis co-infection in the county, the health department decided to add RST to existing HIV rapid testing outreach activities conducted at social venues frequented by the target populations, particularly gay bars and LGBTQ festivals. Individuals with a reactive RST were instructed to come to the health department clinic for confirmatory testing and most received treatment on the same day as the confirmatory testing.

The health department conducted 194 RSTs from January 2017 to January 2018. Eight individuals had a reactive test, six received confirmatory testing, and three cases were confirmed positive. Of the 174 individuals tested who reported gender, 69% identified as male, and 79% of those males identified as MSM. The age range of those tested was 13 to 75 years, with a median age of 36, and 48% of those tested identified as Hispanic. Twelve individuals were screened more than once, including one individual who was screened six times. Those with a reactive RST were more likely to report having a previous syphilis infection and to report “no” when asked if they used condoms. An estimated 50% of those reached had not accessed any county health department STD services in the last three years, demonstrating that RST use was effective for reaching individuals not regularly utilizing testing services.

The health department has a more than 20-year relationship with the main bar where they performed outreach and their mobile testing van is considered “almost an extension of the bar,” so it was relatively easy to incorporate RST into their existing work there. Additionally, health department staff were well connected with the target populations on social media, which supported their outreach for RST.

By utilizing their existing HIV testing outreach process, many of the components needed for RST, including staff, partnerships, outreach strategies, linkage to treatment, and space to conduct the tests, were already in place. Additionally, their experience providing rapid HIV testing helped in securing leadership support for offering the RST, as leadership was familiar with the process and some of the resources needed were already in place.

Since the RST yields a positive result regardless of whether the individual is actively infected with syphilis or had a previous infection, it is important to have records of past syphilis confirmatory tests and treatment to identify present infections as new infections. Without records of previous tests and treatment, there is no way to know, without confirmatory testing, whether a positive test reaction is a new syphilis infection. In Pima, there was no written protocol for how clients would be matched with previous tests and treatments for syphilis. A recommended improvement to their process was to develop written guidance for client matching. The health department intended to use Communicable Disease Investigators (CDIs), also known as DIS, to

perform the testing. CDIs are trained in client outreach and follow-up, which was a benefit for the RST process. However, in Pima County, CDIs primarily conduct outreach from their office by telephone, as opposed to field-based or in-person outreach. As such, having CDIs conduct field-based RST represented a shift in function that would require more resources for training and support, as well as add to the responsibilities and workload for CDIs. While the CDIs were trained to do RST, they ultimately were not the ones to perform the test during the project period.

At the end of the project period, the Pima County Health Department planned to continue using the RST in conjunction with HIV and other STD testing in outreach settings, in addition to continuing use of traditional blood draws for populations likely to have had a previous syphilis infection as the health department can draw and process blood on their mobile unit. For high-risk MSM or individuals who are unsure if they had a previous syphilis diagnosis, the health department will do a blood draw either in addition to or in place of the RST to ensure that the opportunity for a confirmed diagnosis is not missed while the patient is available. Since the project ended, CDIs have become more involved in outreach activities and are now performing RST and RST is being used more frequently in clinic settings, as well.

Salt Lake County Health Department (Utah)

Salt Lake County, which includes 16 cities and 6 townships, has a population of more than one million residents. It is the most populous county in Utah and includes the state's largest city, Salt Lake City. Starting in 2012, Salt Lake County began experiencing increasing rates of syphilis. In 2016, the number of diagnosed syphilis cases was 121, representing a large increase from the 73 cases in 2015.

Males represented most of the cases diagnosed from 2011 to 2015, with over 90% of the cases among males occurring among those who identified as MSM. Additionally, about 50% of syphilis cases were co-infected with HIV.



The target population for RST in Salt Lake County was MSM. From March to October 2017, 582 RSTs were conducted alongside HIV rapid testing. Tests were conducted at various venues and events frequented by MSM, such as an existing Utah AIDS Foundation HIV rapid testing program, the Utah Pride Festival, the health department's outreach night, and at MSM night clubs and sex parties. To increase awareness of RST, the health department used tailored and creative social media messaging. Of the 582 individuals tested, 89.2% were male and 78% identified as MSM. Clients with reactive RSTs were more likely to be Hispanic and have sex with partners they met online or via an app than those with a non-reactive RST. Only 5% reported injection drug use and just over one percent were living with HIV. Nineteen individuals had a reactive syphilis test and all those individuals received confirmatory testing. Ten cases were confirmed positive and all received treatment. The median time between testing and treatment was two days.

Since most testing took place at festivals or in other social settings, it was essential that confidentiality was maintained for individuals while they were waiting pre- and post-test, while the testing was being done, and when the results were given. To maintain confidentiality in such settings, the health department noted that additional staff may be needed to manage lines and ensure distance between individuals is maintained throughout the testing process. Careful consideration must also be given to how the testing space is set up.

Conducting RST requires dedicated resources, even when utilizing existing infrastructure. The health department found that RST, in conjunction with rapid HIV testing, was most efficient when at least two staff members conducted the testing at each location. This was determined by continually monitoring staff workload to assess optimal staffing patterns for each testing site and individual staff member. Staff also noted the importance of developing written protocols, such as for taking client histories, logistics (e.g., client flow), follow-up procedures in the case of a reactive RST, and presumptive treatment for those with a reactive RST.

At the end of the project period, the health department planned to continue RST in conjunction with their HIV testing efforts.

San Joaquin County Public Health Services (California)

San Joaquin County has a population of almost 700,000 in northern California's Central Valley. Although it is one of California's smaller counties, it has high population density and is growing rapidly. Stockton is the largest city in the county. Syphilis cases in San Joaquin County have risen steadily since 2009 and infection rates continually surpass the statewide rate. It is estimated that over 20% of syphilis cases occur within the county's homeless population, who were the target population for the project.



RST was conducted in homeless encampments, at the men's shelter in Stockton, and at a rehabilitation facility. Transportation to the clinic for confirmatory testing and treatment was provided by the health department. The health department subcontracted with Gleason House, a community clinic, to provide treatment. A total of 401 RSTs were conducted from April to October 2017. Fifty-eight individuals had a reactive test, 34 of those individuals completed confirmatory testing, and 20 cases were confirmed positive. All 20 confirmed cases were treated, and another 3 clients were treated presumptively but not confirmed to be infected. For the 23 treated clients, the median time between the RST and treatment was one day. Seventy-three percent of clients tested were homeless and 74% reported using drugs in the last 12 months. Individuals with a reactive RST were more likely to be female and Hispanic than those with non-reactive results and were also more likely to have been tested at a homeless encampment in the city of Stockton, have reported experiencing symptoms, and reported being previously diagnosed with syphilis or another sexually transmitted disease.

The RST project team included a program coordinator, epidemiologist, public health nurse (who performed the tests), DIS (who managed clients and performed outreach, intake, and follow-up), health educators, and interns who assisted with record keeping and data entry. Before beginning testing, the team went through extensive preparations, including doing a mock testing event. Additionally, after each testing event, the team did a quick but structured debrief to immediately implement improvements during subsequent testing events. One change that came out of the debriefing process was the assignment of additional staff for testing events to ensure that the intake and testing process was orderly, efficient, and fair.

While the health department had experience providing outreach services in homeless encampments, they did not have an existing rapid testing infrastructure, which posed a challenge. The team recognized the need for more staff to complete the tests and manage the high volume of clients. Additionally, because they

were not able to incorporate RST into existing outreach testing, they had to order all the clinical supplies to perform the tests and more resources than anticipated were spent to conduct follow-up and transport individuals who had a reactive RST for confirmatory testing and treatment. Additional challenges were experienced on account of changing locations of the homeless encampments and the summer heat, which slowed the pace of testing. In the future, staff noted they would recommend partnering with the Emergency Preparedness Department to support planning, logistics, event documentation, and inventory control.

At the end of the project period, the health department determined it would not continue use of the RST due to the resources required and the challenges they faced in reaching clients for confirmatory testing and treatment. For their homeless population, it was noted that it would have been ideal to offer treatment in the field through a mobile clinic. Nevertheless, project staff noted that the important lessons learned about client outreach and testing logistics would be applied to other community-based STD testing efforts in the county.

Appendix 2: Questions to Consider Regarding Implementation of RST in Outreach and Non-Clinical Settings

These questions were derived from the experiences of the four participating local health departments.

Leadership Support

1. Whose support is needed in order to implement RST? Consider the following individuals:
 - a. Local health official
 - b. Medical officer
 - c. Laboratory director
 - d. Clinic director
 - e. STD program staff
 - f. State health department
 - g. Community partners
2. Do leaders understand the prevalence and incidence of syphilis in your community and its health impacts? If not, what can you share with them about syphilis in your jurisdiction?
3. What does leadership know about RST? Do they have any concerns about its accuracy or application in your jurisdiction?

Use of the RST: Limitations, Costs, and Benefits

1. Do the priority populations for RST have a high likelihood of having a previous syphilis infection?
2. Are staff and leadership comfortable with the possibility of having false positive or discordant results? What systems and processes will be put into place to address this potential testing outcome?
 - a. Would a false positive or discordant result cause harm to the patient?
 - b. What messaging will be used for patients if they receive a false positive or discordant result?
 - c. What protocols exist or will need to be put in place regarding the provision of treatment and linkage to confirmatory testing?
3. Will weather affect the ability to maintain proper temperature controls, especially if testing outdoors?
 - a. If weather conditions present a challenge, what can be done to address this challenge, such as testing during specific times of the day that tend to be cooler?
 - b. What is the safety plan in the case of extreme or dangerous weather conditions?
4. How much will RST implementation cost?

Existing Program Infrastructure and Resources

1. What existing STD/HIV outreach programs exist for RST integration?
2. Is there adequate staff to oversee RST, including a point-person to oversee the RST process from client outreach to treatment?
3. What, if any, protocols or tools exist to rapidly assess if a client has had a prior syphilis infection?
4. What, if any, protocols exist to link RST reactive clients to confirmatory testing and treatment?
5. What funding is available for purchasing RST and supporting implementation activities, including training, outreach efforts, testing staff, follow-up, and data management?

Potential Legal and Administrative Barriers

1. Have there been any major administrative decisions that may affect staffing, funding, or the flow of information (e.g., recent department restructure)?
2. Who is authorized to conduct rapid testing? Is a phlebotomy license needed?
3. How much time is required to approve contracts and memorandums of understanding/agreement to procure supplies (e.g., the tests kits, lancets, pipets)? What potential delays may occur?
4. Is adequate storage available for test supplies?

Understanding the Priority Populations and Your Client Base for RST

1. How will clients find out about RST?
 - a. Are there community leaders who can help spread the word?
 - b. Are there promotional/outreach materials that can be updated to include RST?
 - c. What venues and events provide opportunities to reach priority populations with information about RST, as well as the option to test, if it is being offered at the time?
2. What motivations do potential clients have to get tested for syphilis?
 - a. How will you help motivate people to consider RST? Will incentives be offered?
3. How can testing be set up so it's most convenient for clients?
4. Will clients face significant barriers in returning for confirmatory testing and treatment?
 - a. What can you do to facilitate the confirmatory process?
 - b. What resources might clients need to come for confirmatory testing and treatment?

Partnerships and External Relationships

1. Will RST be conducted by the health department, contracted out, or both?
2. Will treatment be provided by the health department or another healthcare site?
3. What sites can be used for RST?
 - a. Are there existing relationships/MOUs with those sites?
 - b. If not, who will reach out to potential partners about RST?
4. Are there community partners and/or influencers you can engage for to help identify testing sites and/or conduct outreach to clients about RST?

Planning and Practicing for Administering RST

1. Will multiple rapid tests be conducted simultaneously (e.g., HIV and RST)? Will treatment be provided by the health department or another healthcare site?
 - a. If so, what measures will be taken to ensure staff is comfortable conducting one or both tests quickly?
 - b. How will you ensure testing staff receive adequate training, including classroom instruction and practice in real-life scenarios?

2. If high volumes of clients are anticipated, such as at a festival, how will queues and crowds be managed?
3. How will confidentiality be maintained, especially if testing will be conducted where there are crowds of people?
4. Will results be delivered the same day or the next day? (Note: Next day may be more appropriate if testing at celebrations, such parties as festivals, as clients may be more willing to get tested if they are concerned that receiving test results may dampen their mood or the atmosphere at the event.)

Continuously Evaluate and Refine RST Processes

1. If conducting multiple testing events or performing testing regularly, how often will staff meet to debrief the process, outcomes, client satisfaction, etc.?
2. How will lessons learned be documented, stored, and used for continuous quality improvement and future programmatic decision making?
3. What will be the process for and key decisional points required to make decisions about expanding, discontinuing, or revising RST implementation practices?