HHS Public Access

Author manuscript

Sex Transm Dis. Author manuscript; available in PMC 2026 January 01.

Published in final edited form as:

Sex Transm Dis. 2025 January 01; 52(1): 9–13. doi:10.1097/OLQ.0000000000002072.

Facilitators and Barriers of Implementing Expanded Sexually Transmitted Infection Screening in California Family Planning Clinics

Ellen Ehlers, MSW[*], **Laura Kovaleski, MPH**[*], **Sangita Devaskar, MPH**[†], **Sara Kennedy, MD,MPH**[†], **Rosalyn E. Plotzker, MD, MPH**[*,‡]

[*]Sexually Transmitted Diseases (STD) Control Branch, Division of Communicable Disease Control (DCDC), Center for Infectious Diseases (CID), California Department of Public Health

[†]Planned Parenthood, Northern California, Sacramento

[‡]University of California, San Francisco, San Francisco, CA

Abstract

Background: Reportable sexually transmitted infections (STIs) have increased in California, with dramatic rises in prenatal and congenital syphilis. In response, in 2018 Planned Parenthood Northern California implemented two opt-out screening protocols: 1) HIV, chlamydia, gonorrhea, and syphilis co-screening for pregnant patients at pregnancy diagnosis and 2) linking HIV and syphilis screening for all patients.

Methods: Using qualitative analyses, we explored implementation barriers and facilitators that can be addressed by clinical leadership and staff to expand uptake of enhanced screening protocols. Sixteen staff were interviewed across three Planned Parenthood Northern California clinics. Primary thematic analysis followed by secondary sub-analysis identified themes. Analyses of questions were only included for each interviewee if answered and applicable.

Results: Five themes of commentary emerged, featuring both facilitators and barriers for protocol implementation: patient education/communication; staff education/communication; workflow; patient willingness; and (for protocol 1 only) visit complexity at the time of pregnancy diagnosis. Additional findings included: 93% (13/14) stated protocols increased syphilis screening and identification; 100% (12/12) reported positive impacts on patient care; 42% (5/12) noted increases in staff workload, 25% (3/12) reported workload improvements over time and 33% (4/12) reported no workload-related impacts; 86% (13/15) reported decreased screening during the COVID-19 pandemic.

Conclusion: Addressing patient and staff education during the beginning stages of implementation may have positive impacts on willingness to adopt new protocols. Consideration of workflow and visit complexity at pregnancy diagnosis may also aid in successful implementation of expanded STI screening protocols in family planning clinics.

Short Summary:

Correspondence: Ellen Ehlers, MSW, California Department of Public Health, Richmond, CA. Ellen.Ehlers@cdph.ca.gov.

This qualitative study explored implementation barriers and facilitators that can be addressed by clinical leadership and staff to expand uptake of enhanced sexually transmitted infection screening protocols.

Introduction:

In the United States, Sexually Transmitted Diseases (STIs) affected approximately 1 in 5 Americans at any given point in 2018[1]. While some individuals experience STI-related symptoms, STIs such as syphilis, gonorrhea, chlamydia, and HIV are often asymptomatic[2]. Thus, without routine screening, asymptomatic STIs often remain undetected and result in delayed treatment, continued transmission, downstream sequelae, and ongoing costs to the healthcare system[3,4]. Additionally, syphilis and HIV can be transmitted vertically from a pregnant person to their fetus, resulting in congenital syphilis (CS) and perinatal HIV respectively. CS neonatal outcomes include severe birth defects, preterm birth, stillbirth, and neonatal death[5]. Perinatal HIV is similarly associated with preterm birth, stillbirth, and low birthweight[6].

Diagnosis of one STI also increases one's acquisition risk for other STIs, highlighting the need for an integrated approach to infection prevention[7,8,9]. Yet knowledge about STI services, awareness of these conditions, and accessibility of services remain barriers to seeking sexual health care[10,11]. Family planning clinics are essential in the provision of comprehensive sexual health services and are an ideal setting for STI screening, particularly among those who could become pregnant[12]. Such clinics often offer STI screening per national STI guidelines which rely on STI risk assessment via detailed sexual history taking and patient awareness and disclosure of STI risk factors. Barriers to thorough sexual history taking such as time limitations, lack of provider education and lack of patient disclosure due to stigma may result in missed opportunities for diagnosis and treatment[10]. Routinized opt-out STI screening results in higher STI screening rates, and CDC recommends this strategy for all adult and adolescent HIV screening in healthcare settings[13,14,15]. Yet, many clinical settings have not adopted this approach due to barriers like lack of familiarity with clinical recommendations, inaccurate perception of incidence, and time constraints[16,17].

In response to an increase in syphilis diagnoses among cis-gender women and pregnant patients between 2016–2018, Planned Parenthood Northern California implemented two expanded opt-out STI screening protocols:

1. HIV, chlamydia, gonorrhea, and syphilis co-screening for pregnant patients at time of pregnancy diagnosis (e.g., same-day testing upon receipt of a positive urine pregnancy test, rather than waiting until subsequent prenatal visit). After pregnancy diagnosis and STI screening, patients were referred to their first prenatal appointment where additional prenatal testing was conducted.
2. Linking HIV and syphilis screening (e.g., any patient screened for HIV is also screened for syphilis and vice versa).

These protocols were implemented at all 17 health centers across Northern California, which accommodated approximately 160,000 visits annually.

This study sought to identify barriers and facilitators that could be addressed by clinical leadership and staff to expand the uptake of enhanced STI screening protocol implementation.

Materials and Methods:

As part of a program evaluation to identify facilitators and barriers to enhanced screening protocols, three Planned Parenthood Northern California family planning clinics were identified in counties with notable increases in syphilis morbidity to represent Planned Parenthood Northern California urban, suburban, and rural service regions. Current or former Planned Parenthood Northern California staff employed during protocol implementation were eligible for interview. To ensure diversity of staff roles, clinic directors identified staff for interviews across the following categories: flow coordinator, front desk, billing, and those providing direct patient care. Purposive sampling was used to identify staff for leadership interviews to include senior leadership who led system-level oversight of protocol implementation. A recruitment email was sent to 45 eligible clinic staff. Based on recruitment response and availability, sixteen participants – 12 clinical and four leadership – were enrolled.

The California Department of Public Health evaluation team developed two semi-structured interview tools with input from Planned Parenthood Northern California staff who were familiar with clinic implementation, one designed for clinic-level staff and a second for leadership-level staff. Clinic-level interviews consisted of 14 open ended key questions, 7 which had optional secondary follow-up questions that were asked if applicable and interview time allowed. Leadership-level interviews consisted of 16 open ended key questions, 11 which had optional secondary follow-up questions. Key questions explored the following domains: awareness of protocols, facilitators and barriers to implementation, consistency of protocol adherence, impacts of COVID-19, effectiveness, quality of care, workload, and resources. Electronic consent was obtained from participants, and the study was approved by the California Department of Public Health and University of California San Francisco Institutional Review Boards.

Between March and August 2021, 16 semi-structured 30-minute interviews were conducted by two trained project staff via audio teleconference. Unanswered questions where the interviewee was not queried due to time constraints or because the question was not applicable (e.g., interviewee was not employed during protocol initiation) were excluded from the analysis of that question. Participants received a $30 gift card for their participation.

After interviews were concluded, thematic qualitative data analysis was conducted to identify primary themes. Interview responses were reviewed, coded, and two project team members collaboratively grouped responses into five main themes. A secondary sub-analysis of each primary theme was conducted to identify subthemes. A project team member conducted the initial identification of themes and subthemes, and a second team member reviewed responses and themes to verify categorization. Team members met to iteratively develop, discuss, and refine themes until consensus was reached.

Results:

Five themes pertaining to protocol implementation facilitators and barriers emerged: patient education and communication, workflow, staff education and communication, patient willingness to receive STI testing, and, for pregnant patients, visit complexity at the time of pregnancy diagnosis (see Table 1 & 2).

Patient Education and Communication (n=16)

Patient education and communication was the most reported facilitator. Education, particularly about current syphilis rates, CS outcomes, and benefits of screening, were noted to address patients' knowledge gaps and increase willingness to receive STI screening by 69% of interviewees. Additionally, for pregnant patients, reviewing the benefits of early prenatal syphilis testing encouraged immediate screening at pregnancy diagnosis.

Regarding communication, 50% of interviewees reported that language was important for implementation, with opt-out language specifically highlighted by 44% of interviewees. In addition, 19% noted that providing information about the new protocols and their rationale to patients helped to garner trust and normalize screening, and 19% noted that underscoring the convenience of specimen collection was helpful both in terms of ease of collection and the convenience of conducting multiple specimen collections in a single visit.

Workflow (n=16)

Workflow changes, particularly around incorporating phlebotomy into patient visits where blood draws otherwise would not have been performed, posed a barrier to protocol implementation per 50% of interviewees; however, a near-equal number of interviewees (56%) commented on facilitators to address this such as stocking supplies in exam rooms and assessing patients' deterrents to phlebotomy (e.g., fear of needles) at the beginning of the visit to proactively address deterrents during patient education. Documentation inefficiencies within the medical record were noted by two interviewees; however, a new electronic medical record system later helped streamline these processes. In addition, one interviewee noted that provider follow-up with patients who initially declined screening reinforced protocol implementation.

Staff Education and Communication (n=16)

Staff education about syphilis, other STIs, and the purpose of the new protocols fostered staff participation in offering testing to their patients, per 44% of interviewees. While 25% of interviewees noted challenges adapting to the new protocols and opt-out language, scripts guided consistent opt-out language in patient discussions. Phlebotomy training also improved staff comfort and confidence, even amongst staff that had previously received training, as they were given an opportunity to practice skills and ask questions.

31% of interviewees noted that clinic-level communication such as reminders about protocols from clinician-champions to frontline staff was reportedly helpful while 25% noted that leadership-level communication such as progress reports with clear goals and benchmarks also helped set expectations and ensure accountability.

Patient Willingness and Visit Complexity at the Time of Pregnancy Diagnosis (n=16)

Patients' willingness to be tested was the most reported barrier to protocol implementation. Willingness declined with patient hesitancy to receive blood draws, per 63% of interviewees, and when STI screening was not the patients' presenting concern (e.g., pregnancy, vaccine, or contraception visits), per 19% of interviewees. Regarding pregnant patients, 25% of interviewees mentioned adding STI testing to an already complex visit at the time of pregnancy diagnosis could be difficult.

Impacts of COVID-19 (n=15)

While 86% of interviewees reported a decrease in syphilis screening during the COVID-19 pandemic, 67% reported improved syphilis screening over time as restrictions lessened. Per interviewees, healthcare system impacts of COVID-19 including decreased visit time, reduced access to STI screening at other clinics, decreased patient volume, and increases in telehealth (which precluded specimen collection), resulted in fewer screening opportunities.

Additional Considerations: Consistency, Effectiveness, Quality of Care, Workload, and Resources

In addition to the five themes above, the following observations were frequently noted by interviewees. 1) Consistency (n=12): Interviewees reported consistency in staff implementation of HIV, chlamydia, gonorrhea, and syphilis co-screening for pregnant patients (50%) and HIV and syphilis co-screening for all patients (67%). Two interviewees reported that, while the overall volume of screening decreased due to COVID-19 restrictions, implementation of protocols among in-person patients became more consistent. 2) Effectiveness (n=14): Most interviewees (93%) stated that the protocols were effective at increasing syphilis screening and identification. 3) Quality of Care (n=12): All interviewees reported positive impacts to the quality of patient care. 4) Workload (n=12): 42% of both clinic and leadership interviewees acknowledged impacts to workload, particularly related to the initial implementation of phlebotomy workflows; the remaining majority (58%) reported either no impact or improvement over time. 5) Resources (n=13): 77% of interviewees found formal training and clinical tools helpful, and 62% of interviewees reported informal training (e.g., clinician support and staff discussions) was helpful.

Discussion:

This qualitative study explored barriers and facilitators pertaining to the uptake of enhanced STI screening protocol implementation reported across three California Planned Parenthood Northern California family planning clinics. Reported barriers and facilitators ranged from clinical staff and patient knowledge to operational workflow considerations. Studies of protocol implementation across a variety of healthcare settings attest to factors that hinder or catalyze the successful uptake of such operational changes[18,19]. Therefore, understanding and identifying these factors may have positive impacts on the uptake of enhanced STI screening protocol in similar settings.

Among the findings, knowledge gaps warranted patient and staff education on disease epidemiology and pathophysiology to support patient uptake and staff capacity. Several

prior studies demonstrate the value of staff education in new protocol adherence[20,21,22]. Interestingly, staff education may play a dual role in providing staff with an appreciation for the necessity of the new protocol, while having the added benefit of building staff capacity to educate patients, thus reinforcing patient uptake.

Patient education – be it via self-study (e.g., health education literature) or provider delivered education – may also facilitate STI testing uptake, particularly in sexual health and family planning settings[11,23]. Not surprisingly, staff reported that patients were more amenable to STI testing when the purpose and basic underlying disease mechanisms were explained. Our findings suggest that routine screening, patient education, and communicating the rationale for new protocols may foster a sense of agency and empower patients to make health care decisions about stigmatized condition such as STIs. Interviewees also noted that education on syphilis sequelae during pregnancy was especially relevant to prenatal patients and likely had positive impacts on timely syphilis diagnosis, treatment, and CS prevention.

Opt-out screening has been shown to result in higher STI screening rates[13,14,15]. In our sample, many interviewees cited that opt-out language was helpful in normalizing STI screening. Training on opt-out language (e.g., providing scripts) at the outset of protocol implementation may, therefore, increase staff comfort and support consistency of this practice.

Interestingly, this study found that leadership and staff perspectives focused on different facilitators and barriers. Leadership-interviewees frequently highlighted staff communication and education as factors that impacted protocol uptake. Meanwhile, staff-interviewees focused on patient communication and education. These findings suggest that interviewee perspectives often reflect their daily patient or staff facing roles and experiences, and responses were, therefore, focused on what they consider to be within their purview. This study also included participants from an array of staff roles ranging from administrative positions to those providing direct clinical care. This strategy afforded a more holistic assessment of protocol implementation and an opportunity to examine how it impacts different aspects of clinic operations. Seeking diverse perspectives when preparing for protocol implementation may preclude avoidable barriers at multiple levels. Furthermore, soliciting ongoing feedback from staff with diverse perspectives throughout implementation may identify barriers early resulting in timely remedies.

Anticipating workflow changes, training needs, and supply needs are important considerations at the outset of protocol implementation. Quality improvement methodology has been shown to eliminate downstream barriers and inefficiencies[24,25]. Utilizing quality improvement methodology prior to protocol implementation to plan for a ‘future state’ and including staff perspectives in the planning stages of protocol implementation may help to identify necessary workflow changes before unexpected barriers arise.

Interviewees also reported that clinician champions and progress reports with clear goals and metrics aided protocol implementation. These findings align with previous research and

attest to the value of having a trusted individual advocate for new efforts which, along with ongoing accountability, may be an important component to ensure staff uptake[26,27].

The majority of interviewees reported reduced syphilis screening overall during the COVID-19 pandemic, owed in part to decreases in patient volume generally. This mirrors other study findings which reported reduced access to STI services during COVID-19[28,29]. Yet, despite an overall decrease in screening volume, some interviewees reported that protocol implementation became more consistent over time. This finding may suggest that lower patient volumes due to COVID-19 restrictions allowed more time per visit for adjustment to new protocols, potentially leading to better long-term adherence. Moreover, protocols may become routinized with time, despite other clinical changes like adjustments to COVID-19 restrictions.

In addition to adherence, our study found that increases to staff workload improved over time. While a higher degree of staff time could be required early in protocol implementation, routinization with training and standard workflows may progressively decrease workload requirements. In addition, interviewees reported that the protocols resulted in positive impacts on patient care which seemed to outweigh these operational considerations.

This analysis was limited to a small sample within three Planned Parenthood Northern California family planning clinics. Additionally, patient perspectives on new protocols were not included, which could have provided additional insights. Analyses of questions were only included for each interviewee if answered and applicable, and the COVID-19 pandemic and systemwide change to a new electronic medical record system at the time of interviews may have also impacted recall. Additional quantitative studies on expanded STI protocols are necessary to better understand impacts to STI outcomes and health disparities.

HIV, chlamydia, gonorrhea, and syphilis co-screening for pregnant patients at the time of pregnancy diagnosis and linking HIV and syphilis screening for all patients may be effective strategies to increase screening and STI case identification, resulting in positive impacts on patient care, as was attested to by interviewees.

Addressing commonly identified themes such as patient and staff education during the beginning stages of implementation may have positive impacts on willingness to adopt new protocols. Consideration of workflow and visit complexity at pregnancy diagnosis may also aid in successful implementation of expanded STI screening protocols in family planning clinics.

Acknowledgments:

Dr. Rosalyn Plotzker had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. The authors would also like to acknowledge Holly Howard, Jennifer Harmon, Melissa Reyna, Eric Tang, and Jessica Frasure-Williams for their contributions to this work.

This work was supported by staff funded through the Centers for Disease Control and Prevention's Strengthening STD Prevention and Control for Health Departments (cooperative agreement, PS19-1901) and the National Network of STD Clinical Prevention Training Center's National Quality Improvement Center (CA PTC, PS 14-1407).

Disclaimer:

The findings and conclusions in this publication are those of the authors and do not necessarily represent the views of Planned Parenthood Federation of America, Inc; the National Network of STD Clinical Prevention Training Centers; the California Department of Public Health; or the California Health and Human Services Agency.

Conflict of Interest and Sources of Funding:

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

1. Kreisel KM, Spicknall IH, Gargano JW, et al. (2021). Sexually Transmitted Infections Among US Women and Men: Prevalence and Incidence Estimates, 2018. Sexually Transmitted Diseases, 48(4), 208–214. [PubMed: 33492089]
2. Tuddenham S, Hamill MM, Ghanem KG. (2022). Diagnosis and Treatment of Sexually Transmitted Infections: A Review. JAMA, 327(2), 161–172. [PubMed: 35015033]
3. Chesson HW, Spicknall IH, Bingham A, et al. (2021). The Estimated Direct Lifetime Medical Costs of Sexually Transmitted Infections Acquired in the United States in 2018. Sexually Transmitted Diseases, 48(4), 215–221. [PubMed: 33492093]
4. Stanford KA, Hazra A, Friedman E, et al. (2021). Opt-Out, Routine Emergency Department Syphilis Screening as a Novel Intervention in At-Risk Populations. Sexually Transmitted Diseases, 48(5), 347–352. [PubMed: 33009277]
5. Kamb ML, Newman LM, Riley PL, et al. (2010). A Road Map for the Global Elimination of Congenital Syphilis. Obstetrics and Gynecology International, 2010(312798).
6. Wedi CO, Kirtley S, Hopewell S, et al. (2016). Perinatal Outcomes Associated with Maternal HIV Infection: A Systematic Review and Meta-Analysis. The Lancet, HIV, 3(1), e33–e48. [PubMed: 26762992]
7. STDs and HIV – CDC Detailed Fact Sheet. (2022, April 12). Centers for Disease Control and Prevention. Retrieved March 24, 2023 from https://www.cdc.gov/std/hiv/stdfact-std-hiv-detailed.htm.
8. Kalichman SC, Pellowski J, Turner C. (2011). Prevalence of Sexually Transmitted Co-Infections in People Living with HIV/AIDS: Systematic Review with Implications for Using HIV Treatments for Prevention. Sexually Transmitted Infections, 87(3), 183–190. [PubMed: 21330572]
9. Malekinejad M, Barker EK, Merai, et al. (2021). Risk of HIV Acquisition Among Men Who Have Sex with Men Infected with Bacterial Sexually Transmitted Infections: A Systematic Review and Meta-Analysis. Sexually Transmitted Diseases, 48(10), e138–e148. [PubMed: 33783414]
10. Newton-Levinson A, Leichliter JS, Chandra-Mouli V. (2016). Sexually Transmitted Infection Services for Adolescents and Youth in Low- and Middle-Income Countries: Perceived and Experienced Barriers to Accessing Care. The Journal of Adolescent Health, 59(1), 7–16. [PubMed: 27338664]
11. Pressley M, Mahgoub S, Halawani M. (2022). Facilitators and Barriers to the Implementation of Interventions in Washington, DC, to Improve Sexually Transmitted Infection Screening, Testing, and Treatment Among People with or at Risk of HIV. AIDS Patient Care and STDs, 36(S2), 117–126. [PubMed: 36178402]
12. Frost JJ, Gold RB, Bucek A. (2012). Specialized Family Planning Clinics in the United States: Why Women Choose Them and Their Role in Meeting Women's Health Care Needs. Women's Health Issues, 22(6), e519–e525. [PubMed: 23122212]
13. Branson BM, Handsfield HH, Lampe MA, et al. (2006). Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings. Center for Disease Control and Prevention Morbidity and Mortality Weekly Report, 55(RR14), 1–17. [PubMed: 16410759]
14. Soh QR, Oh LYJ, Chow EPF, et al. (2022). HIV Testing Uptake According to Opt-In, Opt-Out or Risk-Based Testing Approaches: A Systematic Review and Meta-Analysis. Current HIV/AIDS Reports, 19(5), 375–383. [PubMed: 35829949]

15. Crumby NS, Arrezola E, Brown EH, et al. (2016). Experiences Implementing a Routine HIV Screening Program in Two Federally Qualified Health Centers in the Southern United States. Public Health Reports, 131(Suppl 1), 21–29. [PubMed: 26862227]
16. Traynor SM, Rosen-Metsch L, Feaster DJ. (2018). Missed Opportunities for HIV Testing Among STD Clinic Patients. Journal of Community Health, 43(6), 1128–1136. [PubMed: 29796786]
17. Zheng MY, Suneja A, Chou AL, et al. (2014). Physician Barriers to Successful Implementation of US Preventive Services Task Force Routine HIV Testing Recommendations. Journal of the International Association of Providers of AIDS Care, 13(3), 200–205. [PubMed: 24442739]
18. Grol R, Grimshaw J. (2003). From Best Evidence to Best Practice: Effective Implementation of Change in Patients' Care. The Lancet, 362(9391), 1225–1230.
19. Grol R. (2001). Improving the Quality of Medical Care: Building Bridges Among Professional Pride, Payer Profit, and Patient Satisfaction. JAMA, 286(20), 2578–2585. [PubMed: 11722272]
20. Hansson KM, Romøren M, Pedersen, et al. (2022). Barriers and Facilitators When Implementing Family Involvement for Persons with Psychotic Disorders in Community Mental Health Centres - A Nested Qualitative Study. BMC Health Services Research, 22(1), 1153. [PubMed: 36096844]
21. Webb R, Uddin N, Ford E, et al. (2021). Barriers and Facilitators to Implementing Perinatal Mental Health Care in Health and Social Care Settings: A Systematic Review. The Lancet, Psychiatry, 8(6), 521–534. [PubMed: 33838118]
22. Gilles C, Manigart Y, Rousseau C, et al. (2019). Implementation of A Protocol and Staff Educational Sessions Improves the Care of Survivors of Sexual Assault. Maturitas, 124, 39–42. [PubMed: 31097177]
23. Pampati S, Liddon N, Dittus PJ, et al. (2019). Confidentiality Matters but How Do We Improve Implementation in Adolescent Sexual and Reproductive Health Care?. The Journal of Adolescent Health, 65(3), 315–322. [PubMed: 31227388]
24. Holden RJ (2011). Lean Thinking in Emergency Departments: A Critical Review. Annals of Emergency Medicine, 57(3), 265–278. [PubMed: 21035904]
25. Gleich SJ, Nemergut ME, Stans AA, et al. (2016). Improvement in Patient Transfer Process from the Operating Room to the PICU Using a Lean and Six Sigma-Based Quality Improvement Project. Hospital Pediatrics, 6(8), 483–489. [PubMed: 27471214]
26. Ivers N, Jamtvedt G, Flottorp S, et al. (2012). Audit and Feedback: Effects on Professional Practice and Healthcare Outcomes. The Cochrane Database of Systematic Reviews, (6).
27. Van der Veer SN, de Keizer NF, Ravelli AC, et al. (2010). Improving Quality of Care. A Systematic Review on How Medical Registries Provide Information Feedback to Health Care Providers. International Journal of Medical Informatics, 79(5), 305–323. [PubMed: 20189451]
28. Nagendra G, Carnevale C, Neu N, et al. (2020). The Potential Impact and Availability of Sexual Health Services During the COVID-19 Pandemic. Sexually Transmitted Diseases, 47(7), 434–436. [PubMed: 32520878]
29. COVID-19 & the State of the STD Field. (May 2020). National Coalition of STD Directors. Accessed March 24, 2023 from https://www.ncsddc.org/wp-content/uploads/2020/05/STD-Field.Survey-Report.Final_.5.13.20.pdf.

Table 1:

Barriers and Facilitators to Protocol Implementation

	Barrier to Implementation	Facilitator to Implementation	Illustrative Participant Quotes
Patient Education & Communication	Lack of education & awareness of: ■ STIs & the new protocols. ■ Delaying testing to future appointments. ■ Stigma.	Providing education/counselling on: ■ STIs & the purpose of the protocols. ■ Implications of delayed testing, particularly for pregnant patients. ■ Utilizing opt-out language. ■ Garnering rapport & trust through transparency. ■ Normalizing & destigmatizing screening through routine testing. ■ Communicating the convenience of testing *(e.g., tests can be conducted quickly).*	*"…some people haven't heard of syphilis, they don't know why they need to be tested for that, so its explaining syphilis is on the rise & it can be really harmful if it's not caught early. So just educating patients on why we want to do syphilis testing."* *"I always like to talk to folks about how STDs tend come in twos where like chlamydia & gonorrhea like to hang out with each other syphilis & HIV love to hang around with each other…"* *"Being very transparent about why the test is being offered. I think transparency & honesty is key."*
Staff Education & Communication	Lack of education, training, & familiarity with: ■ Phlebotomy. ■ Opt-out testing language. ■ Forgetting to conduct the screening protocols. ■ Concern of increased visit times. ■ Inconsistent roll out across clinics & confusion amongst staff who work at multiple clinics.	Providing education on: ■ STIs & the purpose of the protocols. ■ Opt-out language *(ie scripts).* ■ Phlebotomy. Clinic-level communication: ■ Opt-out testing techniques. ■ Reminders to staff. ■ Timing of the clinician visit Leadership-level communication: ■ Acc ountability setting *(e.g., progress reports & clear goals/benchmarks).* ■ Consistent messaging & transparency.	*"One of the things that made it just a little bit easier was having set scripts in place for talking to patients about why we're doing what we're doing…"* *"The challenge that sticks out the most…were that the staff were trained on drawing blood, but it was not a consistent skill that we were using...I did a lot of observations & guidance with people throughout the process, & I like to think that it helped."* *"Sharing the data…when you see the facts of the rise in syphilis in the state of California, especially when you break it down by county & the impacts of neonatal syphilis that is undeniable & there is no arguing why this needs to happen."* *"We had a very clear goal [or] benchmark that we were looking to meet, & that report was sent to key leaders, including health center staff, on a frequent basis. I think that was the most effective way to make progress; having transparency around what was actually happening in the center."*
Workflow	■ Navigating difficult blood draws. ■ Operational timing of when to incorporate a blood draw into a visit, particularly for non-clinical visits. ■ Large patient volume & minimal time to address needs. ■ Increased volume of specimen collection & processing. ■ Inefficient Electronic Health Record (EHR) documentation. ■ Increased visit times, particularly during initial roll-out.	■ Involving staff experienced with phlebotomy. ■ Providing phlebotomy supplies in every room. ■ Assessing patient deterrents to phlebotomy at beginning of visit to proactively address *(e.g., provide water, heating pads, distraction techniques).* ■ Conducting rapid HIV test at the beginning of visit to facilitate timely results. ■ New EHR documentation capabilities/ efficiencies. ■ Incorporating two touchpoints to offer testing into the workflow *(e.g., MA & clinician offer testing).*	*"…if we have like a really amazing RN in clinic getting [the RN] involved for that first attempt at a blood draw instead of having a [staff member] who's maybe a little bit more green try, miss a few times, & frustrate the patient..."* *"The kind of supplies were also important, making sure it fit with the workflow…that everyone would have blood draw supplies in the room. Previously, they were in one place because we were not always doing blood draws."*
Patient Willingness	■ Patient deterrents to blood draws *(e.g., fear of needles).* ■ Patient time constraints. ■ STIs not the presenting concern or reason for visit.	■ Convenience of completing two tests in one visit.	*"I would have to say getting people over their fear of needles is the biggest thing…I have had some good success just distracting patients – play music, lay down, look the other way, have them talk about what's going on in their lives."*
Visit Complexity	■ Overwhelming nature of the visit at time of pregnancy diagnosis.		*"…they have a positive pregnancy test & maybe they're unsure about what they want to do with the pregnancy & it's a lot for them to think about all at once..."*

Sex Transm Dis. Author manuscript; available in PMC 2026 January 01.

Table 2:

Number/Percent of Interviewees Who Identified a Theme as a Facilitator or Barrier

Facilitator			Theme	Barrier		
Clinic Staff	**Leadership Staff**	**Total**		**Clinic Staff**	**Leadership Staff**	**Total**
92% *(11/12)*	**25%** *(1/4)*	**75%** *(12/16)*	Patient Education & Communication	**67%** *(8/12)*	**25%** *(1/4)*	**56%** *(9/16)*
67% *(8/12)*	**75%** *(3/4)*	**69%** *(11/16)*	Workflow	**50%** *(6/12)*	**75%** *(3/4)*	**56%** *(9/16)*
58% *(7/12)*	**100%** *(4/4)*	**69%** *(11/16)*	Staff Education & Communication	**42%** *(5/12)*	**100%** *(4/4)*	**56%** *(9/16)*
33% *(4/12)*	**0%** *(0/4)*	**25%** *(4/16)*	Patient Willingness	**83%** *(10/12)*	**25%** *(1/4)*	**69%** *(11/16)*
0% *(0/12)*	**0%** *(0/4)*	**0%** *(0/16)*	Visit Complexity at Pregnancy Diagnosis	**33%** *(4/12)*	**0%** *(0/4)*	**25%** *(4/16)*