Improving HIV/STD Partner Services: Assessment of Barriers and Facilitators of Three New Activities at the Mississippi State Department of Health

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A thesis

submitted in partial fulfillment of the

requirements for the degree of

Master of Public Health

University of Washington

2018

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Global Health

University of Washington

Abstract

Improving HIV/STD Partner Services: Assessment of Barriers and Facilitators of Three New Activities at the Mississippi State Department of Health

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Introduction: Mississippi has one of the most severe HIV epidemics in the United States. At the Mississippi State Department of Health (MSDH), the partner services program has not routinely integrated HIV-related activities into sexually transmitted disease (STD) partner services to identify undiagnosed HIV infection among sex partners of cases, nor has it routinely performed activities to identify previous HIV-positive individuals with an STD who are out of care. Additionally, the promotion of pre-exposure prophylaxis (PrEP) has not been integrated into Disease Intervention Specialist (DIS) case work. These new activities have the potential to substantially bend the curve of the HIV epidemic in Mississippi. The goal of this analysis was to identify: I) the time required to implement the three new HIV-related activities; and II) the barriers and facilitators of integrating the three new HIV-related activities into STD partner services. Together these two analyses were designed to determine the long-term feasibility of the integration of the new activities statewide.

Methods: We used two methods to identify barriers and facilitators of integrating the three new HIV-related activities into STD partner services: staff interviews and a time and motion study of DIS. We also used two methods to estimate time spent on partner services activities: the time and motion study and individual case tracking.

Results: The average amount of time actively working on a case for STD partner services without the new activities was about 3.25 hours. With the addition of three new HIV-related activities, the time varied from 3.75 hours to 4.5 hours per case. DIS noted that the activities were well integrated into their daily workload, but anecdotally stated it was an increase in the number of cases that they handle. DIS generally had a very positive perception of the new activities. However, DIS' thoughts on effectiveness were mixed.

Discussion: This analysis represents the first time that systematic collection of time spent on partner services activities has been completed for the partner services program at the MSDH. While gonorrhea and chlamydia cases are the target of the new activities, they are the lowest priority for DIS. This means that DIS are often following up on gonorrhea and chlamydia cases several days after the client has been tested and treated—reducing the likelihood that the DIS will be able to successfully contact the client for an interview. The results of this study can be used to conduct a costing study. Future investigations focused on the effectiveness of the new activities, costing, and the distribution of duration of tasks may provide a more accurate picture of time spent on tasks not only for the new activities, but also the existing STD partner services program.

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ACKNOWLEDGEMENTS

I would like to thank the staff at the Mississippi State Department of Health for their eagerness to better serve their community and who were so helpful in providing information and kind in hosting me. Specifically, I would like to thank Kirsten Benford, James Brisco, Lynell Bolden, Patrick Bradley, Shamika Drone, Josh Dupre, Kennis Jefferson, Randy Jefferson, Lorenzo Madison, Casondra Neal, Christie Lewis, Chauncey Paige, David Peyton, Mecole Roberson, Sain Trotter, and Regina Turner.

I would like to thank my committee—Christine, Ruanne, and Elizabeth—for their insight and advice. I would like to especially thank Christine for her guidance and collaboration.

I would like to thank Tigran Avoundjian and Rachel Silverman for their assistance in answering my questions about partner services.

I thank the Centers for Disease Control and Prevention for funding support (CDC H25 PS005106).

I thank the staff and faculty of the Department of Global Health for their commitment to student learning and success and my classmates for their leadership and determination

Lastly, I thank my family for their unwavering love and support.

Chapter 1. INTRODUCTION

Mississippi has one of the most severe HIV epidemics in the United States. In 2016, Mississippi had the seventh highest rate of HIV diagnoses among all states, and the second highest rate of diagnosis among men who have sex with men (MSM) (1). Additionally, Mississippi has the highest rate of gonorrhea and the third highest rate of chlamydia among all adults in the United States (2). Mississippi has the second highest rate of syphilis among MSM (3).

Originally introduced to test and treat sex partners of persons with syphilis, partner services (also known as field services), now encompass a wide number of tasks and are routinely performed by nearly every health department in the United States. Commonly recognized partner services tasks include: partner notification, testing, and treatment; HIV testing; and promoting condom use. Some other state or local health departments have now started pre-exposure prophylaxis (PrEP) referral; linkage and relinkage to HIV care; promotion of effective contraception; and referral for health insurance (4).

Disease Intervention Specialists (DIS) are key members of the partner services team who are responsible for the partner services program. Traditional DIS tasks in Mississippi include performing face-to-face interviews with all individuals with reported syphilis or HIV infection to ensure their partners are notified, tested, and treated. DIS in Mississippi also provide partner services for pregnant women or women under 18 who have chlamydia or gonorrhea, and individuals diagnosed with drug-resistant gonorrhea. At the Mississippi State Department of Health (MSDH), the partner services activities for HIV and sexually transmitted diseases (STDs) have been relatively siloed. Traditionally, the partner services program has not routinely integrated HIV-related activities into STD partner services to identify undiagnosed HIV infection among sex

partners of cases, nor has it routinely performed activities to identify previous HIV-positive individuals with an STD who are out of care. Additionally, the promotion of PrEP has not been integrated into DIS casework. These new activities have the potential to substantially bend the curve of the HIV epidemic in Mississippi.

Statewide in Mississippi, there are 38 DIS organized into three regions and nine teams. Team V—with 8 DIS—is assigned 16 counties which include Jackson and the surrounding metropolitan region. Preliminary estimates indicate that the MSDH received reports of 1,723 cases of gonorrhea, 5,493 cases of chlamydia and 309 cases of syphilis that occurred in the area covered by MSDH Team V in 2017. These data represent an increase from prior years. Since Jackson has a concentrated population and a high rate of HIV and STD, the project described below focused on integrating HIV activities into STD partner services within this region of Mississippi.

In 2015, the MSDH, in collaboration with the University of Washington (UW), received funding from the Centers for Disease Control and Prevention (CDC) to explore how the integration of three new HIV-related activities into the existing STD partner services program can improve HIV case-finding, linkage and re-linkage to care and antiretroviral therapy (ART), testing, and use of PrEP. The aims of the collaboration were:

I. Increase HIV testing among MSM through STD partner services.

II. Increase engagement of care and ART use among HIV-infected persons with bacterial STDs, their sex partners, and their associates.

III. Increase PrEP use among MSM with bacterial STDs and their sex partners.

To accomplish these three aims, the MSDH integrated the following HIV-related activities into STD partner services:

- **Activity 1:** Conduct partner services with HIV-negative MSM with gonorrhea, chlamydia, or urethritis.[1]
- **Activity 2:** Re-link previous HIV-positive individuals who are diagnosed with a new STD to care.[2]
- **Activity 3:** Add PrEP referrals to partner services.[3]

In the setting of scarce resources for HIV/STD, MSDH is interested in understanding both the effectiveness and efficiency of new approaches to preventing HIV and STDs. The goal of this analysis was to evaluate the efficiency of these approaches. Specifically, we sought to identify: I) the time required to implement the three new HIV-related activities; and II) the barriers and facilitators of integrating the three new HIV-related activities into STD partner services. Together these two analyses were designed to determine the long-term feasibility of the integration of the new activities statewide.

Chapter 2. METHODS

2.1 Evaluation of New Partner Services Activities

We used two methods to identify barriers and facilitators of integrating the three new HIV-related activities into STD partner services: staff interviews and a time and motion study of DIS. We also used two methods to estimate time spent on partner services activities: the time and motion study and individual case tracking. These are described below.

[1] The existing policy is to only conduct partner services for HIV or syphilis cases.
[2] Prior to the start of the CDC-funded project, re-linkage to care was not consistently done in this situation.
[3] This is a completely new activity.

2.1.1 *Staff Interviews*

We conducted semi-structured interviews with eight DIS on Team V regarding each of the three new HIV-related activities. Interviews were conducted in January and February 2018, approximately 18 months after the initiation of Activity 1, 6 months after the start of Activity 2, and shortly after the start of Activity 3. The DIS were questioned on the perception of their role, the need for additional training, the challenges of integrating the activity into their daily workload, and any suggestions for improvement. Each interview occurred via video conference and lasted approximately one hour. The interviews consisted of an introduction, 40 standardized questions, and a closing statement. Interviewees were informed that their participation was voluntary, they were able to refuse to answer any question, and they were able to stop the interview at any time. Interview responses were summarized into a case memo by the interviewer.

2.1.2 *Time and Motion Study*

Over a two-week period in February 2018, all DIS from Team V and related administrative staff were observed for approximately four-hour time blocks—for a total of about 40 hours of direct observation. The administrative staff observed were the Team V DIS Supervisor, the STD/HIV surveillance epidemiologist, the Regional DIS Supervisor, and the data entry staff. During these observation periods, a description of each task performed was recorded along with the start and end time. Observed data were of DIS who were designated to be *on-call*—indicating that they were to remain on premises as to be available for any patients who visited the clinic. This led to observation of a different set of activities from what was recorded in individual case tracking forms. From the observations, the duration of the task was calculated. Each task was categorized according to pre-specified task categories for the DIS and administrative staff, respectively. The minimum, maximum, and average time of each task category was calculated.

2.1.3 *Individual Case Tracking*

Individual case tracking forms were used to estimate average amount of time for an STD case to be processed at the MSDH, from the time of the laboratory report was received until the case was closed. There were separate forms for data entry/administrative staff and for DIS. The Regional DIS Supervisor initiated a data entry case tracking form when a gonorrhea, chlamydia, or syphilis case was assigned to the Team V DIS Supervisor. Once the case was assigned by the Team V DIS Supervisor to a DIS, the DIS began recording tasks on the DIS case tracking form. The time tracking sheets included space to document tasks completed for a case, the initials of the staff who completed the task, and the start and end time for each task. The minimum, maximum, and average time of each task was calculated.

2.1.4 *Analysis*

To determine the time spent on activities, results from the time and motion study and individual case tracking were combined for aligned categories (with averages weighted by the number of completed tasks documented by method). The average amount of time per task was assigned to the appropriate step in the partner services process, which was previously delineated in process maps created by key stakeholders from the MSDH and UW and supplemented with detail from interviews. Tasks that were not observed or not reported in case tracking were ascertained by asking six DIS to report the average time for the task, with an overall average calculated. To examine barriers and facilitators, we combined information recorded on the case memos from the interviews with direct observations of staff to synthesize key findings.

2.2 Identification of New STD Cases

Surveillance for HIV and STDs is required by federal law. Per Mississippi State law, all health providers and laboratories are required to report new or suspected cases of syphilis and HIV within 24 hours and all cases of chlamydia or gonorrhea within seven days of diagnosis. Additionally, laboratories are required to report all CD4 lymphocyte and HIV RNA tests within seven days of testing. Two electronic data systems capture reported cases: the Patient Reporting Investigating Surveillance Manager (PRISM) for STD surveillance and the Enhanced HIV/AIDS Reporting System (eHARS) for HIV surveillance.

2.3 Partner Services Activities

All partner services activities occurred as part of routine MSDH practice and/or part of the new CDC-funded project to integrate HIV-related outcomes into STD partner services. These activities were guided by standardized protocols developed by the MSDH and UW as part of this project.

Chapter 3. RESULTS

3.1 Time Spent on Activities

Individual case tracking (n=49 gonorrhea or chlamydia cases tracked) indicated that the average amount of time to complete a gonorrhea or chlamydia case from the time of the laboratory report received until the case was closed was 18 days. Case tracking (n=41 syphilis cases tracked) indicated that the average amount of time required to complete a syphilis case was 15 days. Gonorrhea and chlamydia cases were assigned to administrative staff for approximately 2 days and to DIS for the remaining 16 days. For syphilis, cases were assigned to administrative staff for approximately 1 day and to the DIS for the remaining 14 days. While the number of days to

complete a gonorrhea or chlamydia case ranged from 6 to 36 days, the average amount of time actively working on a case without the new activities was about 3.25 hours (Figure 1). However, the time varied between 21 minutes and nearly 16 hours depending on the duration of each task. The number of partners identified, the number of times a patient was contacted (or attempted to contact), the number of times a provider was contacted (or attempted to contact) were also drivers of variability. The number of days to complete a syphilis case ranged from 2 to 38 days, while the average amount of time actively working on a case was only about 5 minutes more than a gonorrhea or chlamydia case. Because this difference was small, for this analysis we considered 3.25 hours to be the standard time for active work on all cases (gonorrhea, chlamydia, or syphilis) for standard partner services activities.

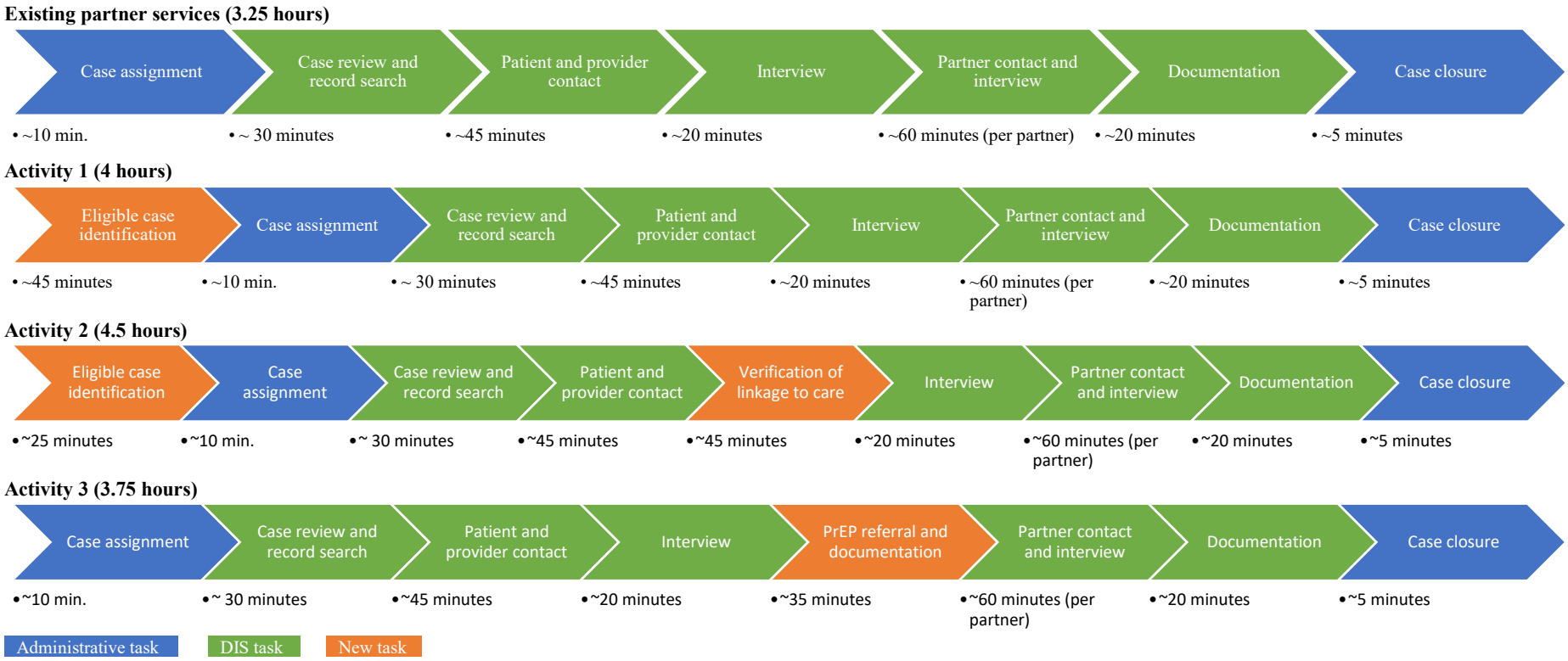

Figure 3.1. Process of one gonorrhea, chlamydia, or syphilis case with estimated time to complete.

Figure 3.1 demonstrates the average time of each new activity when incorporated into standard partner services work. With the addition of Activity 1, the average amount of time needed to complete one case is about 4 hours. The additional time is associated with tasks needed to identify cases of gonorrhea and chlamydia among HIV negative MSM. With Activity 2, the time needed to complete a case rises to approximately 4.5 hours. Verifying a patient's linkage to care accounts for most of the additional time. Activity 3 adds only about 35 minutes to the time needed to complete a case for a total of about 3.75 hours. The additional 35 minutes is spent on PrEP referral and the associated documentation.

Data from the time and motion study and the individual case tracking yielded different estimates of time spent on activities (Figure 3.3). Per direct observations, DIS spent the majority of time on data entry (approximately 29% of their time) and contacting providers (approximately 21%). Per the case tracking forms, DIS spent approximately 36% of their time conducing partner services work in the field and 22% of time doing case and partner interviews. Administrative staff spent approximately 60% of time performing case review; this was similar for direct observations and case tracking. Lastly, observations included general administrative tasks (e.g., email, team meetings) that were not included on the case tracking forms. These tasks were categorized as "Other, misc." in the observations. Similarly, for administrative staff, general administrative tasks were observed that were not recorded on case tracking forms.

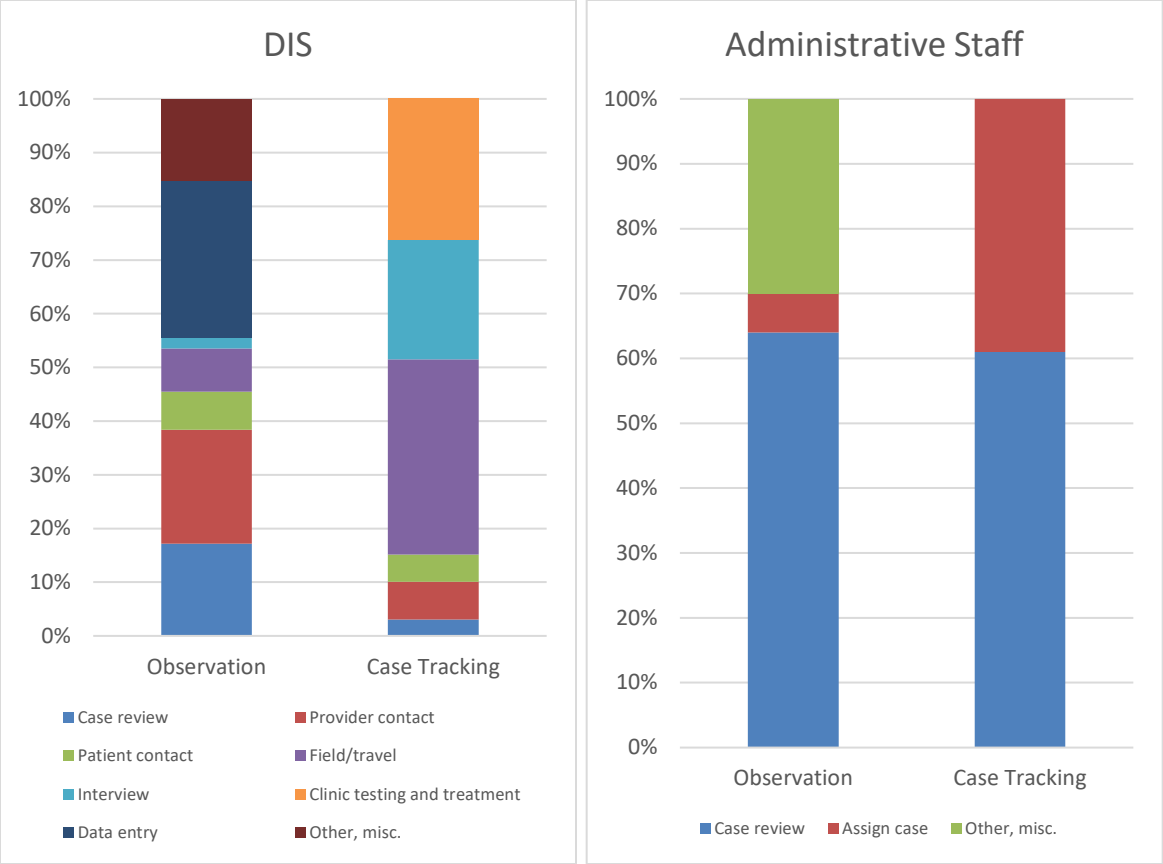

Figure 3.2. Proportion of Time by Task Category.

3.2 Barriers and Facilitators to Implementing the New Activities

Directly observed and staff-reported barriers and facilitators are summarized in Table 3.1. The barriers are classified as a structural barrier or an environmental barrier. Structural barriers are systemic or process barriers that can be directly addressed by the MSDH. Environmental barriers are barriers that exist in the community that may be beyond the purview of the MSDH and are not easily addressed. In interviews, the DIS recognized the main goal of Activity 1 as identifying individuals with HIV and stopping the spread of infection of HIV, gonorrhea, and chlamydia. One DIS suggested that cases of gonorrhea or chlamydia can provide a "gateway" to intervene before more serious infections (e.g., syphilis or HIV) occur. Interestingly, one DIS noted that the goal of this activity was to get HIV-negative MSM started on PrEP—suggesting a strong connection

between Activity 1 and Activity 3. DIS reported their role in this activity to be identifying sexual partners and contacting them to encourage testing and treatment (if needed). They also noted roles in education on safe sex practices and the resources that are available to practice safe sex.

DIS noted that the purpose of Activity 2 is to ensure that HIV-positive individuals are living a healthy lifestyle and to get that individual into care. Some DIS recognized that this will help keep a person's viral load down. DIS also recognized that re-linking HIV-positive individuals to care also decreases new infections. As one DIS said, "treatment is prevention." DIS recognize that this makes their overall job easier if they can decrease HIV incidence. DIS noted that they have been generally successful in linking the patient to care and following up. One DIS noted, "when it works, it works." However, another DIS said, "when the individual doesn't want to get into care, it can be difficult." One DIS said that it is important to let people know that you do not want to get them in trouble, that you are concerned that they are not showing up to appointments, and that it is dangerous to have a secondary infection—both for themselves and for sexual partners.

DIS felt that the goal of Activity 3 is to get as many high-risk HIV-negative individuals to start PrEP as possible to decrease the number of new HIV cases. DIS noted their role is to be able to communicate with patients and develop a connection to educate on the benefits of PrEP, how to maintain their negative status, and how to help their partners. The DIS said that they focus on prevention and providing education. Most DIS said they try to focus PrEP referrals on "staying healthy." DIS felt that this activity has been successful, although they noted that "people persons" have more success. This is because they find more success if they are able to talk honestly with people about PrEP. DIS noted that "most people do not know how to get [PrEP]" and the information they share is welcomed in most cases. DIS also noted that the activity is new, and some DIS are still unfamiliar with it. Some DIS explained that some patients are resistant to PrEP

because of the cost or because of concerns about medication side effects. A one DIS said, some "patients just have their minds made up." DIS noted that these cases are no different from others; they are just introducing in a discussion about PrEP into the interview process.

DIS noted that the activities were well integrated into their daily workload, but anecdotally stated it was an increase in the number of cases that they handle. Most DIS felt that there was nothing that could be removed from their daily workload, unless it was the new activity. A key driver of the increased workload is the necessity to interview all chlamydia and gonorrhea cases among MSM, whereas prior to the implementation of Activity 1 only verification of treatment was needed. For HIV cases, re-counseling was only needed when someone with HIV was diagnosed with a secondary infection. The DIS also noted that patients do not have as much urgency with chlamydia or gonorrhea. With HIV or syphilis, patients are generally more open to suggestions.

Table 3.1. Barriers and Facilitators at Each Stage of Case Completion for the Three New Partner Services Activities.

Directly observed	*Barriers*	• Structural
		  ○ Determining if a client is in jurisdiction (e.g., a client is reported in one county, but lives in another) can add days or weeks to the point of first contact attempt.
		  ○ DIS are often unable to reach patients who have already been tested and treated for gonorrhea and chlamydia.
		  ○ PrEP referral is not offered systematically.
		  ○ PrEP referral data not entered electronically.
		  ○ Many attempts are needed to contact providers and patients.
		  ○ Multiple infections can lead to multiple field records created if lab reports are entered at different times.
		  ○ Data entry staff close all gonorrhea and chlamydia cases unless there is an HIV co-infection.
		  ○ No variable for MSM in data entry for gonorrhea and chlamydia cases.
		  ○ Irregular manual data collation and analysis.
		  ○ Data in multiple systems (Apollo, eHARS, and PRISM).
		• Environmental
		  ○ Field visits often do not yield results.

	Facilitators	• Regular and predictable lab reporting. • Assigning cases directly to Team V DIS Supervisor.

DIS interviews	*Barriers*	• Structural
		  ○ Lack of frequent communication between clinics and DIS.
		  ○ Getting patients to attend appointments or attending at an unscheduled time.
		  ○ Lack of additional staff or additional compensation.
		  ○ Patient may not be receptive to linkage to care.
		  ○ Needing to verify documentation on PrEP referral even if client refuses the referral.
		  ○ Some patients who are interested in PrEP live far away from Jackson (where PrEP is available).
		  ○ Disparate forms in multiple systems and tedious to complete.
		  ○ Waiting to close cases until appointments happen.
		  ○ Syphilis cases may not have been reported for Activity 2 until they are closed.
		• Environmental
		  ○ Difficult to know how long a client has had chlamydia and/or gonorrhea (unlike syphilis which has stages).
		  ○ Distrust of the MSDH.
		  ○ Stigma of MSM.
		  ○ Finding MSM who are HIV negative.
		  ○ Lack of valid addresses and phone numbers.

	Facilitators	• Patients possessing the attitude of wanting to help themselves. • Perceived “seriousness” of the disease. • New appointment and referral cards. • Retrieving contacts from patients.

Chapter 4. DISCUSSION

This evaluation found that integration of new HIV-related activities into existing STD partner services did add time to each individual case and seemed to increase the DIS caseload. DIS generally had a very positive perception of the new activities. However, ideas on effectiveness were mixed. Most DIS felt they have not identified many new HIV cases, but they have gotten many contacts tested and treated. The DIS feel that they have been trained well for the new activities, but some DIS mentioned that they would have liked more explanation of why they are doing the activity when it was introduced. We also identified that DIS spend substantial time on documentation and field visits, which are potential areas for improved efficiency. This analysis represents the first time that systematic collection of time spent on partner services activities has been completed for the partner services program at the MSDH, and, while high-level, are one of the first steps to document and improve program efficiency and effectiveness.

The time and motion study and individual case tracking indicated that the new HIV-related activities added about 30-75 minutes to existing activities, though much of this was administrative time. The addition of verification of linkage to care for Activity 2 and PrEP referral for Activity 3 were the main sources of additional time for DIS. However, it should be noted that DIS typically do not perform partner services on gonorrhea and chlamydia cases so in that regard increased caseload is significant. While we know how much additional time each activity requires when compared to standard STD partner services, we do not know the value of the additional time. Further study is needed to determine the effectiveness of these activities in identifying HIV cases, linking people to care, and successfully increasing PrEP uptake.

DIS spend much of their time attempting to contact providers, entering data, and traveling. This indicates opportunities for improved efficiency across all STD partner services—not just for the new activities. To further improve efficiency, the MSDH could attempt to reduce the amount of paperwork required to implement these activities, and to consolidate data entry into one database. Some DIS also felt being able to complete data entry remotely could improve efficiency. Lastly, developing more efficient methods of contacting providers could reduce the amount of time needed to complete a case.

Many of the barriers identified were structural, suggesting that they can be improved by systemic changes. To improve the efficiency of administrative time, the MSDH could strive to automate data collection and analysis. The same collection and analysis happens regularly, and automated processing could reduce the time needed to identify eligible cases for the new activities. Additionally, the current need to collect and process data from multiple databases significantly increase the time necessary for initial case assignment. By integrating available data sources, the MSDH can significantly reduce administrative workload and improve efficiency. Lastly, introducing an MSM variable into the MSDH's STD surveillance database can help identify eligible cases more quickly.

The DIS perspective of the new activities was relatively positive. While DIS did feel they were adequately trained, some DIS expressed desire for more training on how to offer PrEP and a more readily available resources for them to offer. Trainings on addressing mental health issues among patients and working with transgender patients were also mentioned. These trainings could help reduce stigma among high-risk populations. These trainings could help address environmental barriers. These barriers go beyond systemic changes within MSDH processes, but the MSDH can make some changes to improve the perception of MSDH services in the community.

In interviews, DIS consistently agreed that they pursue assigned cases based on the following priority: pregnant women, syphilis and HIV cases, MSM and women of child-bearing age, and gonorrhea and chlamydia cases. While gonorrhea and chlamydia cases are the target of the new activities, they are the lowest priority for DIS. This means that DIS are often following up on gonorrhea and chlamydia cases several days after the client has been tested and treated—reducing the likelihood that they will be able to successfully contact them for an interview. One potential solution to improve the timeliness of gonorrhea and chlamydia case work is to selectively assign gonorrhea cases to some DIS and chlamydia cases to others. One challenge with this approach is that patients are often co-infected with gonorrhea and chlamydia and the gains from selective assignment may be minimal. Further analysis is needed to demonstrate the potential effect.

This evaluation had several strengths. We used different methods to ascertain time spent on activities and to gain the DIS' perspective on the integration of new work. This work also represented the first systematic evaluation of time spent on DIS activities. There were also several limitations. First, there was only a small amount of time available to observe each DIS. Four hours in one day was not enough to observe all tasks needed to complete a case. Further study could observe fewer DIS, but for longer periods of time over the course of several days. Second, there was a bias in the times designated for direct observation. The observation schedule was chosen based on which DIS were on call for efficiency and predictability. However, on-call DIS often have a different distribution of tasks since they are required to stay in the office and be available for any patients that visit. This likely led to the differences in activities observed for the direct observations versus patient tracking forms. Third, for case tracking, some tasks were not recorded. For example, the DIS did not always record the travel time as part of a field visit. Additionally,

DIS will often go from one location to another when they are in the field and it can be difficult to discern the travel for one case versus another. Finally, in calculating the time needed to complete a case, the time between when the laboratory result was entered in PRISM and when the Regional DIS Supervisor reviewed the case was not considered. While this is likely minimal, the work schedule of the Regional DIS Supervisor can greatly influence when cases are assigned.

The results of this study can be used in a costing study. A costing study would provide a monetary quantification of new activities to determine the long-term feasibility of integration of these activities and scale-up statewide. Future investigation should explore the distribution of duration of tasks and overall time to complete a case using Monte Carlo methods based on the minimum and maximum durations observed and recorded. This may provide a more accurate picture of time spent on tasks not only for the new activities, but for the existing STD partner services program.

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APPENDIX A – INTERVIEW GUIDE

Introduction[4]

"My name is Peder Digre and I am a Master of Public Health student working at the University of Washington in Seattle. The Mississippi Department of Health has partnered with the University of Washington on a project to integrate HIV-related activities into STD partner services. This project has three components that have now been added to MSDH's partner services program.

The first component/activity is to conduct partner services interviews with HIV-negative MSM with gonorrhea, chlamydia, or urethritis to increase HIV testing of partners. This started in July 2016. The second component is to identify previous HIV positive individuals with a new STD who are not in HIV care, and to re-link those individuals to care. This started in June 2017. The third component is to integrate PrEP referrals into STD partner services. You recently started this activity.

The reason we have asked to speak with you today is to hear your perspective on how these new activities are going, and to better understand how these new partner services activities are or are not integrated into your typical work day. We are talking to all of the DIS on Team V. There are no right or wrong answers to my questions—we are looking for your thoughts and perspectives.

This interview is not an evaluation of your performance; we are hoping that we will be able to improve MSDH's partner services program and ultimately improve service to our clients by hearing from DIS. The information you share with me will be kept confidential. Your name will not be used and your responses to these questions will be grouped with those from the other DIS on Team V before I share them with anyone else at MSDH.

This interview will take about one hour. I will be taking notes during our interview so that I can make sure that I have correctly captured what you said, if that is okay with you. I am not writing your name on these notes so there will be no way for anyone to know who gave these responses.

You can refuse to answer any questions and stop the interview at any time. I know that you are busy and I really appreciate you taking the time to talk with me today. Your perspective and the perspective of other DIS will help us better understand how integration of these new activities is happening.

Do you agree to participate in this interview?

Do you have any questions for me before we begin?

[4] Note: Headers in bold or underline are for formatting only. Interviewer will not read these aloud

Warm-up Questions

"I would like to start by learning a little more about you."

1. How long have you worked in the health department?

2. How long have you worked as a DIS in the HIV/STD program?

3. What did you do before you became a DIS in the HIV/STD program?

4. What do you like the least about your job? [DO NOT TAKE NOTES, JUST FOR WARM-UP]

5. What do you like the most about your job? [DO NOT TAKE NOTES, JUST FOR WARM-UP]

"Before we get started with some more specific questions, I would like to learn more about your typical day,

1. When you are looking through your open and new cases on a typical day, which ones do you follow-up on first? How do you prioritize them? Why?

Interviewer will list the aims/activities on a sheet of paper so the DIS can reference the activity while it is being discussed. If interview takes place via video, the aims/activities can be shared on the screen or kept at the DIS' computer where the interviews will take place.

Aim 1 Questions

"Now let's talk about your work interviewing HIV-negative MSM with gonorrhea, chlamydia, or urethritis. This activity started in July of 2016. In the next few questions when I refer to 'this activity', I am referring to conducting partner services with HIV-negative MSM with gonorrhea, chlamydia or urethritis. This is also listed on the piece of paper next to the laptop you are using"

<u>DIS role and training</u>

1. To your knowledge, what are the goals or purpose of this activity? (i.e., the goals of interviewing HIV-negative MSM with GC/CT/urethritis). [probe/prompt: Why has MSDH started doing this?]

2. What do you see as your role in this new activity?

3. Do you feel that you have been able to succeed in this role? Why/why not? What makes it difficult to succeed? What would help you succeed? [probe/prompt: What do you consider to be "successful" benchmarks of your work? or How do you know when you've been successful, what types of things do you look for/let you know?]

4. Could you walk me through the steps you take in a partner services investigation of an HIV-negative MSM with GC/CT/urethritis? If you do not mind, I am interested in hearing about all the steps, from the time when you are assigned a new case that is eligible for this project to when you close the case. [probe/prompt: how do you contact the OP? How do you elicit partner names? When and how do you locate partner information? If you interview a partner, how do you bring that person to the clinic to get tested for STDs and HIV? What if they refuse? Where do you document this information?]

5. Do you feel that you received the necessary training to conduct this activity? Why/why not? What training/resources would you have wanted to receive prior to starting this activity?

6. In your opinion, how successful has this new activity been in achieving its goal, which is to increase HIV testing and identify new HIV cases among partners of OP's with gonorrhea, chlamydia, and urethritis? [probe/prompt: Is this new activity working the way it should (why/why not)? What are some examples of success?]

<u>Differences between this new work and other partner services (i.e., challenges faced by DIS)</u>

1. In what ways is working these types of cases (HIV-negative MSM with GC/CT/urethritis) different than the other partner services work you conduct (for example, syphilis partner services)? [probe/prompt: What challenges, if any, have you identified to conducting partner services with HIV-negative MSM with GC/CT/urethritis? Are these challenges different to conducting partner services with MSM with syphilis or HIV-positive MSM with GC/CT/urethritis? How?]

2. What challenges, if any, have you had with adding this new activity into your typical daily workload? How has your typical day changed since this activity was introduced?

3. What changes have you made to your job in order to integrate this new activity into your typical daily workload? Have you sustained these changes? How?

Suggestions for improvement

1. What suggestions do you have for how to better integrate this activity into DIS' typical daily activities?

2. Thinking about all of the activities you do every day, if you had to remove something from a typical day's work in order to integrate this activity, what would it be?

Aim 2 Questions

"Next I would like to talk to you about conducting re-linkage activities with previous HIV-positive individuals with STDs (secondary infection) who are out-of-care. In the questions I will ask you, when I refer to 'this activity', I am referring to conducting re-linkage activities with previous HIV-positive individuals with STDs."

DIS role and training

1. To your knowledge, what are the goals or purpose of this activity as you understand them (i.e., re-linking previous HIV-positives with new STD)? [probe/prompt: Why has MSDH started doing this?]

2. What do you see as your role in this new activity?

3. Do you feel that you have been able to succeed in this role? Why/why not? What makes it difficult to succeed? What would help you succeed? [probe/prompt: What do you consider to be "successful" benchmarks of your work?]

4. Could you walk me through the steps you take in a partner services investigation that involves re-engaging individuals into HIV care? If you do not mind, I am interested in hearing about all the steps, from the time when you are assigned a new case that is eligible for this project to when you close the case. [probe/prompt: How do you bring up the topic of the OP being out of care? What do you do if the OP tells you s/he is already in care? When do you contact the provider? What information do you verify with the provider? When do you refer the OP to the case manager? Where do you document this information?]

5. Please describe with me how you work with the HIV case managers? In what circumstances do you refer OPs to the case managers?

6. Do you feel that you received the necessary training to conduct this activity? Why/why not? What training/resources would you have wanted to receive prior to starting this activity?

7. In your opinion, how successful has this new activity been successful in achieving its goal, which is to re-link HIV-positive individuals with a new STD back into HIV care? [probe/prompt: is this new activity working the way it should (why/why not)? What are some examples of success?]

Differences between this new work and other partner services (i.e., challenges faced by DIS)

1. In what ways has working these types of cases (re-linking previous HIV positives with a new STD) been different than the other partner services work you conduct (for example, syphilis partner services)? [probe/prompt: What challenges, if any, have you identified to conducting re-linkage activities? How has this differed then doing initial linkage to care (i.e., linkage to care with new HIV cases)?]

2. What challenges, if any, have you had with adding this new activity into your typical daily workload? How has your typical day changed since this activity was introduced?

3. What changes have you made to your job in order to integrate this new activity into your typical daily workload? Have you sustained these changes? How?

Suggestions for improvement

1. What suggestions do you have for how to better integrate this activity into DIS' typical daily activities?

2. Thinking about all of the activities you do every day, If you had to remove something from a typical day's work in order to integrate this activity, what would it be?

Aim 3 Questions

"Finally, I would like to talk to you about offering PrEP referrals as part of partner services. In the questions I will ask you, when I refer to 'this activity', I am referring to adding PrEP referrals to partner services"

DIS role and training

1. To your knowledge, what are the goals or purpose of this activity as you understand them (i.e., offering PrEP referrals as part of partner services)? [probe/prompt: Why has MSDH started doing this?]

2. What do you see as your role in this new activity?

3. Do you feel that you have been able to succeed in this role? Why/why not? What makes it difficult to succeed? What would help you succeed? [probe/prompt: what do you consider "successful" benchmarks of your work]

4. Could you walk me through the steps you take in a partner services investigation that involves PrEP referrals? If you do not mind, I am interested in hearing about all the steps, from the time when you are assigned a new case that is eligible for this project to when you close the case. [probe/prompt: how do you contact the OP? How do you bring up the subject of PrEP? What do you do if the OP says s/he is already on PrEP? How do you connect the OP with a clinic that providers PrEP if they would like to be on PrEP? Where do you document this information?]

5. Do you feel that you received the necessary training to conduct this activity? Why/why not? What training/resources would you have wanted to receive prior to starting this activity?

6. In your opinion, how successful has this new activity been successful in achieving its goal, which is to offer PrEP to individuals at high risk for HIV? [probe/prompt: Is this new activity working the way it should (why/why not)? What are some examples of success?]

Differences between this new work and other partner services (i.e., challenges faced by DIS)

1. In what ways has working these types of cases (those that include offer PrEP referrals) been different from the other partner services work you conduct? [probe/prompt: What challenges, if any, have you identified to offering PrEP referrals?]

2. What challenges, if any, have you had with adding this new activity into your typical daily workload? How has your typical day changed since this activity was introduced?

3. What changes have you made to your job in order to integrate this new activity into your typical daily workload? Have you sustained these changes? How?

Suggestions for improvement

1. What suggestions do you have for how to better integrate this activity into a DIS' typical daily activities?

2. Thinking about all of the activities you do every day, If you had to remove something from a typical day's work in order to integrate this activity, what would it be?

Final Closing Statement

That was my final question. But I would like to know if there is anything else you would like to share with me that you think is important for me to know about these new activities or your role in these activities?

Thank you very much for your time. If you think of anything you would like to share with me, please do not hesitate to call me at 206-612-0054 or email me at pdigre@uw.edu. (Can also send email with contact information).

APPENDIX B – CASE TRACKING FORM

Initial Entry/Provider Work – CT/GC
Time Tracking Form
<u>Instructions</u>

The purpose of this form is to understand the average time it takes to complete case investigations, interviews, and partner notifications for STI partner services. This "Initial Entry/Provider Work" form is designed to capture the time it takes to complete activities from when a case or lab is reported until a case is closed administratively or assigned for an interview. This is not an evaluation, but rather observations that allow us to estimate what it takes to deliver good services.

<u>INSTRUCTIONS</u>

For each STI case (gonorrhea or chlamydia), complete the attached tracking form. Forms may be filled by multiple staff members.

- Record the PRISM numbers in the upper right hand corner for tracking purposes.
- Record the date the provider work was started as Date Start (i.e. this is the date of the initial case or lab report, whichever is first). When the provider work is completed (i.e. when the case is assigned for interview or closed without being assigned for interview), record this date as the Date Stop.
- Complete the Time Tracking table. For each section:
  - Describe each activity performed for this PRISM number.
  - Record the time each activity was started (Time Start) and the time each activity ended (Time Stop).
  - Record your initials in the far right hand column for the portion(s) you completed.
- Each contact attempt or other activity related to each PRISM number should be recorded on a separate row. Attach more forms as needed.

For any questions/feedback, please contact Dr. Christine Khosropour at ckhosro@uw.edu or Peder Digre at pdigre@uw.edu.

Thank you so much for your help!

Initial Entry/Provider Work – CT/GC
Time Tracking Form

PRISM: ___________

Date start (mdy): _____/_____/______ Date stop (mdy): _____/_____/______

Time Tracking (attach additional forms if necessary)

	Describe Specific Activity Here	Time Start	Time Stop	Initials
Include activities such as initial data entry, lab searches, EMR searches, called provider, left message, spoke with provider, email, received call, data entry, etc. Describe each activity related to the specific PRISM case. Include repeat contact attempts, messages, call backs, etc. Note time started and stopped for each activity. *Also record your initials*				

Patient/Partner Time Tracking Form – Interview & Partner Notification CT/GC

Instructions

The purpose of this form is to understand the average time it takes to complete case interviews and partner notifications for STI partner services from the point of interview assignment. This is not an evaluation, but rather observations that allow us to estimate what it takes to deliver good services.

INSTRUCTIONS

For each STI case (gonorrhea, chlamydia), complete the attached tracking form. Forms may be filled by multiple DIS.

- Record the PRISM number in the upper right hand corner for tracking purposes.
- Record the date the case was assigned for an interview (Date Assigned). Record the date when the case work is completed/closed (Date Case Closed).
- Complete the Time Tracking table. This includes sections for 1) index patient contact, 2) partner contact, and 3) other. For each section:
  - Describe each activity performed for this PRISM number.
  - Record the time each activity was started (Time Start) and the time each activity ended (Time Stop).
  - For patient and partner work, indicate if any of the following activities were conducted:
    - HIV testing or referral for testing
    - PrEP referral
    - Linkage/Re-Linkage to HIV care referral
  - If field work was conducted via car, record the mileage in the mileage column.
  - For partner notification, indicate the number of the partner contacted in the left hand column.
  - Record your initials in the far right hand column for the portion(s) you completed.
- Each contact attempt or other activity related to each PRISM number should be recorded on a separate row. Attach more forms as needed.
- If an activity does not fit the existing choices (e.g. provider contact), describe this in the "other" section and record the time.

For any questions/feedback, please contact Dr. Christine Khosropour at ckhosro@uw.edu or Peder Digre at pdigre@uw.edu.

Thank you so much for your help!

Patient/Partner Time Tracking Form Interview & Partner Notification CT/GC

PRISM: _____

Date Assigned (mdy): _____/_____/_____ Date Case Closed (mdy): _____/_____/_____

Time Tracking (attach additional forms if necessary)

Patient Contact Index Patient Contacts & Interview Describe each activity related to STI case contact. Include repeat contact attempts, messages, texts, call backs. Note time started and stopped for each activity. *Also record your initials.*	**Describe Activity (phone call, leave message, text, email, receive phone call, prepare letter, field work, interview, PrEP referral, HIV testing, HIV linkage to treatment, data entry, etc.)**	**Time Start**	**Time Stop**	**Mileage**	**Initials**

Partner Notification Describe each activity related to STI partner contact. Include repeat contact attempts, messages, texts, call backs. Note which partner by number. Note time started and stopped for each activity. *Also record your initials.*	**Partner #**	**Describe Activity (phone call, leave message, text, email, receive phone call, prepare letter, field work, interview, PrEP referral, HIV testing, HIV linkage to treatment, data entry, etc.)**	**Time Start**	**Time Stop**	**Mileage**	**Initials**

Other Describe any other activity unable to categorize above.	**Describe activity**	**Time Start**	**Time Stop**	**Mileage**	**Initials**

Initial Entry/Provider Work – Syphilis
Time Tracking Form
<u>Instructions</u>

The purpose of this form is to understand the average time it takes to complete case investigations, interviews, and partner notifications for STI partner services. This "Initial Entry/Provider Work" form is designed to capture the time it takes to complete activities from when a case or lab is reported until a case is closed administratively or assigned for an interview. This is not an evaluation, but rather observations that allow us to estimate what it takes to deliver good services.

<u>INSTRUCTIONS</u>

For each syphilis case, complete the attached tracking form. Forms may be filled by multiple staff members.

- Record the PRISM numbers in the upper right hand corner for tracking purposes.
- Record the date the provider work was started as Date Start (i.e. this is the date of the initial case or lab report, whichever is first). When the provider work is completed (i.e. when the case is assigned for interview or closed without being assigned for interview), record this date as the Date Stop.
- Complete the Time Tracking table. For each section:
  - Describe each activity performed for this PRISM number.
  - Record the time each activity was started (Time Start) and the time each activity ended (Time Stop).
  - Record your initials in the far right hand column for the portion(s) you completed.
- Each contact attempt or other activity related to each PRISM number should be recorded on a separate row. Attach more forms as needed.

For any questions/feedback, please contact Dr. Christine Khosropour at ckhosro@uw.edu or Peder Digre at pdigre@uw.edu.

Thank you so much for your help!

Initial Entry/Provider Work – Syphilis
Time Tracking Form

PRISM: ____________

Date start (mdy): _____/_____/______ Date stop (mdy): _____/_____/______

Time Tracking (attach additional forms if necessary)

	Describe Specific Activity Here	Time Start	Time Stop	Initials
Include activities such as initial data entry, lab searches, EMR searches, called provider, left message, spoke with provider, email, received call, data entry, etc. Describe each activity related to the specific PRISM case. Include repeat contact attempts, messages, call backs, etc. Note time started and stopped for each activity. *Also record your initials*				

Patient/Partner Time Tracking Form – Interview & Partner Notification
Syphilis
Instructions

The purpose of this form is to understand the average time it takes to complete case interviews and partner notifications for syphilis partner services from the point of interview assignment. This is not an evaluation, but rather observations that allow us to estimate what it takes to deliver good services.

INSTRUCTIONS

For each syphilis case, complete the attached tracking form. Forms may be filled by multiple DIS.

- Record the PRISM number in the upper right hand corner for tracking purposes.
- Record the date the case was assigned for an interview (Date Assigned). Record the date when the case work is completed/closed (Date Case Closed).
- Complete the Time Tracking table. This includes sections for 1) index patient contact, 2) partner contact, and 3) other. For each section:
  - Describe each activity performed for this PRISM number.
  - Record the time each activity was started (Time Start) and the time each activity ended (Time Stop).
  - For patient and partner work, indicate if any of the following activities were conducted:
    - HIV testing or referral for testing
    - PrEP referral
    - Linkage/Re-Linkage to HIV care referral
  - If field work was conducted via car, record the mileage in the mileage column.
  - For partner notification, indicate the number of the partner contacted in the left hand column.
  - Record your initials in the far right hand column for the portion(s) you completed.
- Each contact attempt or other activity related to each PRISM number should be recorded on a separate row. Attach more forms as needed.
- If an activity does not fit the existing choices (e.g. provider contact), describe this in the "other" section and record the time.

For any questions/feedback, please contact Dr. Christine Khosropour at ckhosro@uw.edu or Peder Digre at pdigre@uw.edu.

Thank you so much for your help!

PRISM: _____

Patient/Partner Time Tracking Form
Interview & Partner Notification
Syphilis

Date Assigned (mdy): _____/_____/_____ Date Case Closed (mdy): _____/_____/_____

Time Tracking (attach additional forms if necessary)

Patient Contact Index Patient Contacts & Interview Describe each activity related to STI case contact. Include repeat contact attempts, messages, texts, call backs. Note time started and stopped for each activity. *Also record your initials.*	**Describe Activity (phone call, leave message, text, email, receive phone call, prepare letter, field work, interview, PrEP referral, HIV testing, HIV linkage to treatment, data entry, etc.)**	**Time Start**	**Time Stop**	**Mileage**	**Initials**

Partner Notification Describe each activity related to STI partner contact. Include repeat contact attempts, messages, texts, call backs. Note which partner by number. Note time started and stopped for each activity. *Also record your initials.*	**Partner #**	**Describe Activity (phone call, leave message, text, email, receive phone call, prepare letter, field work, interview, PrEP referral, HIV testing, HIV linkage to treatment, data entry, etc.)**	**Time Start**	**Time Stop**	**Mileage**	**Initials**

Other Describe any other activity unable to categorize above.	**Describe activity**	**Time Start**	**Time Stop**	**Mileage**	**Initials**