PARTNER SERVICES COMMUNITY ASSESSMENT REPORT

New Hampshire Department of Health and Human Services

Utah Department of Health and Human Services

University of Washington

August 2026

UNIVERSITY of WASHINGTON

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FUNDING

This project was funded by the New Hampshire Department of Health and Human Services Division of Public Health and Utah Department of Health and Human Services, and supported by the National Coalition of STD Directors (NCSD).

DISCLAIMER

This project report was prepared for the NCSD by the research team. The views expressed in this report are those of the authors only and do not represent the official positions or policies of the NCSD or the authors' institution.

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ABBREVIATIONS

AMIS	*American Men's Internet Survey*
DIS	*Disease Intervention Specialist*
IQR	*Interquartile Range*
PCP	*Primary Care Provider*
PS	*Partner Services*
STI	*Sexually transmitted infection*
TWIST	*Transgender Women's Internet Survey and Testing*

EXECUTIVE SUMMARY

Sexually transmitted infection (STI) and HIV partner services (also referred to as partner notification or contact tracing) serve multiple functions for health departments, including assuring index patient treatment or engagement in care, testing and/or treating sexual partners to prevent further transmission, and collecting surveillance data. In a time of uncertainty in public health funding, it is important to understand public attitudes and concerns about partner services, and identify best practices for conducting this work.

We undertook this study with the following objectives:

1. To better understand the current landscape of partner services in the US and synthesize previous research on individual and community perceptions of partner services in the US.

2. To gain greater insight into individual and community attitudes and perceptions regarding partner services.

3. To identify opportunities for quality improvement to increase utilization of partner services.

4. To issue evidence-based recommendations and promising practices which can be used to inform future programming and policy decisions related to the provision of HIV/STD partner services.

Our methods included three areas of data collection: 1) a literature review of scientific papers as well as publicly available reports, 2) individual interviews with partner services staff in New Hampshire and Utah, and 3) individual interviews with New Hampshire and Utah residents, many of whom had tested for STIs previously or had been notified of an exposure to an STI. We recruited partner services staff via their respective state departments of health and human services, and through zoom meetings to discuss the study with partner services staff. We employed a variety of methods to recruit New Hampshire and Utah residents, including through local sexual health clinics, online research surveys which asked participants if they would be open to being contacted about other research projects, and through an online research recruitment platform.

Our key findings include:

- Education of the public about partner services could increase awareness of partner services programs and their importance within public health. Improved education

about sexual health could also better prepare patients and partners for the experience of testing positive for, or being exposed to, an STI or HIV.

- While some participants felt that they would prefer to notify partners on their own, support for notifying partners was viewed as being important, especially for casual partners. This might include Disease Intervention Specialists (DIS) notifying partners, or sharing scripts that could be used to notify partners.
- Patients and their partners who had experiences with partner services staff found their help in accessing needed STI testing and treatment programs and processes valuable.
- Connections to services that people need (i.e. STI testing, housing, medical care) can increase patient and partner engagement with partner services.
- Patient interactions with healthcare providers can impact their decision to engage in partner services (or not). Hearing from a provider that the health department might reach out after a positive test result could reduce feeling of surprise or anger that patients sometimes express when contacted for partner services.
- Sociodemographic characteristics of DIS are not as important as their approach to partner services. Residents and partner services staff both described the importance of partner services staff being non-judgmental and providing assistance tailored to individualized needs.
- It is critical that index patients and parters are assured of the privacy and confidentiality of the information that they share with partner services staff.

Recommendations

Based on these findings, we recommend the following to better engage and meet the needs of people with STI and HIV:

System Level Recommendations

1. At the time of contact, provide partner services recipients with clear information about privacy, confidentiality, data security, and how their data will be used and stored.
2. Provide outreach and education about partner services to the public. Education may increase the public's understanding and awareness of the goals of partner services and improve partner services recipients' willingness to engage with partner services staff. Multiple types of channels and messaging for outreach may be needed to meet the needs of different populations.

3. Build stronger relationships between health care providers and health departments. Such partnerships may improve outcomes and patient experiences with partner services.
    a. Strong relationships between providers and health departments are important in linking patients and their partners to testing and treatment.
    b. Providers who let patients know that the health department might reach out to them after a lab result confirming an STI or HIV diagnosis may result in patients being more open to speaking with the health department.
    c. It may be particularly important to develop relationships with online providers offering STI/HIV testing. Online providers may not have systems in place to ensure follow-up and/or treatment after an STI/HIV diagnosis.
4. Broaden strategies for reaching out to patients, including messaging through applications/apps used to meet sex partners.
5. Consider bringing DIS from multiple jurisdictions together to share best practices (this is especially important for small health departments that may have few DIS on staff).
6. Ensure that low cost/low barrier testing and treatment options are available to patients. Consider using incentives for patients or partners that might not otherwise be treated or engaged in care for HIV and/or STI.

Recommendations Specific to DIS and Other PS Staff Training:

7. Provide DIS with tools and strategies to communicate clearly with patients about how data privacy and confidentiality will be protected. DIS working in smaller communities might benefit from additional training or support about confidentiality given the likelihood that they or other health department staff may know patients and/or their partners.
8. Provide training that ensures non-judgmental interactions with patients, partners and other partner services staff. Message content should focus on ensuring general health rather than on their sexual behaviors or specific diagnoses. Patients should be treated as individuals, with unique needs, beliefs, and preferences. Train DIS on how to most effectively provide education for patients. Education might include information about local resources available for, and logistics of, STI and HIV testing and treatment, as well as how to best support patients in notifying their partners.
9. Help DIS develop a conversational approach to partner services interviews, rather than an approach that focuses on data collection.

10. Provide training regarding strategies to engage patients who are reluctant to discuss their diagnosis and/or notify partners. Emphasize the importance of partner services on preventing STI/protecting partners and other community members.

Following the COVID-19 pandemic, local and state health department STI and HIV programs have faced numerous challenges, including public distrust, loss of federal funding, and in some cases, loss of experienced partner services staff who moved to other roles after supporting the COVID-19 contact tracing effort. Given these barriers, delivering STI and HIV partner services in a way that is efficient and effective at reaching patients and their partners to prevent STI and HIV is more important than ever.

Partner services as an STI prevention intervention has not changed appreciably since it was introduced as a strategy to prevent syphilis transmission almost 100 years ago. Our results suggest that partner services can be a valuable intervention for patients, but a one-size-fits-all approach might deter some patients from engaging with health department staff. Framing partner services as a partnership between patients and the health department, in which patients and partner services staff work together toward a common goal of preventing STIs, may be one way to increase patient engagement. Similarly, establishing strong relationships between medical providers and health department staff may lead to opportunities for collaboration and increased patient trust and willingness to engage.

Finally, partner services staff have a wealth of expertise and experience, but partner services work is challenging, and staff sometimes feel isolated. Offering staff opportunities to engage with one another to share best practices and learn from peers is one potential way to encourage continuous learning and increase job satisfaction. If STI and HIV partner services are to remain relevant and impactful in terms of preventing infections, they must evolve to meet the needs of today's patients and staff.

INTRODUCTION

Partner Services

STI and HIV partner services (PS), also known as contact tracing, field services, assisted partner services, or partner notification, are longstanding HIV and STI control strategies in the U.S., beginning with syphilis contact tracing in the 1930s. PS typically includes talking with an index patient to ensure they have been treated appropriately (for STIs) or linked to care (for HIV) and to identify sex partners who may have been exposed to STIs/HIV. In most cases, index patients are asked if they prefer to have the health department notify partners about exposure, or prefer to notify partners themselves. PS have also typically included collecting additional information for surveillance purposes, such demographics or gender of sex partners. In many jurisdictions, the PS "portfolio" of services has expanded over time to include additional services to prevent HIV and STI, including HIV testing and referrals to PrEP for those not living with HIV,[1-3] linkage care for people newly diagnosed with HIV,[4] relinkage to care for people with HIV who are out of care, referrals to doxycycline prophylaxis (doxy PEP), provision of expedited partner therapy (EPT) to treat partners exposed to STI without requiring a clinic visit, and contraception. PS are often carried out by DIS, but may also be provided by public health or other nurses or health department staff.

The New Hampshire Context

In New Hampshire, chlamydia, gonorrhea, syphilis (all stages) rates were decreasing in the most recent STI/HIV summary report covering 2019-2023 at 199, 42, and 6 cases per 100,000, respectively.[5] HIV cases remained stable at 2.6 cases per 100,000. Women and persons under age 30 had the highest burden of chlamydia, while persons aged 25-35 and men were most commonly diagnosed with gonorrhea. Black and African American people were disproportionately affected among those with chlamydia and gonorrhea. Gay and bisexual men and other men who reported male sex partners were the populations most affected by syphilis and HIV.

There are four DIS in the State of New Hampshire and one at the local health department. All public health nurses participate in disease investigations for reportable diseases with the exception of chlamydia and some gonorrhea cases due to high volume and limited capacity. There is one DIS who is a Sexual Health Nurse Specialist and investigates primary syphilis cases. Outbreaks and clusters are prioritized for investigation, followed by infections that could most impact public health.

The Utah Context

In Utah, recent HIV & STI surveillance updates included declining rates of chlamydia, gonorrhea, and syphilis. Combined STI rates were 367.1 per 100,000, which is a 12% decrease from 2023.[6] Women and people aged 15-24 were most impacted by chlamydia, while gonorrhea was most frequent among men and people aged 25-34. Black/African American, American Indian/Alaska Native, Hawaiian Island/Pacific Islander, and Hispanic or Latino people are disproportionately impacted by STIs in Utah (2024). HIV cases slightly increased in Utah at a rate of 4.5 cases per 100,000 persons, and Hispanic and MSM populations are most impacted by HIV transmission in Utah (2023).

The DIS structure in Utah is decentralized, wherein all DIS are housed within local health departments and there are no state or regional DIS. There are approximately 80-90 DIS in the state, and most are public health nurses. Cases are assigned for investigation based on where the patient lives. Chlamydia cases have been deprioritized for investigation due to limited resources. LHDs determine what cases are investigated depending on an internal hierarchy.

Project Objectives

The overarching objectives of this project were to:

1. Better understand the current landscape of partner services as currently delivered in the US, particularly in participating states, and synthesize previous research on individual and community perceptions of partner services in the US.
2. Gain greater insight into individual and community attitudes and perceptions regarding partner services including the way in which it is delivered and by whom, among priority population groups specified by participating states.
3. Identify opportunities for quality improvement to increase utilization of partner services and improve the quality of services provided.
4. Issue evidence-based recommendations and promising practices to inform future programming and policy decisions related to the provision of HIV/STI partner services at local, state, and national levels.

METHODS

This project was composed of three related components: 1) a literature review of partner services, 2) interviews with DIS and other PS staff, and 3) interviews with residents of Utah

and New Hampshire (hereafter referred to as "residents"). The project was conducted between August 2024 and November 2025. Methods, including recruitment, data collection, and data analysis for each component are described in detail below.

Literature Review

We conducted a literature review around STI and HIV partner services, with an emphasis on papers and reports describing qualitative interviews or data collected directly from patients or DIS about PS. We began by reviewing papers that the authors were familiar with via previous work on STI and HIV PS. We then searched PubMed for additional papers, limiting the search to papers that were published in 2014 and after and those that referred to PS in the U.S. This list of papers was reviewed and prioritized into three categories: 1) Review, 2) Review abstract for additional information, and 3) Do not review. For papers that were categorized as "Review abstract for additional information", we reviewed the abstract and, if necessary, the paper to determine whether the paper should be included in the literature review. We prioritized papers for review in which data were collected directly from patients or DIS about STI and HIV partner services. We also used the search terms "("partner services" OR "contact tracing" OR "partner notification") AND (HIV OR "sexually transmitted infection" OR STI OR "sexually transmitted disease" OR STD)" in a search engine (Google) to identify reports or other publications in the grey literature that would not be identified in a search of publication databases. Finally, we included a small number of studies from other high income, English-speaking countries (Australia, Canada) which included information collected directly from patients or other partners about PS.

We reviewed the papers selected for final review and abstracted information about study methods, results, and conclusions. We present common themes and findings across publications about partner services, including community knowledge, attitudes, and preferences for partner services.

Qualitative Data Collection & Analysis

Study Populations & Recruitment

DIS and other PS staff were eligible to participate in interviews if they conducted partner services as part of their job and worked in either New Hampshire or Utah. PS staff were recruited via emails circulated by the state health departments in New Hampshire and Utah, and presentations conducted in partnership between the state health departments and the UW research team. DIS and other PS staff were invited to reach out to study staff via email if they were interested in participating.

Residents were eligible to participate if they were ≥18 years of age, fluent in English or Spanish, and lived in either New Hampshire or Utah. Recruitment was focused on those who had prior experience with partner services or HIV/STI testing. An initial round of recruitment was conducted via health department emails and posting digital and physical flyers in spaces where potential participants might view study materials. Given low recruitment, a second round of patient recruitment was conducted in partnership with the American Men's Internet Survey (AMIS) and Trans Women Internet Survey and Testing (TWIST) studies. Study information was sent via email to participants who agreed to future contact regarding research participation and met study eligibility requirements, including residence in New Hampshire or Utah. A third round of study recruitment was conducted via Research Match, a National Institutes of Health (NIH) funded nonprofit that connects people interested in participating in research to ongoing research projects. A short study announcement was sent via email to those potential participants on the Research Match listserv who resided in Utah or New Hampshire. Research Match participants from Utah and New Hampshire were provided study contact information and asked to reach out if they met any of the following criteria: 1) Ever diagnosed with an STI or HIV, 2) Tested for an STI or HIV in past 5 years, 3) Ever told by a sex partner that they had been exposed to an STI or HIV, or 4) Had previous experience with STI or HIV PS.

Using a QR code, potential resident participants completed brief surveys and/or expressed interest in having study staff reach out to schedule interviews. Study staff followed up via email with all potential participants, contacting each person a maximum of three times.

Study Procedures

DIS and resident participants completed semi-structured individual interviews and short demographic surveys between January and October 2025. DIS demographic surveys captured information about training and length of time providing services, while resident surveys included questions on HIV/STI testing history, partner notification experience, and experience with DIS notification. DIS interviews were conducted by a trained research coordinator using a semi-structured guide focused on capturing: 1) partner services program processes and experiences, 2) challenges and strengths with the current partner services program, and 3) recommendations for program improvement. Resident interviews were similarly conducted by a trained research coordinator, and used a semi-structured guide that included questions about: 1) experiences receiving sexual health care and HIV/STI testing, 2) prior experiences notifying partners and/or being notified by partners about STI/HIV exposure, and 3) prior experiences with partner services programs. All interviews were conducted via Zoom. DIS interviews lasted a median of 48 minutes (range: 31-110 minutes) while patient interviews lasted a median of 39 minutes (range: 27-71

minutes). Interviews were recorded, transcribed, and translated to English (if applicable) by GMR Transcription Services, Inc.

Ethical Considerations

The study was determined to be exempt by the University of Washington Human Subjects Division (STUDY00021714). Participants received a $40 electronic gift card upon completion of an interview. All participants provided verbal consent to participate and be audio recorded.

Data Analysis

Demographic data was summarized using basic descriptive statistics. DIS and resident interview transcripts were analyzed using a traditional thematic analysis approach. Transcripts were imported into ATLAS.ti version 25 and coded using a final version of an agreed upon data-informed codebook. The initial codebook was developed through an iterative process of reviewing and summarizing a randomly selected subset (n=6) of DIS transcripts. Codes were developed deductively and inductively, using topics from the interview guide and those which emerged from transcript review. The codebook was refined through a process of consensus coding a small subset of transcripts (n=2), and discussing codes, code definitions, and text segmentation practices. The codebook was then expanded to account for resident experiences by reviewing the existing codebook against a subset of patient transcripts. This final version of the codebook was used to independently code all DIS and resident interview transcripts. A subset of coded transcripts was reviewed by another member of the research team to ensure consistency in code application and interpretation. Any coding discrepancies were resolved through discussion. Queries for each code were generated individually for DIS and resident transcripts, were reviewed individually, and summarized across code categories. Summaries were used to identify key themes within and across participants related to partner services experiences, beliefs and recommendations.

RESULTS

Literature Review

While the success of PS work can be difficult to measure, metrics such as the proportion of STI or HIV patients interviewed, the contact index (the number of sex partners or contacts identified per case), and other indices such as the brought-to-treatment index (number of sexual partners diagnosed and treated for syphilis divided by index case) have all been used to measure the effectiveness of PS work by health departments to monitor their programmatic work for many years. Several recent papers based on local health department data have reported on trends in these metrics over time, and for the most part, the trend is downward across all metrics. Authors have reported decreasing proportions of cases interviewed (among those initiated for partner services) and similarly declining proportions of patients who identify at least one partner.[7-9] A limitation of papers examining PS metrics over time is that most focused on only one population: MSM. However, a study in King County, WA found that women with syphilis were less likely to be located for interview than cisgender MSM or men who have sex with women. In another example not comparing trends but looking at measures of effectiveness at one point in time, among 23,613 patients with early syphilis reported across 7 jurisdictions, the authors estimated that 80% of sex partners were either unnamed or unreported.[10] A study examining HIV PS outcomes from 2019 used national data and found that only 3.5% (N=1,214) of new HIV diagnoses were identified through PS that year; however, this varied widely by jurisdiction.[11] The authors estimated that an additional 1,692 new HIV diagnoses among partners were "lost" as a result of incomplete or unsuccessful PS efforts. The authors noted that the PS processes contributing the largest number of potential lost diagnoses were: 1) index patients who were located but not interviewed, 2) partners who were not tested, and 3) index patients who were not located. Other authors have noted that the number of new HIV diagnoses identified per case through HIV PS appears to be declining over time.[12]

Concurrent with declining indicators of PS success, health department resources to provide PS have also been declining, STIs have been increasing, and in many cases, the workload of DIS is increasing.[13] In a survey of state health departments conducted in 2016, most state programs reported that their HIV DIS staff was insufficient, and of total DIS positions, 15% were unfilled at the time of the study.[14] DIS with PS experience were critical to the COVID-19 response, and some health departments found that those more senior DIS who worked on COVID-19 permanently moved on to other positions from STI and/or HIV programs after the peak of the public health COVID-19 response.[15] Additional funding was pushed out to

health departments after the pandemic to build the public health workforce, and many health departments used that funding to hire more DIS. While some of those funds have been restored, for several states they were rescinded, and this resulted in many health departments losing those additional staff.

This combination of declining effectiveness (per traditional PS metrics) and dedicated resources for HIV and STI PS make it even more important to identify patient preferences for PS that may increase patient and partner engagement in PS. While the literature around patient preferences for PS is somewhat sparce, there are a small number of both quantitative and qualitative studies documenting patients' preferences for STI and HIV PS. Additionally, some studies examining acceptability of digital partner services also collected information about PS more broadly. There are several common themes across these studies. First, patients generally express a desire to notify their partners themselves, especially regular partners; participants expressed a sense of responsibility to their partners, and the desire to preserve the relationship.[11,16-20] Not surprisingly, patients would also prefer to be notified by their partners if a partner exposes them to an STI or HIV.[16] However, participants indicated that if exposed to an STI, their preference is to be notified by someone (a partner, the health department, or through a digital platform or app), rather than not be notified.[16,21,22] One study queried participants about their preferences for characteristics of DIS performing STI and HIV PS, and participants responded that they would like DIS to be discrete, supportive, flexible, and to allow patients autonomy in notifying partners.[17]

Several groups of investigators have also described barriers and facilitators to STI and HIV PS, from both the patient and DIS perspective. Barriers to PS identified by both groups include anonymous partners, and stigma around STI and HIV diagnoses.[11,18,20,22-28] Others have documented the rise of geosocial networking apps and the challenges that partners met anonymously through these platforms pose to the success of PS.[7,16,29] However, MSM participants have noted varying levels of anonymity of sexual partners met via these platforms, and that sometimes it is possible to contact partners through apps without any other identifying information.[11,16,28] Additional barriers elicited from patients include fear of partners' reactions, including the potential loss of relationships, or even violence.[17,19,25-27] Participants also described concerns related to privacy and confidentiality; some were uncertain how and with whom information collected during PS interviews would be shared.[17,18,21,28] In particular, some participants noted a fear that the information collected via PS might be shared with immigration authorities.[18] A further barrier perceived by patients was a lack of knowledge about PS – what PS are, what services are included, and why they are important.[11,20,25,28] For example, one-quarter of MSM with syphilis who had

not completed a PS interview in OR reported that they didn't know help was available with notifying partners.[20] Finally, patients also noted a lack of understanding about STIs and their consequences might impede engagement with PS staff.[19,20]

Study participants also identified barriers related to PS staff and medical providers. First, patients shared that they are less likely to engage with or provide information to DIS or PS staff who are perceived as being untrustworthy or judgmental.[17] Similarly, patients noted that they would be less open to working with public health after interacting with medical providers who are homophobic.[25]

PS and other health department staff have identified the additional following barriers: insufficient resources or staffing for PS, low pay for DIS, index patients who choose not to identify or otherwise share contact information for their partners, and relatedly, the inability to reach patients and partners.[7,13,14,29,30] Indeed, one study found that the majority of PS staff time was spent on locating partners and data entry as opposed to work with index patients or partners.[31] As STI epidemics change, including greater numbers of diagnoses and shifts in populations affected, this can impact PS, including a larger workload for individual DIS and PS programs overall, as well as PS programs' abilities to work with patients that haven't traditionally been a population of interest, for example, women with syphilis, or people who are unstably housed.

Several studies have also described facilitators for PS success from the perspective of index patients, partners, and PS staff. A common theme in qualitative data collected from MSM is that notifying one's partners about an STI or HIV exposure is a moral or ethical obligation.[17,20,21,23,25,27] Notifying partners of STI or HIV exposure is also viewed as being responsible for one's community. In at least one study, participants noted that regular (vs. casual) partners are easier to notify without help from the health department, and that patients with casual partners might therefore want or need more help from PS staff.[21] Participants also reported that a trusting relationship between patients and medical providers is important, and that if providers told patients with an STI or HIV diagnosis that the health department would call them, it might help them respond to the PS outreach more positively.[18,20,24] Multiple studies have reported that participants were open to help from DIS or other PS staff with notifying partners, [17,26,17,32] and among a group of MSM in King County, WA diagnosed with syphilis, a majority said the health department should follow up with everyone diagnosed with syphilis.[32]

From a more structural standpoint, several groups of authors have reported that incorporating PS staff into sexual health clinics or community-based organizations where STI and/or HIV testing is done can enhance engagement with PS.[33-35] In one study in which

DIS were placed in clinics one half day per week, syphilis PS outcomes improved in the period after this change compared to a pre-implementation period.[33] These outcomes included increases in the proportion of patients interviewed, the mean number of identifiable partners, and the number of partners tested and brought to treatment per case.

As meeting partners through online platforms has become more common, and communication methods have evolved from phone calls to texts and online messaging, several groups of investigators have explored the idea of online PS platforms, or conducting PS through existing geosocial networking apps.[16,18,21-23,36,37] For the most part, participants in these studies have seen the benefits of online or digital PS, and found them acceptable.[22,23] Some study participants noted that the customizability of such platforms could increase patient engagement.[18] However, responses have been mixed,[18,21] and few studies have evaluated such platforms in terms of their reach or effectiveness. In one of these, investigators in North Carolina examined the number of partners notified before and after implementation of an internet PS system, and found that more partners were notified post-implementation.[38] According to participants in these studies, some of which presented hypothetical situations, benefits of digital PS included the ability for patients to notify partners themselves anonymously, and that such platforms might provide a way to raise awareness and/or provide information to both patients and partners.[18] However, some studies have reported that participants expressed distrust in such platforms, citing concerns around privacy and data security, and that such platforms might actually contribute to stigma around STIs.[18,22] Participants have also noted that such platforms will not help patients with notifying partners who are truly anonymous.[11,18] Authors of a review of literature focused on online or digital PS noted, "A crosscutting theme in the literature is the discordance between high levels of acceptability and low rates of utilization."[36]

A few papers focused on using existing apps to notify partners, for example, by using a health department profile to message partners or allowing patients to anonymously notify partners of exposure.[37] While patients have reported feeling comfortable with a health department presence on apps and being willing to seek out testing if they themselves were notified anonymously through an app, the willingness of app owners to engage with health departments around PS in a structured way less clear.[16,37]

PS Staff Interviews

Between January and April 2025, sixteen DIS and other PS staff were interviewed (Figure 1). Median participant age was 43.5 (inter-quartile range [IQR]: 33.5-52) and most were from

Utah (81%). The majority (94%) were women, White (75%) and nurses (69% had a nursing degree/certification). The median years worked as DIS was 4.5 (IQR: 3.4-5.3).

Table 1: DIS Worker Participants

Characteristics	N=16 (100%)
Median age (IQR), years	43.5 (33.5, 52)
State	
NH	3 (19%)
UT	13 (81%)
Gender Identity	
Cisgender man	1 (6%)
Cisgender woman	15 (94%)
Race/ethnicity	
Asian	3 (19%)
Black or African American	0 (0%)
Hispanic or Latinx	1 (6%)
Multiracial	0 (0%)
White	12 (75%)
DIS Experience (IQR), years	4.5 (3.4-5.3)
Job Title	
Public Health Nurse	7 (44%)
DIS	2 (13%)
Case Manager	1 (6%)
Epidemiologist III	1 (6%)
Nursing Director	1 (6%)
Nursing Supervisor	1 (6%)
Registered Nurse	1 (6%)
Sexual Health Nurse Specialist	1 (6%)
Linkage to care Program Manager	1 (6%)
Education	
Phlebotomist	1 (6%)
Nursing (BSN, RN, Associates)	11 (69%)
Masters level	3 (69%)

Notification Process

DIS workers described the overall notification process of index patients and partners. The index patient is assigned to the PS staff as a case because the patient resides in their county, or because the patient tested positive in their clinic. They will reach out to the patient, usually via phone, to ensure the patient knows they tested positive. The DIS asks

the patient some questions to confirm their identity and then they ask the patient if they are in a private place to have a conversation.

Once they are able to begin speaking with the patient, the DIS worker generally introduces themselves, and approaches the topic of the patient's positive result (or exposure, in case of partners) in a matter of fact, non-judgmental, and positive way. DIS workers spoke about listening to the person and quickly understanding what they need and what frame of mind they are in, and adjusting the conversation to their needs and answering their questions, depending on whether they had already been notified of their positive result/exposure and what their reaction is to the information.

> "Usually, they're okay talking with me. Other times they're just sort of freaking out about the whole situation. So, it's hard to have a good conversation with them. But I really try. And I always let them know. They can always call me back if they have any questions. But I try to spend as much time with them on the phone as I need to help them understand the whole situation, get all of their questions answered."
>
> – DIS 011, UT, 2 years DIS experience, BSN

PS staff generally try to take care of a couple of things on each call; first, ensuring the index patient knows their test result and has accessed treatment, second, providing any education the patient needs and answering any questions they have; third, connecting the patient to any resources or referrals they need, and finally, obtaining names and/or contact information for any partners that may have been exposed or having the partner agree to reach out to their partners themselves. Throughout this process, DIS noted that assurances of privacy and confidentiality were essential to ensure patients feel comfortable. Despite efforts to make patients as comfortable as possible, some have a reaction of denial, suspicion, and even anger upon receiving the call from a DIS worker. Others are grateful and accepting of the call.

Linkage to Treatment

After notifying the index patient or partner of the positive result or exposure, DIS ask if they have been treated yet. If the patient has not yet been treated, they offer to assist with connection to treatment. DIS workers discussed supporting the patient if they have not taken their medication yet or have not been able to obtain medication. They also discussed providing education about treatment, such as the importance of abstinence until completion of treatment to avoid reinfection.

Some DIS discussed being able to provide expedited partner therapy (EPT) in some situations as a benefit to get patients rapidly treated. Other DIS \talked about either wanting to, or being able to, meet patients literally where they are to get their medication to them more quickly, if they are unable to travel to pick up treatment for any reason. While this strategy was an acceptable option for DIS in some locations, it was not for DIS in others, which was a source of frustration.

> "Why can't I bring that to a doctor's office or why can't I say, "All right. If you have no transportation, I'll bring it to you at your house or your work or whatever, parking lot." And the reasons I've got back are, "Oh, we'd have to, you know, write something up where there's specific funding to keep the medications." But that already exists for the immunization program. We keep tuberculin test meds as well, so we've got vaccines. We've got TB stuff. Why can't we add an STI medication?"
>
> – DIS 007, NH, 12 years DIS experience, BSN

Some DIS workers described other challenges with getting patients connected to treatment. For example, one DIS noted that for partners, they could get them in for testing right away at their clinic, but they don't have the ability to provide presumptive treatment based on symptoms. They therefore had to recommend patients with symptoms go elsewhere where there is a provider on staff. Another DIS worker explained that if index patients don't provide a name for partners, they aren't able to provide presumptive treatment without testing first.

> "We would preface before we even saw them that we are unable to provide presumptive treatment. We would need a positive lab in order to treat. And so, if they're having symptoms, it would be better probably if they would go to a partnering clinic or just somewhere where there's a doctor on staff that could treat them there presumptively because we don't have that."
>
> – DIS 009, UT, 5 years DIS experience, BSN

> "They will tell us who a partner is, and with the system that Utah has, we can put in a partner's name and link it. That's where a lot of people will refuse to give a name, because they know that it will link or that it will go into a system. So, it's hard because they know it's going into a government

> system and so they will refuse to give a name. But at the same time, we tell them how important it is, and if they give us a name and they come into the health department, we can treat them, and we'll treat them if they just say the name. We know that they're a contact and we can verify, and they'll get the treatment. Otherwise, they have to wait and be tested and wait for the testing result to come back. But if they will give us a name then we can treat them right as they come in and then we'll test them, we'll still test them, but they get the treatment right away right when they walk in."
>
> – DIS 008, UT, 4.5 years DIS experience, BSN

DIS also described the importance of being able to offer testing and treatment for free/low cost, which could help encourage more people to come in and get themselves and their partners taken care of.

> "People are just really happy that we're available to provide services to them at little to no cost. So, it is really appreciated that we're able to test them and treat them, and that we make it so comfortable in our setting."
>
> – DIS 014, NH, 6 years DIS experience, BSN

Referrals and services

DIS discussed a wide range of referrals they made and services they connected people to during their conversations. PS staff noted that they would connect patients to WIC, needle exchange programs, clinics or organizations for people who are uninsured to get care, places with bilingual services, mental health services, housing and utilities, food banks, ways to apply for jobs, referrals to pre-exposure prophylaxis (PrEP) and other preventative services and supplies (condoms, lubricants, plan B, birth control), and domestic violence services. Some DIS workers were at clinics that offered some of these services, and some only made referrals. PS staff noted the importance of being able to support patients with a wide variety of challenges. One worker explained,

> "Their sexual health is not going to be their priority if they don't have food and shelter. They're not worried about an STD if they don't have symptoms."

– DIS 005, UT, 10 years DIS experience, BSN

Other workers explained that they tried to provide as much support as possible for the patient in connecting them to social services, to make sure that the connection was successful.

"We try to make it a really nurturing hand-off for the social services that might be available."

– DIS 003, NH, 10 years DIS experience, Masters in Health Education

Another DIS noted the challenge with certain referrals was that they didn't have a 'warm handoff' system in place, which can lead to missed connections.

"We have an internal list of everything that health department offers, but we do have some external ones too. We have our community health assessment that in each section has resources at the end of it. So, we can use some of those resources to our advantage as well as (...) we have a mental health resource that we can send them to. I would say it's sometimes not my favorite because it's not a warm handoff. It's just like, "Hey, if you need these resources, this is where you can find them." And people can definitely get lost in the system because you get sent around and around and around."

– DIS 006, UT, 5 years DIS experience, MPH

Patient privacy

DIS discussed the importance of ensuring patients that their privacy is secure throughout the notification process of index patients and partners. A particular concern for patients is that their information will be kept private from any partners that are notified.

"Sometimes they're really hesitant to give us the contact information, so we do try to support them and let them know that their information is protected, and we will not give that to the contact. Just like as if the contact came in and did testing, we're not gonna give their information out either. And that's part of HIPAA and the laws that we have to abide by. So, we try

to reinforce that with them so that they're more confident in us that we won't be outing them to these contacts."

– DIS 005, UT, 10 years DIS experience, BSN

Patients also can become upset when they receive a call from DIS, either because they are unhappy a partner listed them as a contact, and/or because they are concerned about the Health Department having their contact at all.

"They will tell us who a partner is, and with the system that Utah has, we can put in a partner's name and link it. That's where a lot of people will refuse to give a name, because they know that it will link or that it will go into a system. So, it's hard because they know it's going into a government system and so they will refuse to give a name."

– DIS 008, UT, 4.5 years DIS experience, BSN

DIS address these concerns by describing how patient information will be protected, and explaining why the health department needs the information.

"There are other people who are like, "I don't want to tell you that. I don't want to give you that information." And then if that's the case, then I just explain to them, "This is why I need this information. We want to minimize the spread of this." And so, I just need to be able to reach out to them so they can get the testing or treatment that they need to keep this from going to other people. And then just really, really push that I am not giving them their information at all. Like, they won't know who the person is from me because I legally cannot tell that information."

– DIS 008, UT, 4.5 years DIS experience, BSN

Patient reactions to notification

PS staff discussed experiencing reactions of anger, suspicion and/or denial when calling patients. They discussed a range of reasons that participants could get upset, including not understanding they could have an STI but not experience symptoms, suspicion over why someone, even the health department, could have their contact information and/or personal health information, having to deal with something else after already having taken

care of treatment, and a general dislike for interaction with health workers post-COVID 19 pandemic.

> "I think initially, right off the bat, they're usually like, why is the health department calling me? And how do you know that? Once we get past that, then they're like, okay, shoot, all right"
>
> – DIS 013, UT, 4 years DIS experience, BSN

> "I think COVID and all of the contact tracing with COVID – I think people go to that whenever we reach out. It's just – we're the bad guy. We're the bad guy. They don't want to talk to us. […] Just because so many people had a – had – what word I'm looking for – most people had never had an opportunity to be involved in contact tracing before COVID, and then I think during COVID, everybody did. And so, I just think that being the Health Department and calling people now is just taboo, if that makes sense"
>
> – DIS 012, UT, 4.5 years DIS experience, ADN

DIS also described situations where patients are upset with a partner for exposing or infecting them, or where patients were angry at not having received a notification of their positive result earlier (e.g. from a home testing company) and want to vent their frustrations during the PS interview although they aren't angry at the health department.

> "A majority of the time they're a little upset that they've been notified that their partners tested positive at this point, right? So, sometimes it's a lot of just listening to them vent, and be upset, and just letting them talk to somebody about it because it's possible that they don't have anyone else that they feel comfortable talking to about it"
>
> – DIS 006, UT, 5 years DIS experience, MPH

PS staff described a number of strategies for calming patients' concerns. One method was asking a patient to hang up and call back, search for the staff member's name via the health department website, or call their supervisor. Another strategy was educating them on how and why the health department was calling and how their information would

protected. A couple of participants noted that older patients seemed to be the most skeptical about the health department calling.

> ""So, for the older ones, 40, 50, 60-year-olds with STDs, I will take the same approach, and if they have questions, like, "Why, but why?" And I say, "Well, it is reportable by law by the state of Utah. It's not me. It's just when we have a lab result that is positive, we try to notify the patients. I don't know anything about you. I don't have access to your medical records. I just have a lab result that says that you are positive for Chlamydia. And my role is to let you know and verify that you have the proper treatment, because we want to know that you received the proper care from your doctor, and if you do not, I will call your doctor and let them know that there is a new guidance, for example." So, that, some of them accept that, some others like, "No, I don't want to talk to you." It's like, okay. I get into the point of, at the beginning, I took it very personal. Like, they really hate me (...) but then it's like, no. They're just people that they don't want to talk to, and they don't have to if they don't want to."
>
> – DIS 016, UT, 4 years DIS experience, BA

DIS workers also noted other factors that contributed to patients reacting with more surprise. For example, partners were often more surprised than index patients, since unlike the index patient, they did not seek out an STI test, so they were not necessarily considering testing. DIS also noted that patients were more surprised to be contacted if they tested elsewhere, and the DIS worker got the contact through EpiTrax.

> "We have the people who come and test here, and then DHHS will send us through EpiTrax if anyone who is a resident of our county tested positive anywhere. Those are the people who are usually more confused as to why I'm calling them. Like, "How did you get this information?""
>
> – DIS 011, UT, 2 years DIS experience, BSN

Though many patients have surprised and even angry responses to DIS calls, many patients express gratitude for the interaction. DIS said patients were grateful for receiving education, connecting to affordable treatment, and receiving clear guidance on what to do

in order to take care of themselves and their partners. Some patients were very grateful for the offer to contact partners for them.

> "I think learning that there is this – not safety net, but just kind of guidance system so that – because people are often like "Oh. Where'd I get it? Who'd I give it to?" And then to find out that there's actually a path that is laid out by a nice person on the phone. I think that can be reassuring and can help people relax a little bit into the offer of "I can make these calls for you" is really quite a relief to a lot of people."
>
> – DIS 003, NH, 10 years DIS experience, Masters in Health Education

One DIS noted that people who didn't have symptoms could be particularly grateful for the notification, because they weren't considering going in for testing otherwise.

> "We have a lot of people that are thankful, especially the contacts that are like, "Oh, I had no idea. I haven't had any symptoms." So, when they come in and test and realize that they're positive too, they are very grateful for that call that we reached out to them."
>
> – DIS 005, UT, 10 years DIS experience, BSN

PS staff also noted that approaching the conversation in a non-stigmatizing and non-judgmental way could help make the interaction a positive one that patients were grateful for, and also helped encourage their participation in the contact tracing process.

> "We don't make it a big deal or a big problem. Of course, we want them to know the risks and the education, but we also try to make it a pleasant experience with their treatment and stuff that it's okay. It's not the end of the world. And we're gonna get you treated. And you're going to be good. And try to get a pleasant experience so that they'll be more willing in the future to give their contact information as well for their contacts. So, I think they would say that they're thankful for it and that they had a good experience, a pleasant experience even though it was an unpleasant notification, they had a pleasant experience getting the treatment and getting taken care of."
>
> – DIS 005, UT, 10 years DIS experience, BSN

DIS workers explained that patients are grateful to have someone to talk with about sexual health concerns, and that some patients were not comfortable asking their regular health care team about sexual health topics.

> "Sometimes I will get a person who is absolutely delighted that I called them. And they might be really nervous or scared because they never knew what syphilis was, and, you know, "Is it gonna come back? Can I still have children?" They have all these questions, and they perhaps didn't feel comfortable talking to anyone else. Maybe it's their PCP that they've had for a long time, and they felt embarrassed to talk to them. [...] And those are the really rewarding calls when at the end, people are saying, "I'm so glad you called me."
>
> – DIS 007, UT, 12 years DIS experience, BSN

Staff contacting patients

PS staff described the staff that made the PS calls in their departments. Many had nurses and public health nurses on staff. One described having a front desk staff trained to do calls because they were bilingual in English and Spanish. Some departments had other disease investigators on staff who were not trained in a healthcare background. Some had epidemiologists or other public health workers conducting calls as well.

Some PS staff noted that they felt that their title of 'nurse' helped them gain trust in conversations with patients.

> "I always tell them my credentials are that I'm a nurse. And using that usually helps too, because in most people's perspective, a nurse is the one that cares the most."
>
> – DIS 005, UT, 10 years DIS experience, BSN

One worker who was an epidemiologist explained that she didn't use that word when introducing herself on calls, because she was unsure if the general public was familiar with the word and she thought it could be 'scary'.

> "I think that the word epidemiologist is scary to a lot of people. It's really big and people don't necessarily know what it means. And I don't wanna frighten them."

– DIS 006, UT, 5 years DIS experience, MPH

One DIS talked about the wide range of people doing DIS work, the lack of standardization of what the job entails, the entry level requirements, and the compensation for the work.

> "And then the other thing that I think is I think that there's a grave disparity in the amount of compensation people get for this work, which I feel like you might have said you were gonna talk about a little bit. But I can't remember. It feels like it's hard to – is this a professional job or a paraprofessional job? […] I like the efforts that were being made a few years ago to standardize the education that DIS gets and to certify DIS. It seems like those efforts have kind of disappeared. […] But I do know that it's structured so wildly differently in different health departments and that makes it hard to feel like you're part of this cadre of people all doing the same thing because people have different names and people have different career paths. It is a dead end job if you don't wanna be a manager of a DIS."
>
> – DIS 003, NH, 10 years DIS experience, Masters in Health Education

Resident Interviews

Between March and October of 2025, 19 New Hampshire and Utah residents were interviewed (Figure 2). Median participant age was 40 and most (84%) were from Utah. The population was a little over half (58%) cisgender men, 3 each of cisgender and transgender women (16%), and 2 participants of another gender. About half of participants had tested positive for an STI at least once in their lifetime (52%) and about two thirds (68%) had experienced notification from a partner of an STI exposure. Only 4 participants (22%) had a prior interaction with partner services from the health department.

Table 2: Resident Participants

Characteristics	N=19 (100%)
Median age (IQR), years	40 (31.5 – 42.5)
State	
NH	4 (22)

UT	16 (84)
Gender Identity	
Cisgender man	11 (58)
Cisgender woman	3 (16)
Transgender man	0 (0)
Transgender woman	3 (16)
Non-binary/Genderqueer	1 (5)
Demiboy	1 (5)
Race/ethnicity	
Asian	0 (0)
Black or African American	0 (0)
Hispanic or Latinx	1 (5)
Multiracial	1 (5)
White	17 (89)
Housing Status	
In own Home	16 (84)
Unstable Housing	3 (16)
Number of times testing positive for an STI, lifetime	
None	9 (47)
1	8 (42)
2	1 (5)
3	0 (0)
4	1 (5)
Prior notification by a partner of STI exposure	
Yes	13 (68)
No	6 (32)
Prior partner services interaction	
Yes	4 (22)
No	16 (84)

Analysis of resident interviews identified experiences with accessing sexual health care, including discussions of barriers and facilitators. We also identified three key components of partner services that residents said they valued; 1) education on sexual health topics, 2) support in notifying partners, and connection to testing, treatment, services, and 3) referrals. We also identified three aspects of how residents of these two states would want those services delivered: 1) with assurance of privacy & confidentiality, 2) with non-judgement, and 3) with a focus on each person as an individual. Barriers and facilitators to sexual health care and the six themes related to partner services delivery will be discussed, including resident suggestions and preferences related to each theme. Finally, two

additional considerations of rural areas and religious contexts will be described, followed by experiences of residents with personal experience with health department-provided partner services.

Experience with sexual health services

Participants had a range of experiences with accessing sexual health care. Many participants described going either to their regular provider or to a clinic for testing on a regular schedule; quarterly, every 6 months, every 12 months, or when they have a new partner. Two participants were living with HIV and saw a provider regularly for their HIV care. Several participants noted that they rarely had tested for STIs, and/or when they had it was in the context of other health concerns. One participant had never tested for STIs before, explaining,

> "I actually haven't really done any services like that before, mostly because I'm not sure where to go. [...] But the second problem is, I often don't know the questions to ask. So, I don't really know what I'm supposed to ask to get the right types of tests."
>
> – PS 009 UT, cisman, no prior STI testing experience

Participants noted several barriers to accessing sexual health care. Cost was a common concern, as was scheduling and making the time to go in. One participant explained that she felt it had been difficult to obtain STI testing as a woman over 50 years old, and that providers had told her that they did not test more frequently than once every three years for women over 50.

> "Sometimes the regular doctor doesn't want to do things too frequently. I've struggled being over 50 getting responsive sexual healthcare."
>
> – PS 020 UT, ciswoman, prior experience notifying partner of exposure

Some participants were afraid or embarrassed to go their regular provider for sexual health concerns and preferred using Planned Parenthood or other clinics. One participant opted to use an online self-testing service but regretted that choice due to the difficulty performing the blood specimen collection and the high cost.

> "I wanted to go to our Planned Parenthood, but they closed it. So, I didn't wanna go to my OB-GYN, even though she's so nice. I was just like, I am – I

was 44 at the time. I was like, ugh. I'm too old to be worrying about STDs, and so I just used the – I can't remember what it's called, but it was an online one. It was expensive, and it was a pain in the butt. I was like you should have just faced your doctor and gone."

– PS 027 UT, ciswoman, prior experience with partner notifying her of an exposure

Another participant noted that she had received pushback from providers about her requests for STI testing:

"I'm part of like a larger, very sexually active queer group, and so we try to maintain routine testing, like at least quarterly. And so, I think I just kind of have like standing orders at this point that any time I'm getting my blood drawn for HRT, I can go ahead and just get STI testing done at the same time. 'Cause I'm like, "Hey, I already have to get labs done. Let's just add a couple samples to that." And it usually takes care of it really well. And I think at first, they were like, "Why do you need all these tests?" I was like, "Well, my partner count's probably gonna be in the double-digits by the end of the weekend." And they're like "Oh, okay. Got it."

– PS 011 UT, transwoman, prior experience with partner notifying her of an exposure

Many queer and trans participants expressed concern about experiencing discrimination from their health care providers.

"But there's always kind of that toss-up, especially in Utah, being trans and going to see a doctor for the first time."

– PS 011 UT, transwoman, prior experience with partner notifying her of an exposure

"So, fear of being treated differently or poorly because of being trans. I don't know if you've heard of the term trans broken arm syndrome. [...] It's a notion where it's if you have a medical issue, instead of it being addressed with cis patients, it's basically just tied - they just tie it always

> back to you being trans. That turns into a thing of instead of you getting treatment, it's them basically talking at you about their beliefs."."
>
> – PS 007 UT, transwoman, no prior PS or notification experience

Participants mentioned multiple facilitators, including having a trusted regular provider, and/or providers that are knowledgeable about sexual health topics, having health insurance, supportive friends and partners, and online scheduling of appointments. Participants also reported that "green flags" that indicate queer friendly services and providers, e.g. asking for pronouns, and incentivizing HIV/STI testing, particularly for unhoused people, motivated them to seek sexual health care.

Education on sexual health topics

When we asked participants what they would want from a health department PS interaction, many suggested they would want education on a variety of topics from health department staff, whose knowledge they respected as health professionals. Participants expressed wanting help understanding which partners to contact, including knowing what types of sex or bodily fluid contact could transmit STIs, and how far back in time to contact partners. Participants also wanted knowledge about the infection they may have been exposed to, including what the symptoms are, conditions where you may be asymptomatic, and treatment.

Others suggested it would also be helpful to hear about updates on sexual health more broadly, including any trends (e.g. increasing syphilis cases in an area, Mpox), STI and HIV prevention strategies for the future, and just the ability to ask questions of a health professional.

> "It's the same as getting it talking to a friend about something traumatic that just happened to you in comparison to talking to a therapist about it. It's just like talking to a partner about STI exposure and what that could mean for you compared to talking to a doctor about it. It's just gonna look different, gonna have less evidence-based practice behind it. And I think that evidence-based practice and using actual research and understanding science to educate people and their decisions is the most important thing that we can do."

– PS 014 UT, ciswoman, prior experience with partner notifying her of an exposure

Support notifying partners

Most participants indicated a moral and/or ethical desire to notify partners themselves but still wanted support in that process from the health department. Participants expressed concern about how to bring up the conversation with partners and fear of negative reactions. They wanted instruction on how best to approach the conversation with partners, how to word the notification, and what information would be helpful to provide.

"If I tell someone in the wrong way, I could cause a lot of damage, a lot of fear, potentially have a trauma response to that. [..] I wanna make sure that the language I'm using is gonna be supportive and empathic and not gonna make this much harder or much worse for whoever is being told." (UT, demiboy, prior experience with PS."

– PS 022 UT, demiboy, prior experience with PS

"But it could be really helpful for partner services to be like, [...] "Research shows that this is the – these are some of the best sample scripts to use. Here's some language to avoid. Here's some language that tends to work for people," and scaffold the crafting of the message in that way, so that it's not bad. I think that would be a really valuable service."

– PS 018 UT, cisman, prior experience with PS

Participants also suggested that framing notification of partners as helping the community, as the mature thing to do, and/or as a moral responsibility could help encourage people to take the step to notify partners.

"This is one of the crappy parts that comes with being LGBTQ. Right? You're just gonna have to inform them [...] Yeah. It sucks being gay sometimes, but it is also awesome. But this is what you need to do to your community, and really shaping it more as a community benefit rather than a partner interaction if that makes sense."

– PS 006 UT, cisman, prior experience with partner notifying him of exposure

> "Messaging that conveys that it's the mature, responsible, and pro-social thing to do, I think, could be useful instead of being like, "You've got this embarrassing thing, and it's so embarrassing that you might not even want to deal with it, so we could do that for you." I think that is sometimes the vibe that I've gotten from the offers. And instead, I think framing it in a positive way could make it feel less like you're being sneaky or getting away with something or avoiding responsibility. Instead, being like, "This is good for you. It's good for everybody, so it's a great thing to do. We can help you do it if you'd like. Here are some options."
>
> – PS 018 UT, cisman, prior PS experience

Many participants also talked about wanting to provide an initial notification to a partner, or have their partner notify them, but also have a follow up from a health professional to be able to get more information and ask questions.

> "I would like it from a partner on the knowledge of possible exposure from them. For info about treatment and testing and everything else, from the health provider, just because they're more qualified to talk about it."
>
> – PS 007 UT, transwoman, no prior PS or notification experience

Although most participants said they would ideally like to notify their partners themselves, participants appreciated that there were some scenarios where they would want the health department to do the notification for comfort or safety. Participants explained that it would depend on the nature of the relationship with the partner, whether they would want to reach out themselves or have health department staff take care of it for them.

> "If I was in a situation where it was unsafe or even just I really didn't wanna have contact with that person, it'd be a really nice option to have somebody else be able to do it without me having to actually call them."
>
> – PS 0014 UT, transwoman, no prior PS or notification experience

Participants also discussed that the most important thing was notification, either for themselves or partners, so that whoever might have been exposed can get treated appropriately.

"The most important thing is being notified. After that, it's nice, and it's like, okay, they take this seriously and they're willing to own the responsibility and do it personally, but if someone was worried about the reaction, the most important thing is taking the responsibility to make sure that someone is notified."

– PS 008 UT, cisman, experience with partner notifying him of

Connection to testing, treatment, services, referrals

Participants wanted partner services to connect them to places to get tested and treated, particularly if they did not have a primary care provider (PCP) or were afraid or embarrassed to go to their PCP for sexual health concerns.

"For a lot of people that don't have primary care providers or aren't comfortable talking with their provider about this, or need referrals or something, I think that would be extremely beneficial to have someone say, "Hey, these are suggested next steps. Do you want help putting you in contact with someone?" Definitely.."

– PS 015, UT, cisman, prior experience with partner notification of exposure

Similarly, participants wanted help with identifying free and/or low cost services, and/or identifying providers who would take their insurance.

"I would hope that they would also be made aware of any and all resources as far as where they can go to be tested especially if they're uninsured, if they can't afford the tests. I would want them to be plugged in to whatever social services exists."

– PS 001 NH, cisman, no prior PS or notification experience

Participants also thought referrals to social services or organizations would be helpful. Many participants mentioned that mental health services in particular could be helpful, and linkage to queer friendly services or organizations.

> "Depending on, I guess, what it was transmitted. For example, something that's not curable like herpes or HIV, potentially support group type stuff or mental health stuff, because [...] of the general stigmatization of sexual health and sex in general. Basically, someone to help find those resources and actually reach out instead of feeling embarrassed or ashamed and hiding."
>
> – PS 007 UT, transwoman, no prior PS or notification experience

They also suggested that more personal referrals could be most useful, with the health department staff being able to explain why they are suggesting the specific service, organization, provider, etc. to the patient.

> "I think referrals, the more personal referrals are, the better. And I do not know if that's ever possible, but if I were given a bunch of links of, "Here are all the clinics you could go to," that has no meaning. [...] But if I'm like, "One of my colleagues strongly recommends this school, and this is one I'm wanting to do, or this is one that I would recommend," I think that has a lot more power. So, the reason I ended up choosing the clinic that I went to was because I'd heard people say very good things about it."
>
> – PS 022 UT, demiboy, prior PS experience

Assurance of privacy & confidentiality

Participants explained that privacy and confidentiality were essential to delivery of partner services. Participants wanted information about a positive result or possible exposure kept confidential from partners, family, friends, their community or church, and even from their primary care providers. It was important to participants that the health department staff speaking with them explain the ways in which their privacy would be protected.

> "I would assume a lot of people would probably be concerned about the confidentiality aspect of it. For example, if they're concerned about the information being available to friends or family or their health insurance provider, or their primary physician. Some people might not want that information out there, and so just the confidentiality aspect of it I could see also being a barrier."
>
> – PS 010 UT, cisman, experience with partner notifying him of exposure

In addition to the health department keeping their information confidential, some participants expressed concerns about the Health Department itself having their information.

> "I think there are a lot of people that are concerned with government overreach and surveillance and things like that. But it's kinda like I said. People involved in the healthcare – well, let's not say healthcare but the medical field at large are typically in interested people's health and well-being. So, yeah. I would appreciate that, even if it was just a follow-up or a reminder to go get tested. I think I would appreciate that."
>
> – PS 017 UT, cisman, experience with partner notifying him of exposure

> "Obviously, I'd have concerns about confidentiality and that sort of thing. But, I tend to think that health departments probably are doing things in the proper manner, and maintaining confidentiality and being as discreet as they can under the circumstances."
>
> – PS 024 NH, cisman, experience with partner notifying him of exposure

Participants suggested that despite wariness of the government in general, health care workers are generally trusted, and that trust might outweigh the suspicion and concern some patients might feel. Participants also explained that having the staff conducting the call reiterate how patient data will be kept confidential would help patients feel more comfortable engaging in partner services.

Queer and trans participants interviewed described specific concerns with having the health department contact them. These participants noted that anti-queer government policies generate fear of discrimination from health department workers, or of government access to data regarding who patients' sexual partners are and how that data might be used to target queer people.

> "The government is not always LGBTQ-friendly where I am. Right? They banned the Pride flag. Right? So, understanding that, even something the Salt Lake County Department of Health I would be like, "Oh. What if there's a homophobe doing this?""
>
> – PS 006 UT, cisman, experience with partner notifying him of exposure

"In the world we live in, very concerning for reasons of authoritarianism and discrimination, along those lines, especially for queer people, just concerns about "Oh, I'm in this database now of, I had sex with X person, for instance" and then that information being somewhere in the government that could potentially be accessed or even if there was a data leak, for example."

– PS 007 UT, transwoman, no prior PS or notification experience

"As a transgender woman in modern America, it's a little stressful to think that the government of the State of Utah knows about me specifically. Because it's a very red state and there's a lot of legislation recently that is like not so great. And so, imagining that data being linked up in a way that it could be used against me is a little scary. But if there's no precedent for that happening, then I don't think that would be a problem."

– PS 016 UT, transwoman, no prior PS or notification experience

The same suggestions were made with regards to overcoming this fear among queer residents, with participants noting a general trust in health care workers, an understanding that partner notification is the right thing to do to help keep the community healthy, and suggesting that emphasizing how patient privacy will be maintained and data will keep safe could help assuage fears.

Non-judgmental delivery of services

Participants wanted partner services to be delivered in a non-judgmental way from health department staff, to help them feel at ease having a conversation about possibly sensitive topics. Participants noted the essential role the health department plays in reducing shame and stigma, by normalizing sexual health care.

"I mean, I like the language, just calling it Partner Services. Knowing that something like that exists, again, going back to normalizing it. It's so normal that we have a system in place to help you."

– PS 020 UT, ciswoman, prior experience notifying partner of exposure

Participants once again noted that this would be particularly important for patients in small towns and rural areas, who may know health department staff outside of their partner

services interaction, and for religious participants or others who come from a community whose beliefs prohibit conversations about sexual health and view sex as shameful.

Treating each person as an individual

Participants discussed wanting to speak with someone who is supportive, understanding, and who makes them feel as though they are treated as a human rather than a box to check. Participants wanted health department staff to recognize that each conversation they have will be unique, with different backgrounds and experiences.

> "If I had the feeling that somebody was just -- had a list of people they needed to contact today and they're just going A, B, C, D and it seemed very mechanical, for lack of a better situation, that wouldn't fly well with me."
>
> – PS 024 NH, cisman, prior experience with partner notifying him of exposure

> "They're busy and they do this all day long. I think one of the challenges when you're in that job is, this is maybe some information that you deliver multiple times in a day. I'm 53 years old and this would be the first time in my life that I'm hearing that information. So, for you where it's brushing your teeth, that's how common it is to you. It's one of the most traumatic events of my life. So, maybe just reminding them that every call is unique on the other end."
>
> – PS 020 UT, ciswoman, prior experience notifying partner of exposure

Rural contexts in NH and UT require additional considerations for privacy and access

Participants in both states discussed the additional challenges with regards to privacy concerns and challenges accessing services for patients living in rural areas. Participants who lived in rural areas worried that if they saw someone for sexual health services or partner services, they might know that person from a different context and worry about the PS/health department staff judging them.

> "Hopefully just that if they know me, they don't care that I did what I did or do what I do going forward, I guess. Non-judgement is the big concern."

– PS 009 UT, cisman, no prior STI testing experience

Participants also expressed concern with health department staff maintaining confidentiality in rural contexts where "everyone knows everyone," and noted that patient privacy and confidentiality would be important to maintain even in those contexts.

"Not only is it rural, it's, it's a very small town. Everybody knows everybody. You can't go anywhere without running across somebody that you know. So, again, I think, you know, confidentiality is just so super important."

– PS 024 NH, cisman, prior experience with partner notifying him of exposure

Participants in both states also discussed the additional challenge of accessing services in rural areas, where there may not be clinics located nearby. If there are clinics, residents noted concerns about shortages of medications and supplies.

"The other thing about Utah [is that] we have so many areas of the state that are very limited in access to care, and being able to get people tested and treated if you live in one of the really frontier areas, where your nearest health department is three hours away, or if you live on one of the reservations or something like that, I think it could be a real challenge."

– PS 008 UT, cisman, prior experience with partner notifying him of exposure

For residents living in these rural areas, it could be important for health department staff to understand these access challenges, be aware of the nearest services available, and potentially be able to assist with securing or advising on transportation solutions.

The religious context in UT provides extra challenges for partner services

Participants in Utah explained that consideration should be taken of the religious context in the state, and the large presence of the Mormon Church. Participants noted that the Mormon Church promotes strong cultural norms against extramarital sex, and taboos about talking about sex in general. They explained that this could make it challenging to

discuss topics related to sexual health for patients of that faith, or even dangerous for them if privacy is breached.

> "The Mormon Church is very against extramarital sex in any capacity. And there's a huge social pressure to conform to that if you're a member of the church. And so, if there's somebody who gets a call that their sexual partner tested positive, if that could snowball into them losing their job or losing their education if they're a student at BYU or something, I think, making sure that the communication is discreet would be extra important."
>
> – PS 016 UT, transwoman, no prior PS or notification experience

Participants noted that it could be helpful to have health department staff who are Mormon to understand and relate to the experiences of patients of that religion.

> "I grew up Mormon/LDS but I'm not anymore. I think about when I was younger it was very scary for me because I also felt like I had sinned against God. I was super ashamed. It was horrible. It was horrible. So, if I at that time when I was religious had somebody that just told me that I'm not a bad person. That I'm still a good person. You know? That would have helped. [...] It's not just like, oh, it's embarrassing I got an STD. It's like you've sinned against God and you've done one of the sins that they consider is like closest to murder."
>
> – PS 027 UT, ciswoman, prior experience notifying partner

> "I think you definitely need a translator to understand that culture. [...] having someone who, from the health department, is a member of that religion or a member of that faith."
>
> – PS 006 UT, cisman, prior experience of partner notifying him of exposure

Participants also emphasized that once again, non-judgment from health department staff would be an essential component of partner services for religious patients.

> "It's important, and from a Utah perspective, to have messaging like, "Irrespective of whether <we?> approve of your sexual activity or not, or

whether or not anyone thinks this is okay, you can't turn back the past. Protect your health and safety. We're here to help keep you safe, not to judge you, not to ask anything."

– PS 015 UT, cisman, prior experience with notifying partner and partner notifying him

Experiences with partner services, while limited, were positive

Only four participants had a prior experience with a partner services interaction with health department staff. Two of those participants indicated that the experience was fine, but they didn't feel they needed the services as they had already contacted the necessary partners and they didn't require further information or referrals at that time.

Participants did note that the interactions they had with health department staff were non-judgmental and generally positive.

"I appreciated that the service existed and that someone was, in an organized way, trying to deal with the problem. Everybody was super friendly. It didn't feel at all like there was any kind of stigma or judgment. […] it was like showing up to get your car serviced, and they just have all the answers for you. You don't have to try to figure anything out. I really liked that. It was quick."

– PS 018 UT, cisman, prior PS experience

"I thought it was great. It was really nice to have a non-judgmental person who was just like, "Okay, well, we have this thing. Let's go through and see if we can figure out anyone else who might be exposed." And so that part, yeah, it was very pleasant on my end."

– PS 022 UT, demiboy, prior PS experience

DISCUSSION AND NEXT STEPS

Based on these findings, with recurrent themes from the literature review and from interviews with state residents and PS staff, we recommend the following to better engage and meet the needs of people with STIs and/or HIV:

System Level Recommendations

1. At the time of contact, provide PS recipients with clear information about confidentiality, data security, and how their PS data will be used.
2. Provide outreach and education about PS to the public. Education may increase the public's understanding and awareness of the goals of PS and improve PS recipients' willingness to engage with PS staff. Multiple types of channels and messaging for outreach may be needed to meet the needs of different populations.
3. Build stronger relationships between health care providers and health departments. Such partnerships may improve outcomes and patient experiences with PS.
    a. Strong relationships between providers and health departments are important in linking patients and their partners to testing and treatment.
    b. Providers who let patients know that the health department might reach out to them after a lab result confirming an STI or HIV diagnosis may result in patients being more open to speaking with the health department.
    c. It may be particularly important to develop relationships with online providers offering STI/HIV testing. Online providers may not have systems in place to ensure follow-up and/or treatment after an STI/HIV diagnosis.
4. Broaden strategies for reaching out to patients, including messaging through applications/apps used to meet sex partners.
5. Consider bringing DIS from multiple jurisdictions together to share best practices (this is especially important for small health departments that may have few DIS on staff).
6. Ensure that low cost/low barrier testing and treatment options are available to patients. Consider using incentives for patients or partners that might not otherwise be treated or engaged in care for HIV and/or STI.

Recommendations Specific to DIS Training:

7. Provide DIS with tools and strategies to communicate clearly with patients about how data privacy and confidentiality will be protected. DIS working in smaller communities might benefit from additional training or support about confidentiality

given the likelihood that they or other health department staff may know patients and/or their partners.

8. Provide training that ensures non-judgmental interactions with patients, partners and other PS staff. Message content should focus on ensuring general health rather than on their sexual behaviors or specific diagnoses. Patients should be treated as individuals, with unique needs, beliefs, and preferences. Train DIS on how to most effectively provide education for patients. Education might include information about local resources available for, and logistics of, STI and HIV testing and treatment, as well as how to best support patients in notifying their partners
9. Help DIS develop a conversational approach to PS interviews, rather than an approach that focuses on data collection.
10. Provide training regarding strategies to engage patients who are reluctant to discuss their diagnosis and/or notify partners. Emphasize the importance of PS on preventing STI/protecting partners and other community members.

Study Strengths and Limitations

This study had several strengths. First, much of the existing literature around PS has focused on MSM specifically; here, we include perspectives from a broad group of people of all genders and sexual identities, perhaps more representative of the populations of Utah and New Hampshire. Additionally, only a few previous papers have incorporated the perspectives of both patients and PS staff. Collaborating with state health departments ensured interview guides included questions about contexts important to New Hampshire and Utah, for example, challenges faced by PS staff providing PS in rural areas.

This work also had several limitations. First, for the literature review, relatively few papers incorporated index patients or partners with direct experience with HIV or STI partner services. We similarly found it challenging to recruit index patients who had received partner services for participation in interviews, and while many of our participants had experience being notified of an exposure by a partner, testing positive for an STI, or notifying a partner themselves, only a minority had directly engaged with health department PS staff. Given difficulty in recruiting participants overall, our sample size is small, and residents of New Hampshire are underrepresented. Similarly, there is a lack of racial and ethnic diversity among participants who completed interviews. Given variability in populations and health department organization, our results may be less generalizable to other state or local health jurisdictions.

Conclusions

We found that while local and state health department STI and HIV programs provide services that are valued by their constituents, they face multiple challenges in providing these services. The COVID-19 pandemic heightened broad public distrust of services provided by health departments. The pandemic was followed by the loss of federal funding, and in some cases, loss of experienced partner services staff. As resources for health departments decline, it is critical to prioritize delivering STI and HIV partner services, which are known to be effective in reducing HIV and STI transmission. Through our interviews with residents and partner services staff in Utah and New Hampshire, we learned that partner services (PS) can be a valuable intervention, but a more tailored approach might be more effective in engaging patients. Framing partner services as a partnership between patients and health departments, in which patients and partner services staff work together toward a common goal of preventing STIs, may be a strategy to increase patient engagement. Further, building durable relationships between medical providers and health department staff may result in greater trust and increased engagement among both providers and patients. PS staff are highly valued employees and have a skill set that is not easily obtained, but some staff expressed feelings of isolation. A strategy to increase retention and job satisfaction among PS staff could include opportunities for peer-to-peer learning or other ways to collaborate with counterparts in other jurisdictions. While STI and HIV partner services are longstanding interventions to prevent STI and HIV, changes such as those recommended in this report may be needed in order to both meet the needs of today's patients and increase the interventions' impact on STI and HIV transmission.

ACKNOWLEDGEMENTS

The study team thanks all the participants for their contributions to the study.

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APPENDIX

Key Themes from Patient and DIS Interviews, Utah and New Hampshire Residents, 2025

Theme	Supporting quotes	
	DIS interviews	Patient interviews
Awareness of STI and HIV partner services is low	"I think initially, right off the bat, they're usually like, why is the health department calling me? And how do you know that? Once we get past that, then they're like, okay, shoot, all right" – DIS 013	"I think education is the best thing, telling people at the time that this is still confidential, they will notify people anonymously, they won't use your name, but also educating people up front when they are tested that if you come back positive, these are mandated – as far as I know, in most states, most of these are mandated by law, and it's to…notify partners and protect the public, not to come after you and put you on some sort of list." - PS 008 "When there's a lack of information or knowledge, people are going to be alarmed and surprised." -PS 019 "A web page with information about the program […] But just presenting it in a very positive light; as not a thing about, "We're going to tell you when you have diseases," but "This a tool, a group to help you achieve your positive health outcomes around this space." -PS 015
Providing education about sexual health is	"Sometimes I will get a person who is absolutely delighted that I called them.	"It's just like talking to a partner about STI exposure and what that could mean for you

a valuable component of partner services	And they might be really nervous or scared because they never knew what syphilis was, and, you know, "Is it going to come back? Can I still have children?" They have all these questions, and they perhaps didn't feel comfortable talking to anyone else. Maybe it's their PCP that they've had for a long time, and they felt embarrassed to talk to them. [...] And those are the really rewarding calls when at the end, people are saying, "I'm so glad you called me."" – DIS 007	compared to talking to a doctor about it. It's just going to look different, going to have less evidence-based practice behind it. And I think that evidence-based practice and using actual research and understanding science to educate people and their decisions is the most important thing that we can do." – PS 014 "I would like it [information about an exposure] from a partner on the knowledge of possible exposure from them. For info about treatment and testing and everything else, from the health provider, just because they're more qualified to talk about it." – PS 007
Patients may choose to notify their own partners, but support in terms of language or approach is helpful for some patients	"...So probably half the time they'll be like, "Yeah, I'll give you some names." It's some of the times, "I'll give you the names, but I'll only know their first name" because Grindr, things like that. Or "I'd rather you not talk to them at all. I'll tell them." And I'm like, "I can make a script for you and text it to you on what to tell them." And they're like, "Sweet, I'll forward that." And then we'll go from there." -DIS 004 "So, if they don't wanna give me this information, I like to give them the information	"But it could be really helpful for partner services to be like, [...] "Research shows that this is the – these are some of the best sample scripts to use. Here's some language to avoid. Here's some language that tends to work for people," and scaffold the crafting of the message in that way, so that it's not bad. I think that would be a really valuable service." – PS 018 "If I tell someone in the wrong way, I could cause a lot of damage, a lot of fear, potentially have a trauma response to that. [..] I want to make sure that the language I'm using is going to be supportive and empathic and not

	about what to tell their partner." -DIS 007	going to make this much harder or much worse for whoever is being told." – PS 022
DIS notification of partners would be welcome for some partners, especially casual partners	"I think learning that there is this – not safety net, but just kind of guidance system so that – because people are often like "Oh. Where'd I get it? Who'd I give it to?" And then to find out that there's actually a path that is laid out by a nice person on the phone. I think that can be reassuring and can help people relax a little bit into the offer of "I can make these calls for you" is really quite a relief to a lot of people." – DIS 003	"If I was in a situation where it was unsafe or even just I really didn't want to have contact with that person, it'd be a really nice option to have somebody else be able to do it without me having to actually call them." – PS 014
Referrals to other services can increase patient engagement with partner services	"Their sexual health is not going to be their priority if they don't have food and shelter. They're not worried about an STD if they don't have symptoms." – DIS 005 "We have an internal list of everything that health department offers, but we do have some external ones too. We have our community health assessment that in each section has resources at the end of it. So, we can use some of those resources to our advantage … we have a mental health resource that we can send them to. I would say it's sometimes	"I would hope that they would also be made aware of any and all resources as far as where they can go to be tested especially if they're uninsured, if they can't afford the tests. I would want them to be plugged in to whatever social services exists." – PS 001 "Depending on, I guess, what it was transmitted. For example, something that's not curable like herpes or HIV, potentially support group type stuff or mental health stuff, because […] of the general stigmatization of sexual health and sex in general. Basically, someone to help find those resources and actually reach out instead of feeling

	not my favorite because it's not a warm handoff. It's just like, “Hey, if you need these resources, this is where you can find them.” And people can definitely get lost in the system because you get sent around and around and around.” – DIS 006	embarrassed or ashamed and hiding.” – PS 007
Medical providers can be important partners for partner services staff by preparing patients for a potential call from the health department, which may increase acceptance of partner services outreach	“It’s all just after someone is diagnosed; we get the notification of the reportable infection, and then we reach out to the person. So, more often than not, they don’t know we’re calling. They are not aware that we will be calling. So, it’s usually a cold call, and that kind of creates varying degrees of willingness to participate on the other end. So, typically, we would introduce ourselves and then just say, calling about a recent diagnosis you had. We can name the provider office or something.” -DIS 003	“I can almost see getting – like if the health department would have a way to contact your primary care provider so that you can kind of get a call from a medical provider that you’re already familiar with, I can see that being really helpful. So, instead of it being like kind of this new person who you’ve never met sort of dropping the news that something’s happened. I guess it’s sort of the difference of like getting a call from a family friend that someone in your family has died versus like cops showing up at your house and knocking on the door. You know?” -PS 011 “I was seriously just thinking about that, and I was like how would I feel. You know, when I went for the dog bite, they were really nice there and they let me know that the Health Department would be contacting me and that it would not be a big deal and that it was okay. So, I don’t know. If the doctors could maybe prepare them like when you go and if they know that

		person. I don't know. Some towns are so big. I don't know if they even have a card of the person that's going to be contacting and being like, 'This person is really nice. They just need to talk to you. They're going to be contacting you or you could reach out to them, if you'd like.'" -PS 027
Partner services staff can improve uptake by providing information that helps patients navigate STI/HIV testing and treatment processes	"People are just really happy that we're available to provide services to them at little to no cost. So, it is really appreciated that we're able to test them and treat them, and that we make it so comfortable in our setting." – DIS 014 "We have a lot of people that are thankful, especially the contacts that are like, "Oh, I had no idea. I haven't had any symptoms." So, when they come in and test and realize that they're positive too, they are very grateful for that call that we reached out to them." – DIS 005	"I actually haven't really done any services like that before, mostly because I'm not sure where to go. [...] But the second problem is, I often don't know the questions to ask. So, I don't really know what I'm supposed to ask to get the right types of tests." – PS 009 "For a lot of people that don't have primary care providers or aren't comfortable talking with their provider about this, or need referrals or something, I think that would be extremely beneficial to have someone say, "Hey, these are suggested next steps. Do you want help putting you in contact with someone?" Definitely.." – PS 015
DIS characteristics or identities are not as important as the approach they take to providing partner services	"We don't make it a big deal or a big problem. Of course, we want them to know the risks and the education, but we also try to make it a pleasant experience with their treatment and stuff that it's okay. It's not the	"Hopefully just that if they know me, they don't care that I did what I did or do what I do going forward, I guess. Non-judgement is the big concern." – PS 009

	end of the world. And we're going to get you treated. And you're going to be good. And try to get a pleasant experience so that they'll be more willing in the future to give their contact information as well for their contacts. So, I think they would say that they're thankful for it and that they had a good experience, a pleasant experience even though it was an unpleasant notification, they had a pleasant experience getting the treatment and getting taken care of." – DIS 005	"I appreciated that the service existed and that someone was, in an organized way, trying to deal with the problem. Everybody was super friendly. It didn't feel at all like there was any kind of stigma or judgment. [...] it was like showing up to get your car serviced, and they just have all the answers for you. You don't have to try to figure anything out. I really liked that. It was quick." – PS 018 "I thought it was great. It was really nice to have a non-judgmental person who was just like, "Okay, well, we have this thing. Let's go through and see if we can figure out anyone else who might be exposed." And so that part, yeah, it was very pleasant on my end." – PS 022
It is important for patients and partners to know that their confidentiality will be protected if they are contacted for partner services	"Sometimes they're really hesitant to give us the contact information, so we do try to support them and let them know that their information is protected, and we will not give that to the contact. Just like as if the contact came in and did testing, we're not going to give their information out either. And that's part of HIPAA and the laws that we have to abide by. So, we try to reinforce that with them so that they're more confident in us that we	"Not only is it rural, it's a very small town. Everybody knows everybody. You can't go any you can't go anywhere without running across somebody that you know. So, again, I think, you know, confidentiality is just so super important." – PS 024 "In the world we live in, very concerning for reasons of authoritarianism and discrimination, along those lines, especially for queer people, just concerns about "Oh, I'm in this database now of, I had sex with X person, for instance"

	won't be outing them to these contacts." – DIS 005	and then that information being somewhere in the government that could potentially be accessed or even if there was a data leak, for example." – PS 007 "I would assume a lot of people would probably be concerned about the confidentiality aspect of it. For example, if they're concerned about the information being available to friends or family or their health insurance provider, or their primary physician. Some people might not want that information out there, and so just the confidentiality aspect of it I could see also being a barrier." – PS 010