

Client and Health Care Provider Perspectives on an Online Partner Notification Toolkit

Final Report

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BACKGROUND

The Online Sexual Health Services (OSHS) program at the BC Centre for Disease Control (BCCDC) is planning to develop an online partner notification resource, or "toolkit", for (1) persons diagnosed with sexually transmitted infections in BC, and (2) health providers who are providing diagnoses of sexually transmitted and blood-borne infections (STI/BBI). This web-based toolkit will replace and expand on existing partner notification tools used in British Columbia (e.g., inSPOT), and will allow individuals diagnosed with an STI to notify their partners by email and short message service (SMS)/text message, anonymously or using their name. The toolkit will also provide various additional resources, which may include tips and scripts for talking to partners, information for notified individuals to bring to their health providers, and multilingual notifications.

The toolkit will initially be developed for BC. At a future date however, the partner notification platform could potentially be scaled-up to include other jurisdictions in Canada. This platform would provide similar resources and functionality to individuals diagnosed with an STI, but with a focus on the relevant jurisdiction.

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PURPOSE

- To gather information to inform the development and implementation of a new online partner notification toolkit.
- To understand the opinions of potential users (e.g., clinic clients, health care providers) of the proposed partner notification toolkit on various aspects of the toolkit including its format, required accompanying resources and any potential barriers to its use or implementation.

METHODS

Several guided discussion groups with potential users, health care providers and community stakeholders and interviews physicians were held to gather information and feedback on the proposed partner notification toolkit model. Powerpoint slides were used to guide the discussions. The slides displayed visuals of the draft partner notification model for directed input and feedback (see appendix A). The slides described the rationale for the toolkit and each step in the proposed model, including illustrating the interface as seen by clients. The presentation also included a set of questions, specific to each target group, to prompt discussion and feedback on the proposed model, perceived challenges and facilitators to integrating the model into their practice (providers) or lives (for clients), perceived risk or harms of the proposed model and feedback on associated content or resources to accompany notification tools (see discussion guide, appendix B).

The advisory group meetings were approximately two hours in length and the individual interviews ranged from 30 minutes to one hour. All groups were led by the consultant (MD), and a member of the Online Sexual Health Services team (DH, MB) participated in each group as a note taker. The proceedings of the groups and interviews were audio recorded. A simple content analysis of the audio recordings and notes was conducted to categorize similar

content into descriptive groups or themes that highlight the main features of the proposed online toolkit. Analysis was completed for each group separately.

Structure of Consultations:

All of the group discussions were held in a private conference room at BCCDC; for the nurses group some of the members participated via teleconference. Individual interviews were conducted by phone with the exception of one which was conducted in person at the BCCDC. All recruitment for the groups and interviews was handled directly by internal BCCDC staff (DH). The consultation process including the following stakeholder groups:

- BCCDC STI Clinic clients
- Youth (25 years and under)
- Gay, bisexual and other men who have sex with men (MSM)
- Online Services Community Consultation Working Group
- Public Health Nurses
- Family Physicians

The group discussions focused on the following key content areas: 1) Methods of notification (e.g., short message service (SMS) or text message, email); 2) Desired features of the partner notification toolkit; 3) Desired resources (e.g., example notification 'scripts', STI information, STI treatment information); 4) Potential challenges/facilitators to implementing partner notification toolkit (appendix B).

RESULTS

In total, we conducted five focus groups. Three groups were based in the Vancouver area and focused on potential client users, including youth, MSM and clients of BCCDC's main sexual health clinic. Perceptions of health care providers were ascertained through a fourth group that included representatives from community stakeholder organizations in Vancouver (e.g., AIDS Vancouver, the McCreary Centre Society, Health Initiative for Men, Youth Co) and a fifth group which included public health nurses from across the province of British Columbia. We also conducted eight individual interviews with primary care physicians in British Columbia. The physicians worked in various roles, including family practice settings, sexual health clinics, emergency rooms and teaching roles and were based in the following cities: Vancouver, Kamloops, Summerland, Victoria, Whistler, Powell River and Langley.

The findings are organized according to features of the online partner notification toolkit that were discussed: 1) Online versus traditional methods of partner notification; 2) methods of notification; 3) message interface and content; 4) open versus closed online models; 5) resources; 6) potential challenges. The findings are first presented separately for the client (youth, MSM, clinic clients) and provider groups (community organizations, public health nurses, physicians) and then points of convergence are discussed.

Table 1: Client Groups Demographics
*only 5/6 completed demographic questionnaire

	Clinic Clients (n=4)	Youth (n=6)	MSM (n=6)*
Sex			
Male	1	4	6
Female	3	2	0
Age mean (range)	43.5 (23-73)	21.5 (17-25)	30.6 (31-54)
Education:	, ,	,	, ,
Elementary	0	1	0
High School	0	2	1
College/University	4	3	4
Born in Canada			
Yes	3	4	5
No	1	2	0
Ever tested STIs			
Yes	4	4	4
No	0	1	1
Sex of partners			
Male	2	2	5
Female	1	3	0
Male/Female	1	0	1

Table 2: Health Care Provider Demographics

	Nurses (n=11)	Physicians (n=8)
Sex		
Male	10	2
Female	1	6
Setting		
Urban	7	4
Rural	4	4
Health Authority		
Vancouver Coastal	4	4
Fraser Health	4	1
Interior Health	0	2
Vancouver Island	0	1
Northern Health	3	0

CLIENT GROUPS

1. Notifying Partners – Preferences & Challenges

Currently in British Columbia, individuals diagnosed with a sexually transmitted infection (STI) can choose to notify their partners themselves, can notify their partners with a health care provider present, can have public health notify their partners on their behalf or use an electronic e-card service (inSPOT).

When discussing options for partner notification, the majority of participants in the client groups stated that they would prefer to notify partners themselves or with a health care provider present. However, many saw a role for online or anonymous methods of partner notification (e.g., via public health), particularly in cases of casual or multiple partners. The nature of the sexual relationship was key to the method of notification they would choose. Many would opt to notify steady partners in person but would choose anonymous methods (via public health) for casual partners or in cases of multiple sexual partners. One participant also noted that if someone was dealing with a new diagnosis themselves, such as HIV, they may not feel ready to face others and would rely on anonymous or public health means of partner notification.

"If a relationship has ended in not a good way and it is more recent and you don't want to be in touch with that person I would rather a health professional letting them know or maybe an email" (Clinic client group participant).

"I would tell them myself or I think having a health care provider beside you to talk to patient and partner together would be helpful so they are clear about the disease and what is the right protection and stuff...but it depends if the person is too shy a nurse calling the person on their behalf is a good idea" (Youth group participant).

Regardless of the means of notification, participants cited several challenges with partner notification including fear of anger or judgement, fear of losing the relationship, feeling embarrassed, and getting the correct information or "facts" to communicate to their partners about the STI.

2. Methods of Notification

Initial reactions to the possibility of receiving an email or text message notifying them of a possible exposure to a STI primarily focused on privacy, security and the unavoidable immediacy of text messages in particular:

"That would be so hard, because if I was on the bus or something and I got this text message that said 'you need to get checked out' that would be trippy" (STI client group).

"In meetings, in the workplace people often have their phones sitting on the table, so when a message comes in the other people in the meeting might see it" (STI client group).

Others raised concerned about the privacy and security of emails and that email messages like this may be treated as spam, particularly for the young participants who stated they rarely used or checked their emails instead relying on text messaging to communicate. Positive aspects of email messages were that they allowed for slower processing of information and that individuals could read the message in their own time, and emails were seen as more private and more accessible, particularly for those without smartphones.

"I kind of like the idea of email a bit better just in terms of personal privacy. I am thinking of a scenario where someone is sitting with their partner and all of a sudden a text message pops up and they don't want their partner to see ...I like the idea of email better because you need a password to get into it and the message isn't going to all of a sudden jump up on your phone" (MSM group participant).

There was a lot of discussion around the preferred method of contact – email or text. Most felt that email was preferred, was more secure and private, with the exception of the youth focus group. The young people interviewed felt that text was more personal and private because they were in constant contact with their mobile phones. Interestingly, and in contrast to the other groups, the young people also felt that text was more personal, implied more concern and urgency and was more like a conversation than email messages. Text messages were also seen as more likely to be delivered whereas emails can be filtered to junk mail. However, one participant stated that text messages were also more prone to abuse because of their immediacy and the ability to instantly screen capture text messages and send over social media.

"My email is not like, I don't view it very privately. I don't view it as a super personal thing so if I get an email like that it feels out of context to me, like whoah why I am getting this message here. I don't want to get that kind of thing in an email. Like a text message, my phone is always on me, it is a much more personal thing, it much more personal to me, more secure. I don't feel like email is as secure like I don't want that information in my email box it would freak me out" (Youth group participant).

"I find the text more urgent. It would feel like the person was more like in a hurry to get a hold of me that it was a more urgent matter to them. Where if they send me an email it's kind of like they don't want to take responsibility" (Youth group participant)

"The one thing I do like about the text over email. Text you are more likely to have a delivery. Email it might go to spam you don't know what kind of filters they have, less likely to get a guaranteed delivery" (MSM group participant).

When presented with online partner notification options many participants stated that they would prefer person to person contact; either a phone call from their partner or from public health was deemed preferable to an anonymous text message. There was consensus that these messages would likely arrive anonymously (vs. named), because if an individual chose to use their name in the message participants thought that they would likely just notify their partners personally rather than via text or email. However, participants thought that the addition of another way to notify their partners was positive, online methods were convenient and would be useful for casual partners and partners met online. Importantly, participants felt that the system should allow for both named and anonymous means of contact because allowing people to contact partners anonymously may encourage those who would otherwise not notify partners at all.

3. Message Interface and Content:

Participants were positive about the proposed online notification form (to be completed by the sender; includes recipient email address / phone number, see appendix A) and felt it was straightforward and easy to use. The discussion around the online form and the message content focused on several key aspects: the STIs included on the form; whether the specific STI exposure should be included in the message and the tone of the message.

Which STIs to Include

The example online form included notifiable STIs such as HIV, Chlamydia, Gonorrhea, Syphilis, Hepatitis A and B and two non-notifiable STIs – LGV and Trichomoniasis.

Participants felt there were infections missing from the list including Herpes, HPV, Hepatitis C and Molluscum contagiosum (two participants in one focus group shared personal experiences of having this infection). Participants felt that the form would benefit from an "other" box to allow the sender to add in an infection if it wasn't listed. The option of including an "other" box was deemed particularly relevant for diseases like HPV that are not included in routine STI testing and thus may be missed if the person receiving the message simply requests routine testing when presenting at the clinic. Others questioned whether it was important to notify people about an infection such as herpes which is very common and has no cure.

Message Tone & Information

Participants preferred messages that were straightforward and positive and did not contain text perceived to be alarming like "don't panic". Consistently across all focus groups and interviews, participants referred to the notion that it was "human nature" to automatically leap to "worst case scenario" conclusions and thus the messaging needed to include some comforting or reassuring language. The majority felt that the inclusion of the BCCDC logo in the message would reassure them that the message was not "spam" and would encourage them to take the message seriously.

"Give some positive information. I don't want all the negative information I want the positive side...Don't just say don't panic, say why you shouldn't panic" (Youth group participant).

Overwhelmingly participants felt the most important piece of information contained in the message should be a contact phone number that the receiver could call for more information or support.

"Something that I didn't see on any of those screens was a phone number....like hey if you want to call us, like talk to a nurse, there was no direct number if somebody is freaking out or has questions there was not like phone where you can get of a human being to help you through it" (MSM group participant).

Other information that participants thought was essential included information on where to get tested, a link to book an appointment online immediately and information on the STI.

In all of the focus groups there was some discussion on whether the notification messages should name the specific STI exposure or should be generic. Most felt that the message should name the specific infection so that the individual knew what to be tested for and to decrease anxiety. However, the specific infection name should not appear in the subject line of the email or in the body of the text message. Participants felt strongly that the initial message should contain a link to more information which would then provide them information on the STI itself, testing and treatment. Finally, some participants felt that the online notification form should allow participants to modify or edit the standardized message whereas others felt that this would open up possibilities for abuse.

"If you just say STI there are so many possibilities including HIV which would really freak people out, it would freak me out....I would like to have information on which infection" (Youth group participant).

"I think you should name the infection...I would rather know...it's going to get your mind racing you are going to think the worst" (MSM group participant).

"You are already telling them it is an infectious disease if you don't tell them what is it they might go get tested for everything which is good" (STI Client Group).

Other Forms

As part of the discussion about online forms and message preferences, we reviewed notification forms from other international programs. As compared to the example form developed for the BCCDC Partner Notification Toolkit, the main differences represented in the international forms were the use of visuals, security warnings, the form length and the general appearance/layout of the forms (see appendix A). There was a general consensus that the use of visuals was distracting and was not consistent with the seriousness of the message about STIs. Participants disliked forms that were lengthy, either that included long messages or that required clicking through multiple pages. The multi-page forms were seen as particularly problematic for mobile users. In terms of general appearance of the forms, participants disliked the use of "aggressive colours" like red and orange, and preferred "calm colours" like blue and purple, noting that the colours made the online forms seem less clinical.

The other online forms employed various security measures to discourage misuse, including making a clear statement that the users IP address was being stored and warning messages about cooperation with the police in the case of misuse. Participants had mixed feelings about these approaches; some felt that they were acceptable to prevent misuse, others felt that recorded IP addresses would dissuade them from using service, whereas others noted that it was easy to mask one's IP address (e.g., by using public wifi) and thus those intent on misusing service could still do so. Participants generally agreed that it was important to include a positively worded statement encouraging users to approach the service seriously to prevent misuse.

"It is a serious matter, so I think some source of security is a good thing" (Youth group participant).

"I feel like recording your IP address even though it is personal, like why do you need that, but then you can't troll people, like for example like you don't like someone and you would purposely write that just so you can hurt them. You know that if you were to personally hurt someone they could find out who you were. But I feel like if you were serious and you wanted to send it to them and you had the intention then them knowing your IP address isn't the worst thing in the world" (Youth group participant).

4. Open vs Closed Models:

Each advisory group reviewed two possible model options for the online partner notification toolkit (see appendix A). In the open model, the partner notification form would be housed on a website as a page available to the public. Anyone could visit the website and send out notifications to their sexual partners about a possible STI exposure. In the closed model, access to the notification form would be controlled by a health care provider in some way, such that once the individual receives a verified positive STI diagnosis from a clinic or health provider, he/she is given access to the system using a code, an email link, or a special web address.

Participants seemed to voice a preference for the closed system, citing its added security and reliance on a verified positive diagnosis. However, several important disadvantages of the closed model were discussed, including losing the provided code and thereby losing the opportunity to notify partners, resistance to sharing one's email with a health care provider to receive access to the system, and that this model may prevent those with STI symptoms from notifying partners in advance of seeking testing and diagnosis. Participants thought the open model was more open to misuse, including misuse by people who may think they have an infection (based on symptoms) but have not been tested.

"There is a gap...so say you have syphilis you have rashes on your feet and you go to the doctor and they yes you have syphilis but it's now been a week or two weeks when you could have been telling people but you can't tell people until it's for sure positive...this wouldn't be a resource until you for sure have it" (MSM group participant).

"The open model is open for cyber bullying, the closed model is too restraining and you feel like you are trapped like you are identified like you have a code number but I like the security number" (Youth group participant).

"I would definitely go with the closed option because it just shuts down that possibility [of misuse] and it is not like this is taking over the partner notification game, people who aren't comfortable with computers can still phone, they can still get a nurse to do it" (Youth group participant).

5. Resources:

As the person notifying of an infection, few participants liked the idea of scripts that would help them with talking to their partners about a possible STI exposure. Others noted that it would be impossible to address each unique situation in a script format, making these less useful. Perceived as most helpful to someone sending a notification was reliable information on the STI, including downloadable information sheets or cards to provide to a partner.

If participants were to receive an online notification message, there were several key resources that were desired by participants across all groups: 1) a phone number to call and speak with someone for support; 2) information on where to get tested; 3) information on the STI including treatment options. Participants were clear that the phone number for support should link directly to a person and not to an automated system, with some suggesting a phone number for a crisis line may also be needed.

6. Challenges:

HIV - a special case?

Participants in all groups questioned whether it was appropriate to allow users to notify partners of a potential HIV infection using the online toolkit. Opinions were mixed and most participants were uncertain about whether HIV warranted special consideration. Many noted that they would not want to receive notice about a potential HIV infection via email or text but recognized that being notified, in some way, was important. Participants felt that in the case of HIV, the message should contain information for immediate and direct support for the receiver such as a direct phone number to a public health nurse. Participants also expressed concern

about the long wait times for HIV testing and questioned whether message recipients should be directed to immediate testing at a local emergency department to ease anxieties.

"I feel like it [HIV] should be on there. I feel like yeh it is a way to get it out. Especially for people who are scared to tell their partner about it because it has that special perception around it. I feel like even if the person does get like super panicky or traumatized by the message in that moment I think that having that information is tonnes better than not having it" (Youth group participant).

"I don't think the [HIV] testing services are that good in Van, there are huge wait lines for stuff....but like it would be hard if someone got that through a text message and the person couldn't even see a doctor because clinic hours are bad." (Youth group participant).

Many addressed the stigma surrounding HIV infection and felt that including HIV in the partner notification toolkit along with other highly treatable infections would work to normalize HIV testing and infections. Others noted that the legal environment has complicated the issue of partner notification for HIV infection and questioned how this may affect the ways in which people chose to notify their sex partners of a potential HIV infection.

Security & Privacy

The primary concerns cited by participants were about the privacy and security of the online environment and of email and mobile devices. Participants acknowledged that these concerns were not unique to the partner notification toolkit, but to the internet generally and some noted that these concerns would not prevent them from using the system. Others noted that they had less concern about their own privacy and more about the privacy of the message recipient. Participants felt that the development of a closed system would help to address these concerns, but in many cases, also noted that privacy and security concerns were intrinsic to the online environment.

Most were open to features such as collection of IP addresses or captchas to prevent or discourage misuse of the system, although some noted that if someone were intent on misusing the system there were ways to get around these security features. Overall, the potential for misuse was deemed low; participants felt that there may be a small minority of people who would send messages as jokes or pranks but that this practice would not be common. Solutions to address potential misuse included using a secure code, login and password to access the system (similar to the function of the closed model), including an introductory message encouraging responsible use of the system.

Keeping pace with technology - social media and other online applications

Participants (predominately those in the MSM group) raised concerns that while the addition of online and SMS based messaging options was a positive step, these technologies were already outdated. Individuals are now meeting through online applications such as Grindr and Tindr that do not require the exchange of contact information and, in some cases, rely on GPS technology to allow sex partners to connect. The addition of email and SMS based methods of contact would not be useful in these situations, as email addresses or phone numbers are not exchanged between sex partners.

"In some instances you may exchange phone numbers through one of those apps or websites but most of the time it's only through those apps and there is no other way to communicate with them" (MSM group participant).

"There are plenty of users on these apps that don't have contact information or they are using it as a visitor or use it one time and delete their profile" (MSM group participant).

Others noted that sex partners also meet through Facebook and, given the nature of Facebook, there is no method by which to notify partners anonymously of a potential infection. Participants did note that notifying partners through apps would be possible, but in many cases, profiles are taken down leaving no contact information. Essentially, as with existing methods of partner notification, the online tools are limited by the amount and nature of the contact information someone has for their sex partners.

"The system can't reach people that can't be reached for whatever reason" (MSM group participant).

In summary, participants were open to online sexual health services with a specific interest in online appointment booking and online appointment or testing reminders. Young participants thought these online additions would be particularly helpful because they used their mobile phones almost exclusively to organize their calendars. However, participants noted that online services should not replace existing partner notification services and BCCDC should remain cognizant of those without access to smartphones and personal computers.

NURSES

1. Notifying partners

In total, 11 public health nurses (10 female; 1 male) from various settings across British Columbia participated in a focus group. The nurses were variously involved in partner notification in their practice. Similar to the client groups, the nurses noted that most clients prefer to notify their partners themselves, thus their role was largely limited to informing patients about their options for partner notification without doing partner notification themselves. However, one participant's role was exclusively in partner notification for public health. The nurses cited several challenges to partner notification, including: clients not knowing partner contact information; clients communicating incorrect information to partners; contacting partners in isolated settings (e.g., work camps, northern communities); and issues of confidentiality, particularly related to notifying partners about HIV infection.

"Usually clients will bring in their partners or will tell them themselves. And not often I am actually calling them because [community name] is small and everyone knows the phone number so if you have missed call everyone knows it's from here" (Nurse group participant).

"Most of the clients that I see don't know any of the contact information for all of their clients; they sometimes know some contact information. In a minority of cases they ask me or public health to notify partner" (Nurse group participant).

2. Methods of notification - Online model

Generally, the nurses were positive about the addition of the online partner notification toolkit, stating that having additional options would be beneficial, particularly for young people and for clients who are concerned about their personal safety and require distance and anonymity when notifying partners. There was agreement that they would recommend this service to clients in addition to the existing partner notification options. The nurses also agreed that those clients most likely to use the service include clients who are more 'tech savvy', younger, are most uncomfortable doing partner notification, or have partners outside their steady relationships or outside their geographical area.

"I can also see it being helpful with a client who is concerned about safety...so this I think makes it more anonymous" (Nurse group participant)

"I can see people using this who have partners outside of their steady relationships and wanting to be more anonymous in that sense and notifying those partners that way" (Nurse group participant).

Some nurses were concerned about how this additional service would integrate into their practice particularly if they had to "walk" clients through the system and how much additional time it would add to an appointment, whereas others thought it may be time saving:

"I think it's definitely worth the time if the client is willing to do it with you and you can sort of walk them through it with them. You think about the time you are spending with the client but also the time notifying the partners so there is the savings there. I don't think it is going to take too long to actually do it right?" (Nurse group participant)

3. Message interface and content

Similar to the client groups, the nurses raised the issue of privacy and visible text messages, noting that the initial message and message subject line should contain no visible information about STIs or sexual health. There was a lack of consensus as to whether the message should name the specific STI or be generic. Some felt that a message concerning a non-specified STI that needed to be treated would be enough, whereas others felt the message should name the specific STI but also include reassuring messages about testing and treatment. In agreement with the client participants, the nurses felt it was vital that the message contained a phone number that the client could call for information and support.

Which STIs to Include

Nurses felt that the online service was appropriate for all STIs, including HIV. Unlike the client groups, the nurses did not have strong concerns about HIV being included in the system and felt it was important to include HIV to help reduce the stigma associated with it. However, the nurses did note that they would likely encourage other means of partner notification in cases of HIV as email/text based methods were not ideal but were preferred to no notification.

"I think it really should be we are really working on decreasing stigma in general right so to just say that if you have chlamydia and gonorrhea you can use this but not if you have HIV or syphilis you have to do it this way. I think that is actually creating more stigma" (Nurse group participant).

4. Open vs Closed Models

The nurses generally felt that the online toolkit should be as open as possible in order to provide the most access. Many felt that the use of a code or email to access the system would be a barrier for their clients. In contrast to the client groups who saw the closed model as more secure, some nurses noted that clients would question the anonymity of the closed system if they had to access it using a code or email. Those working with young clients felt that the open model empowered young people to notify partners themselves rather than have access restricted through a health care provider.

"I think there are pros and cons to both models. Like the open model you are running the risk of people using it as gag, or abusing it or not knowing what infection they are putting forward but I think in terms the people who are really going to use this service are the ones that we can't get into clinic door or an appointment or a scheduled time so making it as accessible as possible would be better" (Nurse group participant).

The idea of sending clients an email link to the service, as is proposed by the closed model, was deemed quite unfeasible by some of the nurse participants. Many noted complexities with emails, such as email addresses that are shared by couples, email addresses that are changed often by young people or rarely checked, and that certain youth clinic sites do not have computers rendering emails on site impossible. Other means to provide access to the closed system, such as wallet cards or pamphlets, were deemed difficult to manage and likely to be lost by some clients. The nurses clearly worked in distinct settings with varying access to technology and their access to technology influenced their opinions on the feasibility of the online system. Those working in outreach were often equipped with ipads and could easily see collecting and/or sending emails within the client visit, whereas those working at youth or mobile clinics had little or no access to computers, making the closed model proposal much less feasible.

"The closed model with the email invitation I don't think it would work well in our clinic. People change their emails often at least the young people and we have a hard time reaching them through email or at least them getting back to us in a timely way through email" (Nurse group participant).

"The open model appealed more to me rather than this link back and forth because already I have difficulty doing that with the clients. It would be an added layer of complexity I think" (Nurse group participant).

5. Resources

As health care providers venturing into online environments in their own work (e.g., texting or emailing clients), the nurses were interested in receiving more information about how others were dealing with partner notification via online apps, and information on what they were ethically allowed to share and disclose via email, text or through other online venues.

6. Challenges/Benefits

Many of the perceived challenges of the online partner notification toolkit were not specifically about the tool itself but about the technology employed and the online environment. Nurses

who worked with young populations noted that they often had phones but these devices often had unreliable access because data or minute allowances were reached. Others raised unique challenges such as older clients who have a mistrust of online environments, and clients who regularly meet sex partners online or through online apps (e.g., Grindr, Tinder) and don't have any contact information for them. Others questioned how to ensure that text messages are taken seriously and are recognized to have come from a reliable source.

"Some of my clients meet their clients through online apps, that's the majority, and they may have their email or something but it's usually someone they meet on grindr or scruff...so how to you contact those people, that's an issue" (Nurse group participant).

"My concern would be how do you get the word out that it is a normal acceptable part of our practice....so when they actually get that message they take it seriously" (Nurse group participant).

Positively, some of the nurses currently use text-based communication in their practice and thus felt that the addition of text-based partner notification would be very valuable. Others noted that some clients are not ready or prepared to speak with anyone in person and the online model allows these clients to access the information and system in their own time. In essence, the primary benefit of the online model, as described by nurses, was that could provide their clients with an additional option to notify their partners and could potentially reach those who are currently less likely to notify partners using traditional methods.

"I mean it's not the ideal, if I am notifying a client I am checking in and seeing how they are doing and giving them resources and follow up and calling back to see how they are doing but it is a way that allows people to access more of their contacts especially when we are dealing with people who are overseas and people are out of our catchment areas" (Nurse group participant).

Misuse

The nurses had few concerns about misuse and felt that misuse of the system would be rare. Many felt the consequences of misuse could be seen positively as an opportunity to educate those receiving the message, and viewed the possibility that someone would be tested unnecessarily as an acceptable risk given the potential benefits of the system. However, it was highlighted that, in many cases, if someone visits the clinic saying they have been notified of a potential infection, they would be treated immediately with antibiotics prior to testing. A proposed solution to this issue was to modify practice guidelines in cases where the notification of infection stemmed from the online system to avoid unnecessary antibiotic use before testing.

PHYSICIANS

1. Notifying Partners

Most of the participating physicians worked in family practice settings throughout the province, with some working in both family practice and in specialized sexual health clinics. The patient populations treated by the physicians were diverse and crossed several demographic groups. All had experience with STI testing and diagnosis, but for most, this was not a central part of their practice. The STI testing that was done by most physicians was part of routine screening

or in response to specific symptoms. A minority of the physicians worked in specific sexual health settings where STI testing, diagnosis and treatment formed the main part of their practice.

None of the physicians were directly involved in notifying sexual partners of a possible STI exposure. All described their role in partner notification in a similar way. This role involved speaking with their patients about their positive diagnosis, encouraging them to notify their sexual partners and in some cases collecting partner contact information and forwarding this information to the BCCDC for contact tracing. Physicians were generally reluctant to reach out to sex partners who were not their patients, with many stating challenges to doing so including lack of time and that in a fee for service model this practice was not supported (e.g., no funding for services to people who are not patients). Also, physicians described that the availability of public health nurses for this function meant that it wasn't necessary to take on this role themselves. However, one physician did note that she has given a second dose of medication specifically for the sex partner if the partner is not her patient or she is concerned about the partner returning for follow up.

Similar to the client groups, most physicians noted that their patients were generally comfortable notifying their own partners with one physician noting that in 13 years she had only one patient who did not want to notify his partner. Physicians cited several challenges related to partner notification. The most common concern was not knowing whether patients followed through with contacting their partner. Other challenges involved getting contact information to forward to public health and knowing whether or not public health followed through with the contact tracing. One physician described sending off the contact tracing form to a "black hole" and not knowing what happened after that.

"Challenges are getting consent [to provide contact to public health] from patient sometimes they don't won't give me a name or if it is a patient of another doctor" (Physician participant).

"The biggest one is whether the patient has done it....I have always wondered how robust that system is...I very rarely get patients who want public health to notify for them" (Physician participant).

2. Online Model

The majority of physicians were supportive of the proposed online partner notification toolkit and felt that their patients would use the system. Most felt it was important to add additional notification options for those not comfortable speaking to their partners in person. In line with the client groups, most felt the system would appeal to certain subpopulations, including young people and those with multiple sex partners. One physician was cautiously supportive, noting that she often refers patients to inSPOT (online e-card partner notification tool) and most don't want to use it, instead opting to notify partners in person or use public health to anonymously notify their partners. One physician did not think her patients would use the toolkit and was not supportive of online partner notification, stating that "some information should just not be online".

Most physicians stated that they would recommend the service to their patients as an additional notification option, particularly in cases where patients did not want to share partner contact information. The physicians working in smaller communities noted that, in many

cases, people did not want to share information about their sexual partners because they may be known to the physician. Some felt that this system may allow patients a quicker and more efficient way to notify partners anonymously than currently offered by public health. When asked to describe how the online service would integrate with their current practice, most physicians said that it would simply be another option they would provide to their patients and that the impact on their practice would be minimal. However, some physicians noted a greater impact on their practice once the idea of closed notification model was introduced (see next section).

"I would probably add that to my opening blurb, there are multiple options, including this" (Physician participant).

"I can't see that it would impact in any way. How the contact is notified shouldn't make much difference to me.....unless I was doing it. I don't see how it would affect integration [into practice] unless I was instigating email or SMS message" (Physician participant).

3. Open vs. Closed

The physicians seemed to struggle to reconcile the perceived benefits/risks of the open vs. closed models with the model that would make most sense for their practice and patient care. Many noted that the closed system was more secure and the use of an access code or secure login would limit abuse and potentially increase uptake because patients would be more comfortable with the system. However, many also stated that the extra steps required by the physician to offer the closed model were barriers and would make it less likely that the online partner notification option would be offered. In a few cases, physicians noted that they already collect patient emails as part of their practice and the closed model would not pose any additional time burden on their practice. Despite the perceived benefits of the closed system, including security and the potential to track whether notification occurred, most stated that they would prefer to use the open model because it was easier, required fewer steps and potentially had higher uptake because the barrier of physician-directed access was removed.

"Something that requires a provider to take an extra step to make it happen is not as ideal" (Physician participant).

"Immediately the question that came to mind was which model would result in better uptake...how many steps would it take for a clinician to take to share information about the model in the closed versus open...if it takes too many steps physicians just won't do it" (Physician participant).

4. Messages

Physicians had very similar responses to the client groups in terms of message content and detail. Most felt the message should be brief, direct and respectful and would be trusted if sent from BCCDC. Physicians agreed that the message should indicate that they may need to seek medical treatment, explain the steps they need to take and provide a phone number that they can call for more information and support. The physicians also felt that given the immediacy of text and email, the message should link to more detailed information. When the physicians considered how much STI specific detail the message should contain, many spoke of experiences providing difficult information to patients and agreed that patients prefer to have detailed information delivered quickly and with empathy. Most felt that a generic

message that did not specify the STI would cause more anxiety and make their jobs more difficult when the person presented for testing.

"Yes [name infection] because I would have quite a different visit with someone if it was a chlamydia exposure versus a herpes exposure versus a syphilis exposure so I would still test them but it would certainly change the conversation" (Physician participant).

"What does a person do with that information "you've been exposed to a STI" because if they walk into my clinic and say they just got this anonymous text message then I don't know, my only option is to test them I can't treat them immediately whereas protocol would say if someone came in and said I am a chlamydia contact I would be treating them and testing them so it may delay treatment if the full information isn't there" (Physician participant).

According to the physicians, the message should also contain information on where to get tested, the time frame for testing, symptoms and treatment. The messages should convey a sense of urgency but also be reassuring given the highly treatable nature of most STIs.

Which STIs to Include

In agreement with the client groups, most felt that all STIs should be included in the service. However, in contrast to the client groups, some noted that herpes and HPV should not be included. When asked about HIV, most felt that HIV may require a more generic message or directed support but that it should be included. Some noted that this was not the ideal way to be notified about HIV, and that a phone call from a nurse would be preferred, but it was certainly better than not being notified at all. Similar to some of the clients, physicians also noted that reducing HIV related stigma was a good reason to include HIV with all other STIs in this service.

"I guess on the one hand HIV is so important that if there are contacts to be notified then anyway of doing that would be good but it would also be very stressful the person receiving that message electronically. I feel like if I were receiving that message I would rather have a phone call from someone who could me information at that moment in time. If that were an option. If we are talking about this or nothing then it is better but if we are talking about this or a phone call from a nurse who can give me information at that moment in time then I think that is better for a serious disease like HIV" (Physician participant).

5. Resources

The most common request for resources was links to updated treatment guidelines for STIs. Physicians who did not practice in specialized STI clinics expressed a need for updated guidelines, including information on prescribing, drug resistance, alternate treatments and recommended follow up. Several physicians were not familiar with the BCCDC's Smart Sex Resource website and relied on other sites to provide information to patients. Some felt that information or scripts on how to talk to patients about partner notification would be useful, but most felt that they were well practiced in communicating with patients and some noted that partner notification was not a central part of their practice.

6. Challenges

The physicians did not think that the online service would create additional barriers, but would address the needs of those patients who were uncomfortable sharing contact information or notifying partners directly. Certainly a potential barrier exists for those patients without access to technology, but most described this as being rare and that traditional notification services would still be in place for those patients.

Several physicians noted that symptomatic patients were often treated before testing and questioned how the system would work in these cases.

"It would be interesting to see how it integrates into the context of I am seeing someone who is symptomatic and is being treated concurrently with testing and sometimes they are motivated to recommend to their partners to go ahead and get tested because in our context it can take up to a week to get results from PHSA (public health services authority)" (Physician participant).

As described by the nurses, some physicians noted that the service should have the capacity to support text messages to international phone numbers, given the transient nature of some populations in BC (e.g., resort visitors, seasonal workers). One physician noted that in transient or marginalized communities, it would be a challenge to know if the message was received and by the right person, noting that phones are often sold or traded, creating a potential confidentiality issue if text is received by the wrong person. Other challenges were not unique to this system but to partner notification generally, such as not knowing partner contact information and not knowing if notification was successful. Others cited the emotional impact of receiving such a text, but noted that receiving a phone call or letter was also difficult.

"I've never received a phone call or letter from public health I don't know what the emotional impact of getting a text would be I mean you could be anywhere...it would be an odd text to get but it's an odd piece of mail to get or an odd phone call to get" (Physician participant).

Misuse

As with the nurses, most physicians took a pragmatic approach to the issue of misuse. Those with concerns felt that the benefits of the system in terms of improving care and facilitating partner notification far outweighed the potential for misuse:

"Overall consequence for person being pranked is unfortunate but if test is negative it ends there" (Physician participant).

In fact, the majority felt that misuse was not a concern and that their patients would not misuse the system. The concerns about misuse were not about the system itself but were more broadly focused on online security, with some citing concerns about the security of the information and the system as a potential target for hackers.

"It's a target for hackers....I think it would be terrible and very likely to happen. You have to have 20 layers of security" (Physician participant).

As with the client groups, some physicians noted that the closed system would reduce the potential for misuse but that those intent on misusing the system would find ways to work around security features. Importantly, some physicians noted that misuse of the system would adversely affect their practice because patients would present for unnecessary visits and tests. Others noted that if they perceived that patients were consistently receiving false messages, they would no longer recommend or use the system. However, most highlighted that they felt misuse of the system would be so infrequent that it did not present a major concern.

Electronic health care

The majority of physicians interviewed used electronic medical records (EMRs) exclusively in their practices. In speaking with the physicians, it would seem that each EMR service has unique features. For example, some physicians noted that they could send text and emails directly from the EMR system, increasing the security of these messages, whereas others noted that their EMR system did not support these features. Some physicians noted that they currently communicate with patients by email and sometimes by text message, but that they consistently emphasize the confidentiality limitations of these forms of communication with their patients. Others have features of their practices online, such as online appointment booking and reminders.

Overall, physicians described patient populations that were open and enthusiastic about communicating electronically with their doctors, but in many ways, physicians are playing catch up in terms of the technology and knowing what is considered acceptable. For example, many physicians noted that they did not have a specific secure clinic email from which to communicate with patients and were uncomfortable using their personal emails or cell phones for communicating. Others questioned what was ethically and legally acceptable when communicating with patients electronically and noted a dearth of information for physicians on these issues.

Interestingly, the one physician who was not supportive of the online system used electronic medical records (EMR) exclusively. This physician, in particular, felt that most health records do not include highly sensitive information but routine data on benign health markers (e.g., blood pressure, weight), whereas the partner notification system would be built specifically for sensitive information about people's sexual health.

"The average health chart doesn't have very sensitive information in it. Certain things in society are deemed sensitive information. If you have had a heart attack that's not really sensitive information but if you've had genital herpes, if you're an alcoholic, if you've attempted suicide those sorts of things are sensitive information and they are in the chart and we have built in mechanisms to protect charts as much as we can" (Physician participant).

7. Getting doctors to use the system: Promotion & Accreditation

With physicians generally supportive of the new online toolkit, we addressed the challenge of how to promote the system to physicians. Overwhelmingly, physicians agreed that professional development courses with continuing medical education (CME) credits were one of the best tools to educate physicians about new programs and tools. However, most noted that any promotional or education outreach must be multimodal and essentially "bombard"

physicians with information in multiple formats, including mail outs, booths at conferences, journals (e.g., BCMA journal, CMAJ) and through each Division of Family Practice.

Importantly, one physician noted that it may be vital to step back and educate physicians about the ways they can use online and electronic communication methods with their patients and to increase their comfort with technology as much as possible. In encouraging physician use of the system, many said it must be as easy as possible and ideally linked directly to the EMR system. Physical materials such as tear pads and pamphlets (printed and available online) were also key resources cited as important for sharing information with patients.

COMMUNITY CONSULTATION WORKING GROUP

1. Notifying Partners

Members of the Community Consultation Working Group (CCWG) represented AIDS Vancouver, the Health Initiative for Men (HIM), the McCreary Centre Society and Youth Co. All participants were involved in program development or delivery and not directly involved in partner notification. However, two of the four organizations have some involvement in partner notification – AIDS Vancouver does some partner notification as part of case management for people who are newly diagnosed or new to Canada and HIM developed its own online partner notification toolkit but have found that the uptake is low primarily because potential users do not have email or phone numbers for partners. Challenges of partner notification cited by the CCWG included dealing with people who were newly diagnosed and new to Canada and dealing with the new ways people are meeting sex partners online and the lack of contact information exchanged during these encounters.

"I think when people weren't using apps as much and were still using online sites it was different because you could say give me your number and I'll text when I am close but with a GEO app I mean you just take your phone literally right to their door and there doesn't need to be a phone number or email or anything to connect" (CCWG participant).

2. Open vs. Closed Model

In contrast to other groups the CCWG proposed a hybrid model that would combine the open and closed proposals. They questioned whether it was possible to combine some of the security features of the closed model, such as having a secure login function or confirming the sender has a valid email or phone number, with the open model. The primary concern was adding security features to the open model to reduce abuse. They did not feel that the use a code to login to the closed model would be barrier but similar to other groups they worried that the code would be lost and then the opportunity to notify lost also.

3. Message Content and Format

In line with other participants the CCWG felt that the message should have two steps, an initial alert and a link or phone number for more information embedded in the message. As with others there was some debate about whether to name the specific STI exposure in the message or use a generic message. Some felt that not including the specific STI would create more anxiety, would make it difficult for health care providers to manage and was somewhat "paternalistic" by assuming that the receiver was in need of protection or safeguarding by Public Health.

"Its feels a bit 'public healthy' like we are not going to tell you [what STI is] because we know what is best and we are going to lure you in here [to the clinic] first because we want to have a chat with you. If we give you this information who knows what you are going to do with it and that is a historical public health mentality" (CCWG participant).

However, others noted that a generic message may be taken more seriously particularly for those who consider highly treatable infections (e.g., chlamydia, gonorrhea) as less important.

"I am just thinking I am in a meeting and all of a sudden I get a text message what are my reactions going to be. Regardless it is going to be anxiety driven and how do we reduce that risk. I think using the word STI might help. Yes our minds might go all over the place but it may be more likely that someone gets tested because they are not sure what STI it is" (CCWG participant).

The CCWG felt that the message should include some health promotion messaging around refraining from sex until testing and treatment and have information on the specific STI such as testing and treatment. In addition, although noted as complex, the CCWG also questioned whether the messaging could address larger structural issues around STIs and in particular HIV such as stigma and disclosure.

4. Promotion

The CCWG felt it would be important to promote the system particularly to young people at high schools, colleges and universities and by using banners or ads on websites/apps using for meeting sex partners.

LANGUAGES

With all groups we discussed what languages it would be important to offer the online toolkit in. The majority of client groups stated that the toolkit should be offered in "all languages" with some specific languages that were common to Vancouver cited as essential (e.g., Cantonese. Mandarin, Punjabi). As with the client groups, the physicians and nurses noted that language was very context specific and most could not comment on which languages the service should be offered in. Several noted that their practices served primarily English speakers but were located in communities with some transient non-English speaking populations (e.g., seasonal workers, visitors). One physician noted that her practice was primarily in Vietnamese and her patients will typically bring in English documents or letters to her for assistance reading. She worried that an email received in English would be perceived as spam and, because it was electronic, patients would not be able to bring it in for interpretation. She noted that translation services would best address this challenge. Another physician noted that the service should allow the receiver to translate the message themselves (rather than translation by the sender) and that often non-English speaking patients have an English speaker who can help. Issues of confidentially were discussed as complex in this situation because the message involves a sexual health issue. The participants in the community consultation working group noted that it was important to ensure that the resources behind the toolkit were also offered in multiple languages if the toolkit itself was.

CONCLUSIONS

The goal of the addition of an online component to the existing partner notification tools is to increase the uptake of partner notification particularly among those individuals who are reluctant to notify using existing methods. Both the potential users and health care providers we spoke to seemed to agree that the addition of online methods of notification was a positive step and would address some barriers to partner notification such as those who are most reluctant to notify. However, both providers and clients noted the value and preference for person to person contact when notifying partners of a potential STI exposure and emphasized that the online tools should complement and not replace existing services.

Other points of convergence between the client and health provider groups focused on the content of the notification message. There was broad consensus that the email or text message notification should include a phone number for further information and support with some emphasizing the particular importance of this in the case of more complex STIs like HIV and syphilis. Again, this underscores the value of some person to person contact for partner notification. Similarly, both providers and clients felt the notification message should be supportive and reassuring and underscore the highly treatable nature of most STIs.

Issues of privacy and security were also central to the feedback from the providers and clients. Both cited that messages should arrive in two-stages to protect the privacy of the recipient or in the least hide information related to STIs or sexual health in the initial portion of the message that could be viewed instantly on a smart phone. The security of the system was also a central aspect of the perceived uptake of the system. Both clients and providers felt that the security of the system would directly affect whether people felt comfortable using it or referring their patients to use it but that the added security features should not present unnecessary barriers to use. Despite shared security concerns both the client and provider groups noted that misuse of the system would be low and represented an acceptable risk given the potential benefits of adding online options for partner notification broadly.

There were important points of divergence between the client and provider group that warrant discussion. Whereas the client groups cited a preference for the closed model with access controlled through a health care provider in some manner, the health care provider groups preferred an open model with no restrictions on access. Interestingly, both groups discussed potential challenges to the use of code or email based access to the system but the client group's preference for the closed system seemed to stem from a desire for security. The providers however felt that the use of codes or emails would act as a barrier for some of their clients and that the extra steps required by them to facilitate access would also act as a barrier. Thus, it is possible that an open model built with appropriate security features would jointly address the concerns of clients and providers.

Clients and providers also had mixed opinions on how much information to provide the message recipient about the STI itself. Physicians stressed that the provision of specific information about the STI exposure was important to their ability to provide adequate counselling and care to their patients and felt that patients preferred receiving complete information about a diagnosis. Nurses had somewhat mixed opinions with some citing that a generic notice about a possible exposure that needed treatment would be enough to encourage patients to present for testing whereas others felt that more detailed information should be presented. Clients also expressed mixed opinions. Those in favour of more detailed information felt that less information would cause more anxiety and stress. In terms of the health system broadly it is certainly preferable to provide detailed information about the

specific exposure to avoid unnecessary testing and treatment. Based on discussion with both clients and providers about the notification message more broadly it would seem that the provision of adequate resources (e.g., contact phone numbers) and including supportive or reassuring text in the message may alleviate some of the concerns about the provision of STI related information.

Finally, clients felt the list of STIs included in the toolkit should be comprehensive and even include an "other" box to allow for clients to add in an infection that may not be included in the prepopulated list. Some clients described experiences with STIs that were not routinely tested for but that still warranted partner notification. In contrast, providers cited a preference for notification only for reportable STIs and STIs that could be tested for and treated. Herpes and HPV were two diseases that some providers felt should not be included in the partner notification toolkit whereas clients mentioned these as particularly important to include. This issue raises the question of resources and concerns about the risks/benefits of notifying partners about exposure to STIs that have few treatment options and are extremely common (e.g., Herpes). However, it is encouraging that client groups expressed a desire to notify sexual partners about a broad range of STIs.

Table 3: Client & Provider Conclusions Summary Table

Points of Convergence	Points of Divergence	Key challenges
Additional option is positive; person to person contact preferred	Open vs closed models	HIV
Two-stage messages	How much information on the STI	Treatment before testing
Message tone	Which STIs to include	Online sex partners
Phone number for information/support	Role of providers – codes/access provision	Guidelines for care providers working in online environment
Low perceived misuse		

There were some key challenges raised by both the client and provider groups that should be considered when developing the online partner notification toolkit. First, both clients and providers questioned whether HIV warranted special consideration when included in an online notification toolkit. Both groups expressed concern about the possibility of receiving a text-based notification about HIV but agreed that notification in some format was preferred to no notification. Again, both clients and providers took a pragmatic approach to weighing the potential risks/benefits of notifying sexual partners about HIV electronically citing the need to reduce stigma around HIV, the importance of notifying partners in some way and the need to provide adequate resources to those receiving notifications about HIV regardless of the means of notification. Providers generally agreed that HIV should be included in the service but that modifications to the message and corresponding resources may be needed.

Second, both clients and providers questioned how the notification system would work in cases of treatment before testing. Clients noted that they may want to notify someone based on symptoms alone but if the system were closed and required a positive diagnosis to access then they would need to wait before notifying partners. Providers also noted that it is common to treat concurrently with testing for some STIs or in some cases treat in the absence of testing. Thus, a challenge moving forward is addressing the potential need to notify partners

prior to a confirmed positive diagnosis and whether the system needs to include different resources for these cases.

Third, as with existing partner notification tools, it is impossible to notify partners without some form of contact information. While the addition of online tools certainly adds notification methods it will still be limited in the case of sex partners met online and through the use of GPS-based applications. Both clients and providers cited the challenge of this new means of meeting sex partners and the limits to partner notification within these settings. There was a sense that people are willing to notify partners met through these websites and applications when possible and open to solutions that would see notification tools built in to these sites. Essentially, the issue of meeting online sex partners is a reminder of the pace of technology and the need to be cognizant of this rapidly changing environment when building online tools.

Fourth, providers also acknowledged the rapid pace of technology and their inability to keep up with the changes. Providers noted that they feel behind not just in their use of technology in practice but in their knowledge about what is acceptable, feasible and ethical practice in an online environment. Many nurses and physicians stated that they currently used both email and text based communication with their clients but continually emphasized with clients that these methods were not confidential. Providers expressed a need for resources and guidelines on how others were working within the online environment and what was deemed acceptable practice. The development of such guidelines will be essential as more services move online.

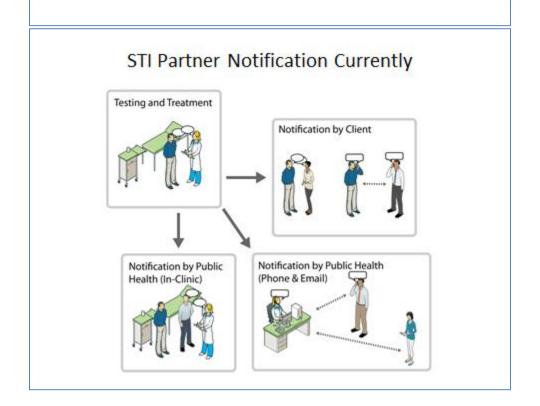
Finally, while the sample of physicians we interviewed was small we did hear some strong resistance to the online partner notification toolkit. Additionally, one physician explained that the majority of physicians do not use electronic communication with patients and that there may be some widespread discomfort with the use of electronic communication in practice. As key stakeholders in partner notification addressing physician discomfort and resistance to the use of online tools may be vital to the broader success of the online toolkit.

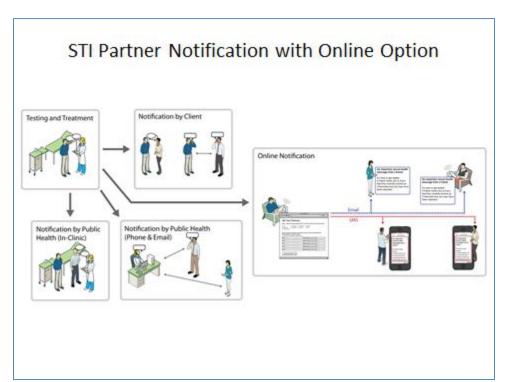
In conclusion, the proposed online partner notification toolkit was viewed as a positive addition to the existing tools by both clients and providers. Clients and providers raised some clear preferences for the model development and raised some important challenges to address moving forward.

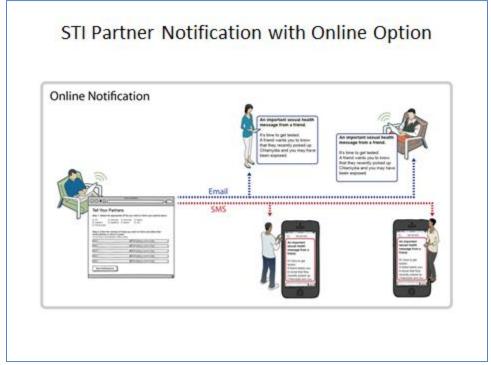
APPENDIX A: Visual Slides for Advisory Group Discussions

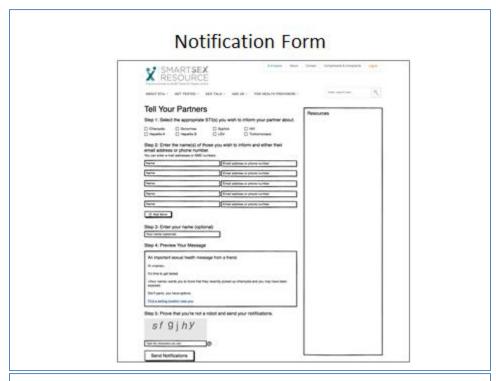
"Ground rules"

- Confidentiality
- · Diversity of opinion
- Respect
- · "I" statements
- · Right to pass
- Cell phones

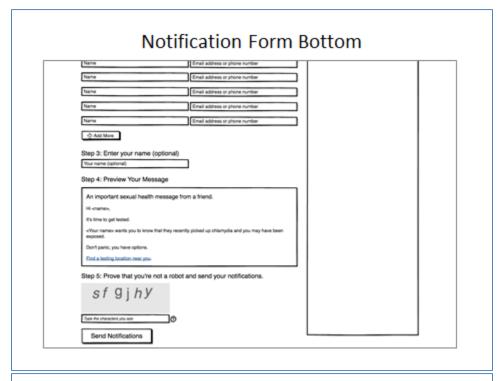


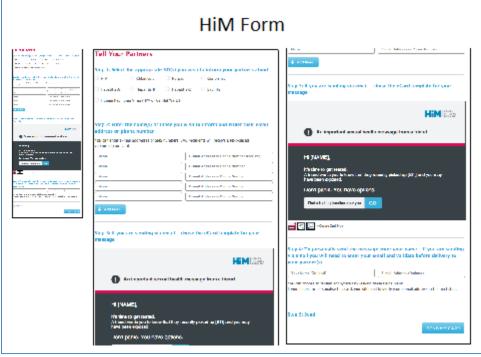








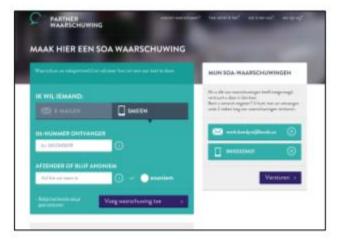


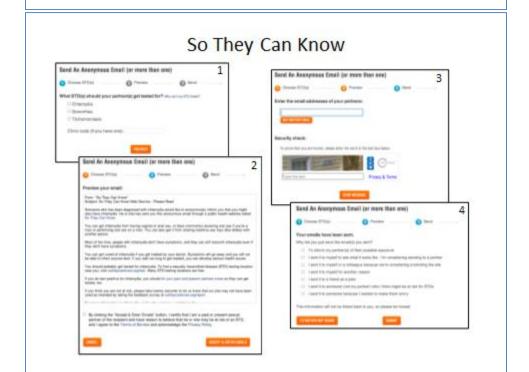




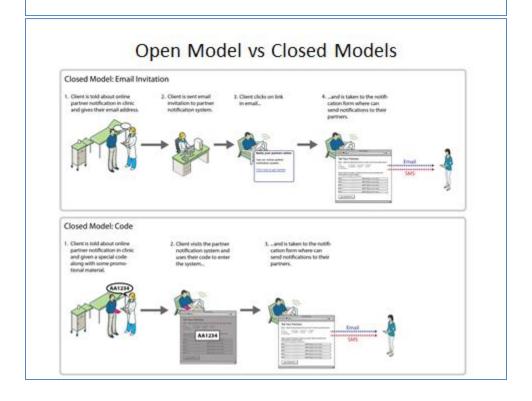








Open Model 1. Client is total about online patries excitication in clinic. 2. Client annies at forur/see/Resource. 3. Client filts in contact form and notifications are serie.



APPENDIX B: Advisory Group Discussion Guides

Client Advisory Groups Consultation Discussion Guide/Key Questions:

1. Introduction & Welcome

 Review ground rules for discussion including confidentiality of responses, respect for other member's opinions and rights to opt out of questions and/or discussion if desired. [SHOW GROUND RULES SLIDE]

2. Overview of Partner Notification

- Review current system for partner notification in BC.
- What it is: When an individual tests positive for a reportable STI (these include: Chlamydia, gonorrhea, syphilis, HIV) this person is offered assistance notifying their sexual partners if desired. Notifying partners is voluntary in BC, and it's encouraged so that partners can get tested and treated quickly to prevent passing on the STI to others.
- How partner notification happens: There are several options: the individual can contact
 their partners on their own or talk to them with a health provider present; the individual
 can provide contact information for sex partners to their care provider or to public
 health and the care provider/public health can contact the person(s) on their behalf;
 the individual can use the INSPOT online e-card service to notify their partners
 electronically. [SHOW 10,000FT SLIDE]
- What type of service would you prefer to use if you had to tell your partners to get tested? Do any of these options seem better/worse to you?
- If you were diagnosed with an STI, what do you think your challenges would be around telling your partner(s) they need to get tested? What would you be concerned about?
- **Probes:** Would you want to tell them? How would you want to tell them? What services would you use? Would it dependent on the type of partner (e.g., casual, dating)?

2b. Introduce new model of Partner Notification – Slides Showing Overview Explain proposed new model of partner notification using slides: [SHOW 10,000 ft SLIDE WITH ONLINE OPTION]

- Who do you think would use this service, in what scenarios?
- Would you use this type of service? What would you like about it? Dislike?

3. Online Form - features of partner notification toolkit

- Show visual slides of example notification form [OVERVIEW SLIDE + TWO CLOSE UP SLIDES]
- Does this form seem easy to use? Too complicated?
- Is the form missing anything?
- Are there additional features you would like to see? (e.g., visuals, more information)

- Probes: Show slides of existing international services and gather initial reactions, highlighting differences (e.g. Drama down under; Let Them Know; HIM)
 - What are your initial reactions to these models?
 - What do you like/dislike?

3b. Methods of Notification

The proposed model allows for SMS (text) and/or email methods of notifying partners. You can send your notification anonymously or with your name/email.

- Do you have a preference for how you would like to *send* a notification?
- Do you have a preference about how you would like to *receive* a notification?
- Should the service allow for both anonymous and named notification methods?
- Would you include your name? Personal Email?
- Some people meet and socialize with sex partners using mobile apps such as Grindr/Tinder or dating websites. How would you like to notify partners met through these apps or websites?
- Probes: What kinds of features would the toolkit need for these kinds of apps? What kinds of resources would you need? Should the online partner notification toolkit have different features specifically for these apps?

3c. Messaging:

- If you received a message from this service:
 - What do you think a notification message should say?
 - What should it NOT say?
 - What kinds of messages would you be comfortable receiving?
 - How much detail should the message contain? Should it name the infection?
 - Should the messages be the same/different if sent by text/email?
 - Would you worry about someone else seeing the notification?
 - Would your reaction to the message change if it were anonymous? Named?
 Came from BC-CDC?
 - Would your reaction to the message change if it contained specific information about the infection?
 - Probes: Show HANDOUTS with sample messages to garner feedback
 - What information on the website do you think the notification should link to?
 What information would you like to have included?
 - What languages should service be offered in?

4. Model Options

Model options: The model could be open – meaning that anyone could access the partner notification toolkit on a website and send out notifications, or could be closed or invitation based meaning that after you tested positive for a STI your care provider would provide you with secure access to send out notifications to your partners. The secure access could be through a code that you enter on the website, or an email/SMS link to a secure part of the website. **[SHOW OPEN/CLOSED SLIDE]**

- What are your thoughts on an open/closed model?
- Which model would you prefer? Feel more comfortable using?
- Which model would you be more likely to use when notifying?

- With the 'closed' model the sender would likely have a verified diagnosis because he/she would have received weblink or code from health care provider. A closed model means that you receive a message regarding a diagnosis verified by BCCDC – how would you feel about this?
- Do you see one as being more complicated or difficult to use? For example, with the closed model you may be in a treatment/counselling room with a nurse and you will have to provide your contact information and will receive a code/weblink from nurse. With an open model, you could leave clinic and visit website to send notifications on your own.

5. Desired resources

The toolkit will include several different kinds of resources such as information on different STIs,treatment options, clinic finders, advice/tools on talking to your partner, letters to bring to yourdoctor if you need to get treated for an STI.

- What information would you like to have if you were sending a notification?
- What information would you like to have if you were receiving a notification? If you got
 a notification that directed you to a website, what would be the first thing you would
 look for on the website?
 - What supports/resources would you like to have around partner notification?
 - Would 'scripts'/videos about how to talk to your partner be of interest or relevance?
 - Would information on getting tested help?
 - What information would you like if you decided to notify partners yourself?

6. Potential challenges/facilitators to implementing partner notification toolkit

- Do you have any concerns about using this service?
 - Concerns about privacy?
 - Concerns about security?
 - Concerns about how your information will be used or stored?
- Do you think people will mis-use the service?
- In what ways do you perceive the system will be mis-used?
- Suggestions for preventing mis-use?
- What would you think if the website stored your IP address, which could later be used if there was a complaint?
- If you wanted to send a notification as a prank, would knowing that your IP address was known and stored be a deterrent?

7. Closing

- What would you call this service? Does partner notification make sense?
- In general how do you feel about online/mobile sexual health services (e.g., apps, text/email testing reminders)?
- Is there anything else you would like to add about partner notification? Anything we missed in our discussion?

Provider Advisory Group Consultation Key Questions/Guide: Public Health Nurses, Family Physicians & Community Consultation Working Group

1. Introduction & Welcome

Review ground rules for discussion including confidentiality of responses, respect for other member's opinions and rights to opt out of questions and/or discussion if desired.

2. Overview of Partner Notification

Briefly review the focus of the consultations - partner notification in BC – note all participants should be familiar with this system.

- How involved with partner notification / contact tracing are you in your practice?
- Physicians: What kind of setting do you practice in? How much STI testing do you do?
- How do you currently handle partner notification?
- What challenges do you have around partner notification?
- **3. Introduce new model of Partner Notification Slides Showing Model:** Explain proposed new model of partner notification. Overview 'visuals' of new model using slides including "10000ft" overview model slide.
 - Which clients do you think would use this service?
 - Would you recommend this service to your clients? It is something you think they would use?
 - How would this service impact or integrate with your current practice? What STIs do you think would be appropriate for this service?
 - What do you think are the benefits and challenges of this type of service?

3a. Features

- Model: Explain open vs. closed (invitation based model) use slides.
- What are your initial reactions to these models?
- Which would you rather use as a care provider?
- What model would you feel more comfortable supporting?
- The closed/invite model may involve collecting client email addresses, entering email address or phone number into system and/or allowing clients to enter email address at your office. In your opinion what are benefits/drawbacks of this type of model?
- What about giving clients a wallet card with a special URL that your client could use to send out notifications themselves (instead of collecting email addresses/phone number and sending invitation to use the service). What system would you be more likely to support? Recommend to clients?

Additional Questions: Family Physicians in BC

- People who need to know about this service are physicians and people diagnosed with a STI. What's the best way to get physicians to use the service and refer clients to the service?
- What would make this a credible service for physicians?

3b. Messaging:

- What should notification message say?
- How much detail should it have about infection?

3c. Content/Resources

- What information do you think your clients would want included in this system?
 (Probes: for example: information about testing/treatment; information on how to talk to partners; information on what to expect)
- What information would you like to have included?
- Would it be useful to include resources for health care professionals around partner notification?
- What resources would you like to see?
- Would information around how to offer partner notification or how to talk to clients be useful?
- What languages should service be offered in?

3c. Mis-Use

- What concerns would you have around potential misuse?
- Do you think your clients would mis-use/abuse this system? In what ways?
- Do you have any suggestions on how to prevent mis-use?
- Do you think clients would be open to these types of solutions to reduce mis-use? (list options for prevention: captcha; information retention, IP addresses)
- Would mis-use/abuse of this system affect your practice? In what ways?

3d. Promotion

- How should we promote this system to public health?
- Does housing this resource at SmartSexResource make sense for your practice?

Additional Questions: Family Physicians in BC

 How should we promote this system to family doctors? What materials would like to have in order to refer your clients to the service?

3e. Additional Issues

- Are there additional online resources/services around partner notification that you would like to see?
- Would this type of system help with any of the challenges discussed earlier?
- Would this system address or perpetuate existing barriers to partner notification/testing?