



DIGITAL &
**SEXUAL
HEALTH**
INITIATIVE

Design and implementation factors associated with missed opportunities for testing on GetCheckedOnline: 2022 client experience survey findings

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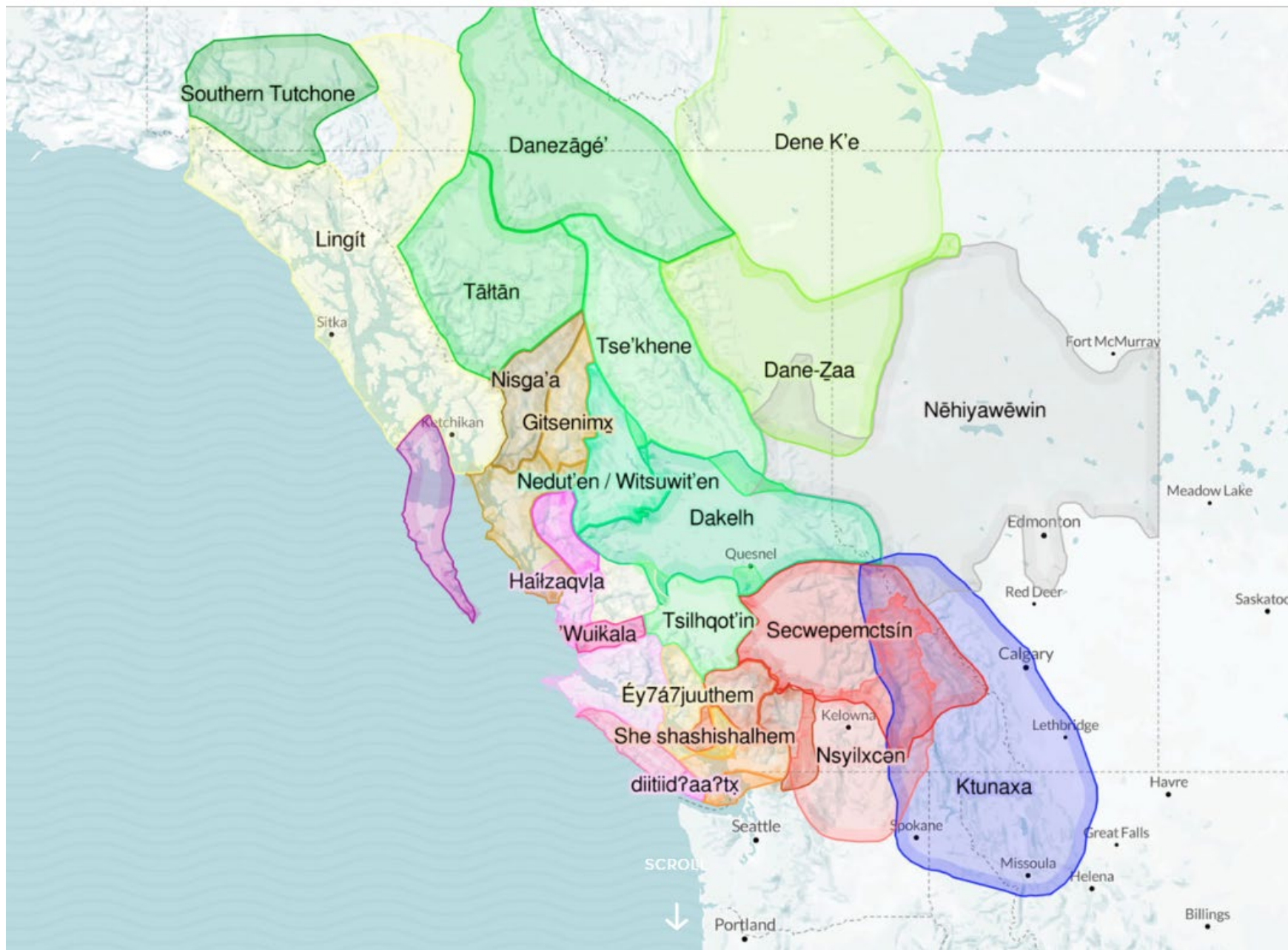
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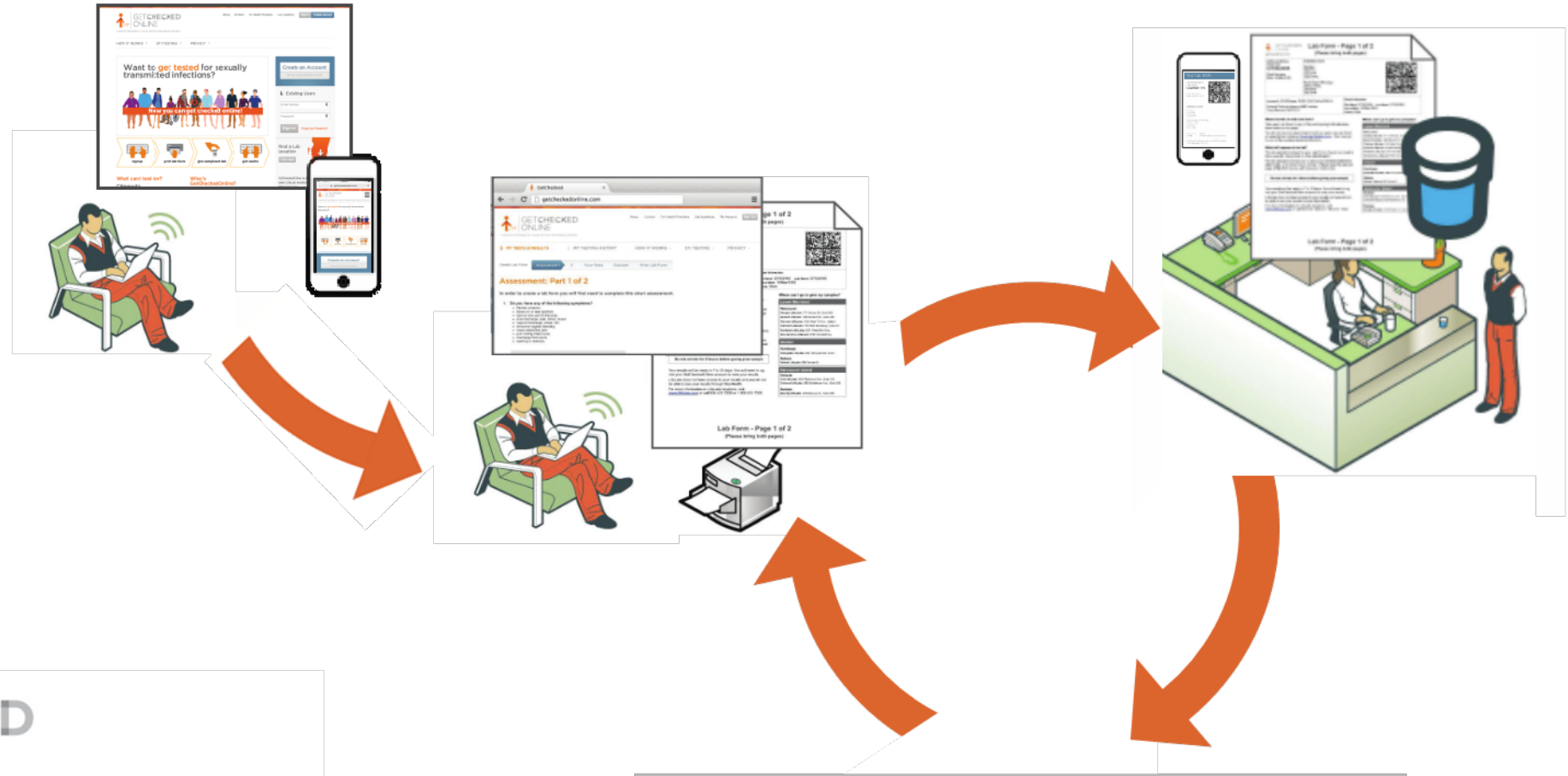
First People's' Map of BC <https://fpcc.ca/stories/first-peoples-map>

Background

- Increased popularity of digital interventions providing testing for sexually transmitted and blood-borne infections (STBBIs).^{1,2}
- By not requiring patients to see health providers, these interventions are assumed to reduce barriers to access testing³
- Our previous work demonstrates concentration of benefits along existing social strata⁴
 - Higher income, educational attainment, urban, white, cisgender and heterosexual individuals



Illustrations by Rayka Kumru

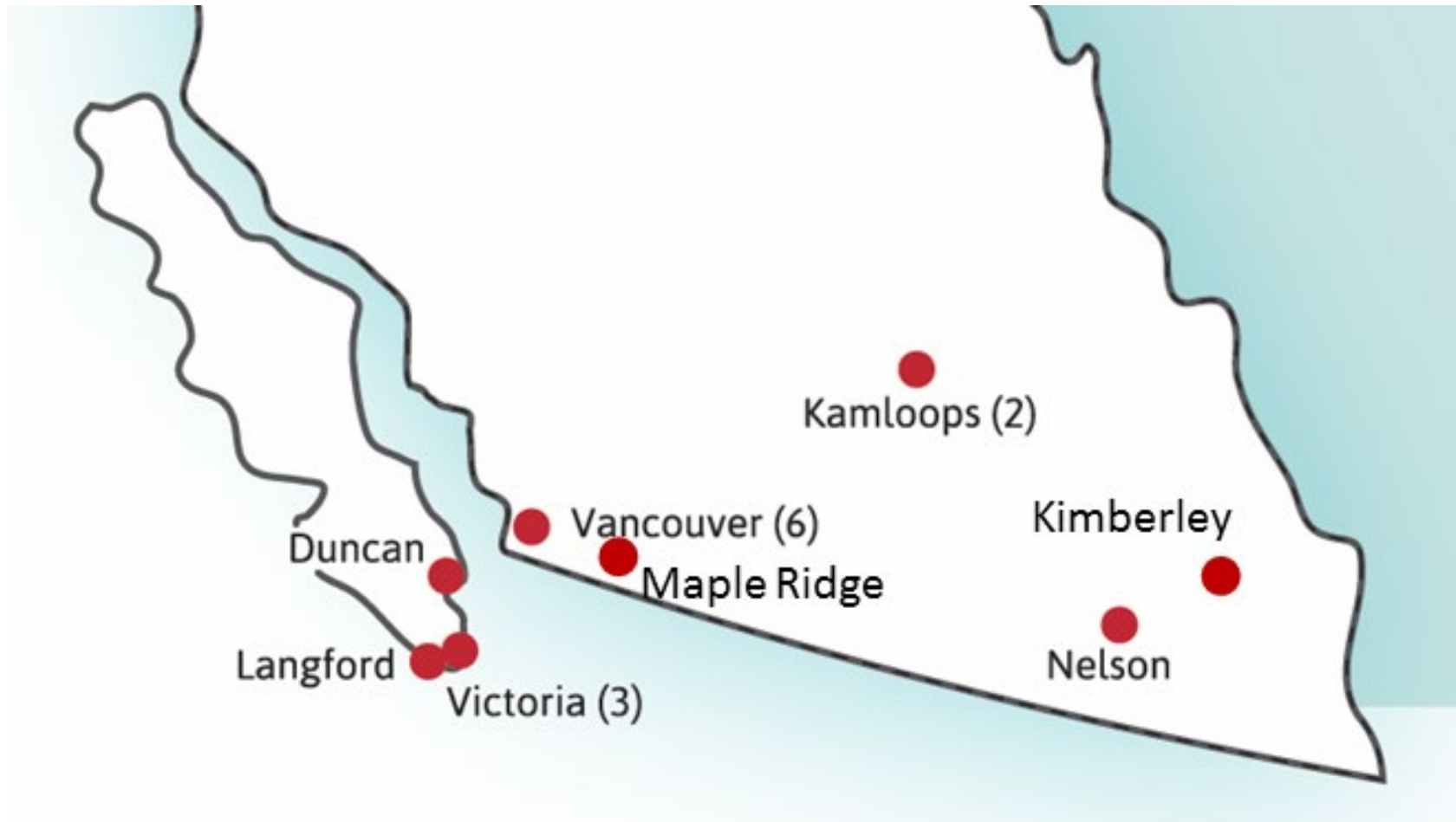


**A solution for
overcoming barriers
to access STI testing**





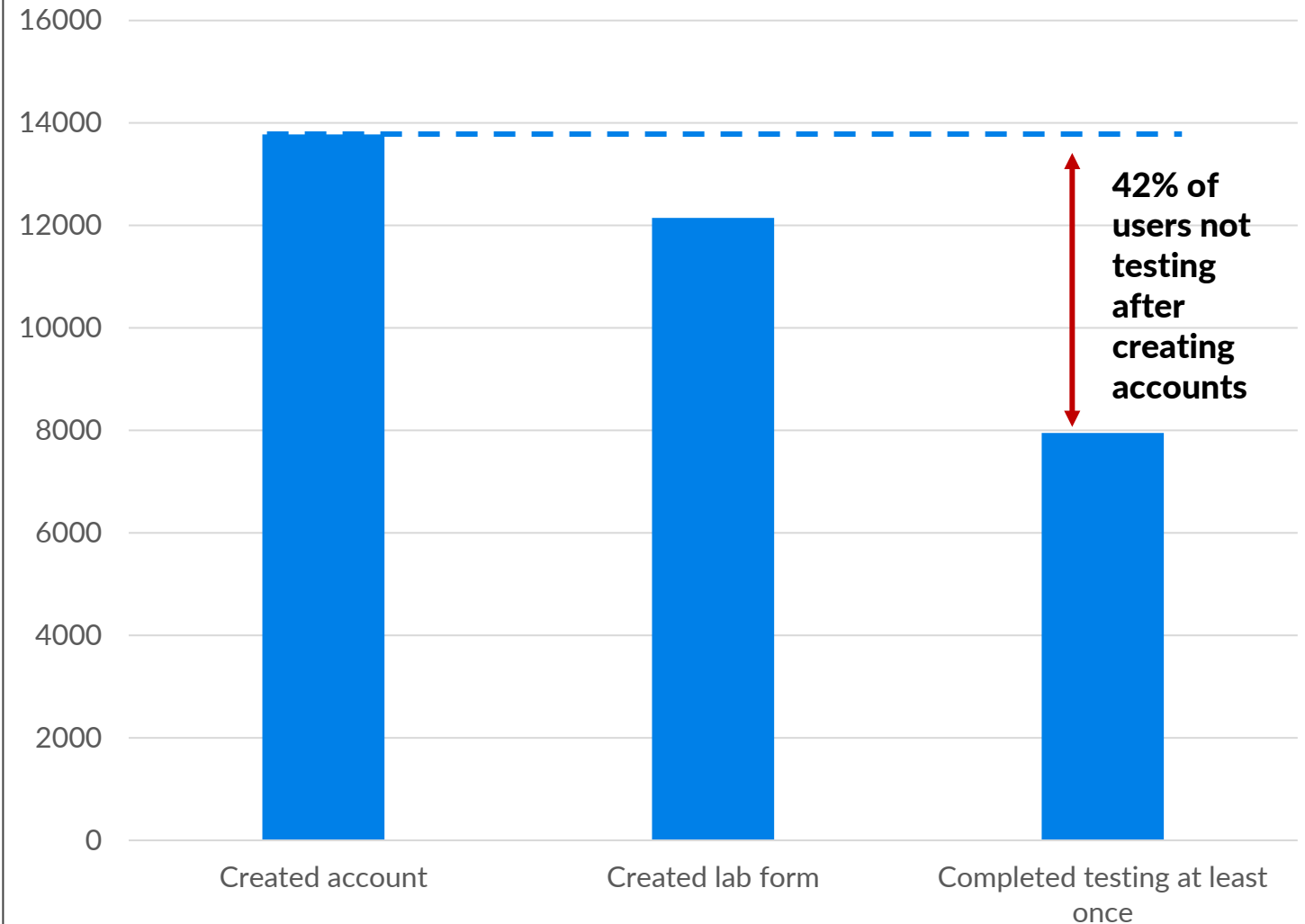
GetCheckedOnline is available in 8 communities in British Columbia



Missed opportunities?

Equity implications?

Progress through the service pathway for *GetCheckedOnline* clients creating accounts – Sep 2014 – April 2019
(n = 13,778)





Our research



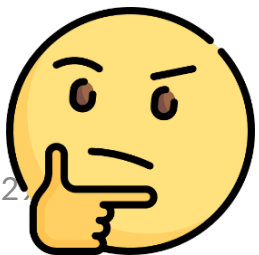
To explore how program features[¶] and equity-related factors influence the experience of missed opportunities[§] for STBBI testing on GetCheckedOnline

[¶] Refers to web-design and implementation (i.e., organization of lab and clinical services supporting the website); [§] Refers to self-reported inability to test on GetCheckedOnline despite needing testing at account creation.



Our research questions

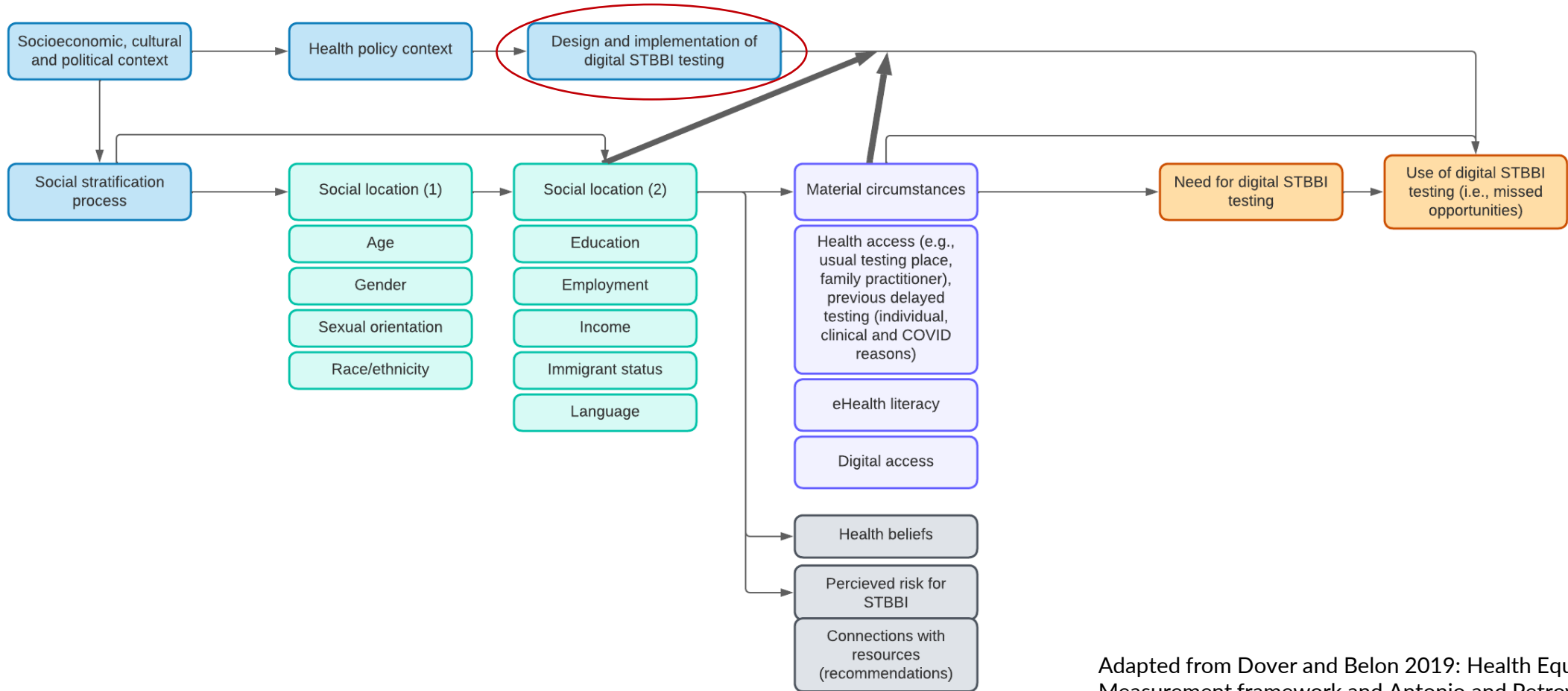
- Are design and implementation factors associated with missed opportunities on GetCheckedOnline?
- Do equity factors modify identified associations?
- How do clients with missed opportunities experience the design and implementation of GetCheckedOnline? †




† Aim to explain associations through clients' experiences and identify potential improvements



Theoretical framework



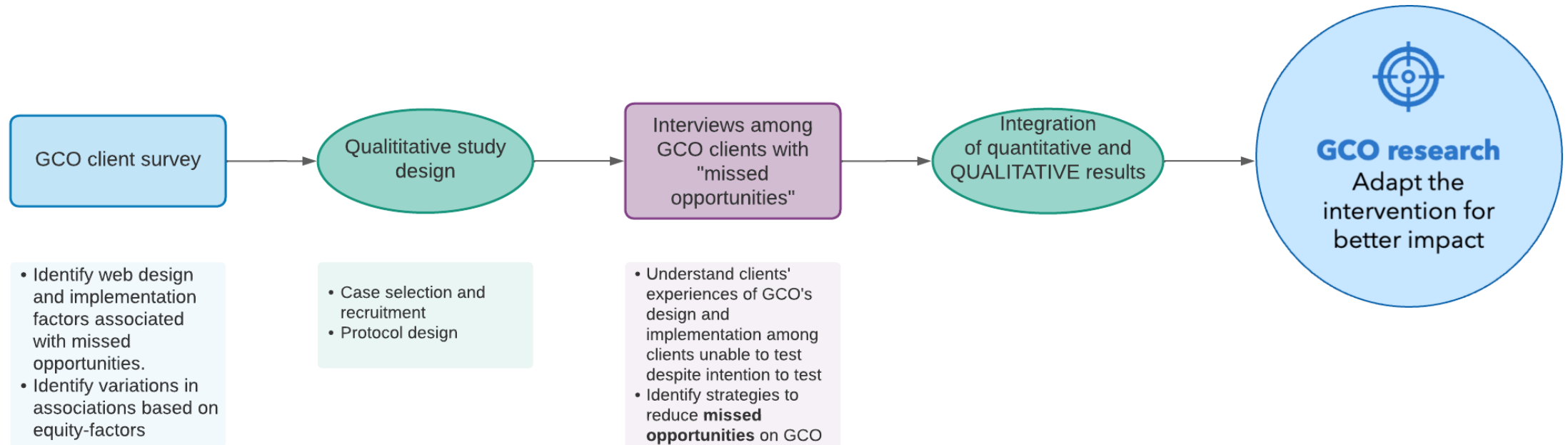
Adapted from Dover and Belon 2019: Health Equity Measurement framework and Antonio and Petrovskaya 2019 eHealth Equity Framework, and Venkatesh 2012: UTAUT

A photograph of a community meeting in a room with posters on the wall and a man presenting to a group of people. The room has a whiteboard, a desk with a computer, and several posters, including one that says "EBOLA". A man in a light blue shirt is standing at the front, addressing a group of people seated in white plastic chairs. The audience is diverse, with some people wearing head coverings. The room is well-lit with ceiling fans and lights.

Who am I and why am I interested in equity in digital STBBI testing



Our explanatory sequential mixed-methods study



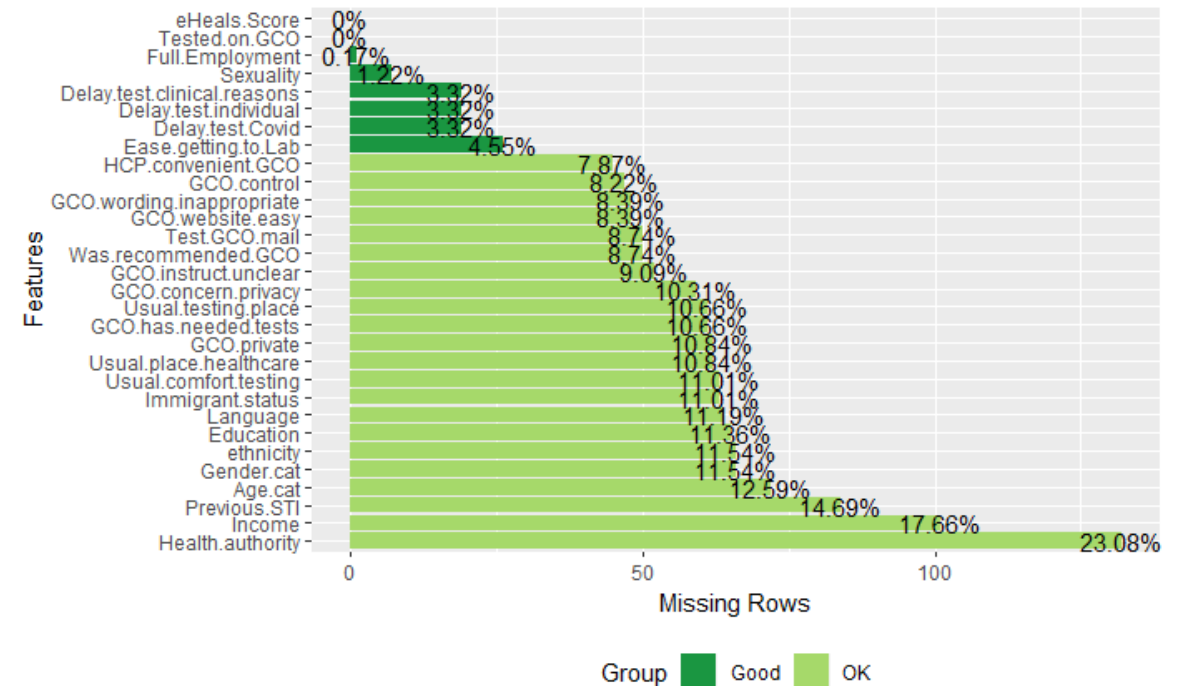


The 2022 GetCheckedOnline client survey

- **When:** November 21 and December 6, 2022.
- **How:** Online survey of GCO clients invited by e-mail
- **Who:**
 - Aged 16 years or more
 - Created GCO accounts between April and October 2022 (i.e., in a 6-month period ending 45 days prior to the survey)
 - Consented to contact for research
- **Survey:** based on the TDF
- **Outcome:** Missed opportunities
- **Exposures:** Web design factors (e.g., ease of website use) and Implementation factors (e.g., ease of getting to a lab)

Analyses

- **Analytic problems:** significant missingness with variables missing between 0.2% and 23.1% of responses.
- **Main analyses:**
 - Theory informed (DAG) logistic regression on a multiply imputed dataset to account for the missing responses.
- **Additional analyses/sensitivity analyses**
 - Effect modification analyses using measures of social location
 - Repeated main analyses using complete cases.



Client interviews

- Included participants from the Client surveys self-reporting missed opportunities for testing and consent to contact for interviews.
- Sent emails and conducted semi-structured interviews Zoom (Average – 28 minutes (range: 18-48 minutes).
- Audio recordings and verbatim transcripts.
- Reflexive thematic analyses using constant comparative techniques.



Image by Storyset on Freepik



The magnitude of missed opportunities

681

Out of 3128 people
responded to the
Survey (22%).

84%

Said they needed to
test when they
created an account

1 in 3

Of people
needing testing
(32%) did not
test

Associations between design/implementation factors and missed opportunities for testing

- More implementation than design factors.
- Annual income (<\$20k) modified ease of using the website, **Employment status (unemployed)** modified clarity of instructions and **Gender (women)** and **immigrant status (immigrant)** modified ease of getting to lab.

Variables	Adjusted Odds Ratio (95% Confidence Interval) - Imputed	Adjusted Odds Ratio (95% Confidence Interval) - Complete case: N=304
Web design factors		
The GCO website was easy to use: Do not agree	3.40 (1.68, 6.87)*	3.48 (1.56, 7.77)*
Instructions on GCO were unclear: Agree	1.53 (0.80, 2.93)	1.21 (0.55, 2.69)
The wording on GCO was inappropriate: Agree	0.88 (0.38, 2.00)	0.91 (0.33, 2.56)
Was recommended to use GCO from friend/HCP: Agree	0.90 (0.58, 1.39)	0.88 (0.56, 1.36)
Concerned about privacy and security when using GCO: Concerned	1.60 (0.98, 2.63)	1.63 (1.02, 2.61)*
Implementation factors		
Ease of getting to a lab location: Not Easy	3.26 (1.97, 5.41)*	2.69 (1.68, 4.32)*
GCO offers all the STBBI tests needed: Do not agree	1.81 (1.11, 2.95)*	2.06 (1.21, 3.53)*
More likely to use GCO with a self-collection and mail to lab option: Agree	2.12 (1.32, 3.42)*	2.74 (1.78, 4.21)*

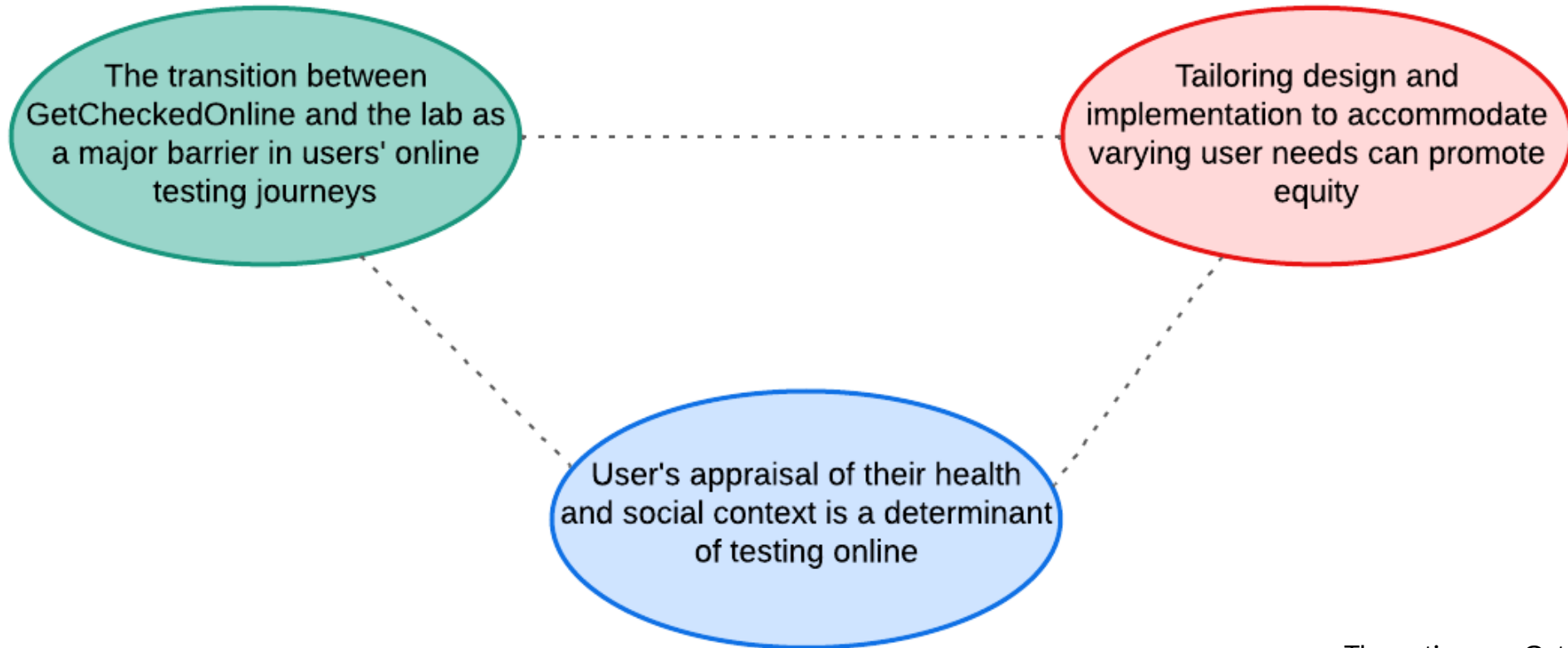
Client interviews

- 14 participants
- 3 (21%) self-identified as a man and 9 (64%) self-identified as a woman and 1 (7%) identified as gender diverse.

Characteristic	N (%)
Age	
24 or less	3 (21)
25-29	3 (21)
30+	7 (50)
NA	1 (7)
City	
Kelowna/Kamloops/Nelson	3 (21)
Vancouver/West Vancouver	6 (43)
Victoria	5 (36)
Race/Ethnicity	
East Asian	2 (14)
Southeast Asian	4 (29)
White	6 (43)
NA	2 (14)
Sexual Identity	
Gay, Bi or pansexual	4 (29)
Straight (heterosexual)	7 (50)
Prefer not to use another term	1 (7)
NA	2 (14)



Experiences of missed opportunities: Identified themes





Theme 1: Interoperability challenges

The transition between GetCheckedOnline and the lab as a major barrier in users' online testing journeys

- Participants expressed frustration at needing to use multiple websites to get tested
- Most participants created a lab form but had trouble transitioning to the lab system to complete testing

“I think if you could have just one site, like if it could be all done through GetCheckedOnline, like you could book your appointments to [the labs] through GetCheckedOnline, it would be easier as opposed to getting your QR code then having to go to a different website and then having to do it all over again .” – (Participant 01, Man, 28 years)



Theme 1: Perceptions of two separate organizations

The transition between GetCheckedOnline and the lab as a major barrier in users' online testing journeys

- Having different websites, and differences in how GetCheckedOnline and the lab worked reinforced ideas that the services didn't work well together.

“I think when we talk about this service GetCheckedOnline, it's also paired with the service provided by [the labs]. They are not connected; they are two different organizations. But because I am being sent to [the labs], I have to think “do I really want to go to a [lab]?” The customer service experience is as quick and efficient as possible. Sometimes the staff are fine but sometimes the customers and patrons are a bit unruly” – (Participant 03, Gay Man, 25-29 years)



Theme 1: Users' negative emotions

The transition between GetCheckedOnline and the lab as a major barrier in users' online testing journeys

- Participant expressed feelings of frustration, anxiety and confusion about the testing process that were mainly related to the hand-off from GetCheckedOnline to the lab

“I [GetCheckedOnline] was pretty simple. As I remember, you can just fill the form. Then they just said like, here’s the address of the clinic... close to you and you can just go there. We were like okay; we didn’t feel comfortable going there. Is there going to be a line? Is it going to be like you have to reserve a spot before? That was not clear.” – (Participant 06, Straight Man, 30+ years)



Theme 2: Comparing options based on testing and treatment needs

User's appraisal of their health and social context is a determinant of testing online

- Participants described their considering their testing and treatment needs when appraising the comparative advantages of testing options (e.g., getting a routine test or testing for a specific concern)
- For concerned testers, speed of access to treatment and having a provider who could examine them, and answer questions were important
- For routine testers, the types of test available and convenience were important
- Most participants agreed digital STBBI testing helped them manage stigma associated with testing for STBBIs



Theme 2: Recommendations and social influences

User's appraisal of their health and social context is a determinant of testing online

- Participants who heard about GetCheckedOnline from their friends and family expected the service to be easy and convenient but were less prepared for how it the testing process worked
- Participants who heard about GetCheckedOnline from health providers were better prepared and did not describe negative emotions or concerns about trust as much as others.
“I think because the lady [HCP] that suggested I do this to begin with, mentioned that was through [the lab], I feel like I had it in the back of my mind. But I can see how it would be a little confusing to some people if you weren't aware of the picture in regards to how to make an account with you [GetCheckedOnline] and then you have to make an account with [the lab].” – (Participant 01, Man, 28

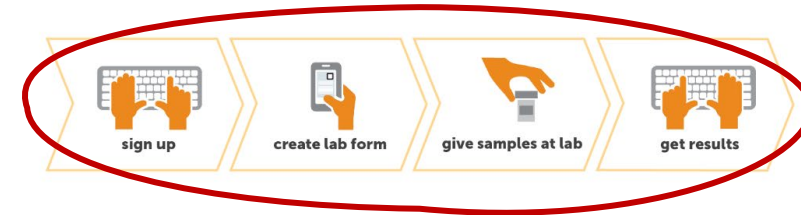


Theme 2: Deciding to test based on prior health access, experience and capability for testing

User's appraisal of their health and social context is a determinant of testing online

- Participants described thinking about their existing access to healthcare providers and the resources they needed to test (e.g., time, travel) when deciding whether to test through GetCheckedOnline
- Participants who had used the lab before had a better understanding of the testing process but their previous experience with the lab influenced their decision not to test.
- Younger participants viewed their age and ability to use technology to be an advantage compared with older people.

Want to **get tested** for sexually transmitted infections?



Create an Account

WITH AN ACCESS CODE

 Existing Users

Sign-In

[Forgot your Password?](#)

Theme 3: Missed features

- During a walk-through of the website, people realized they had missed features that explained the testing process, the reasons for questions asked and locations available for testing because they were focused on getting tested.

“I wonder if before somebody makes an account, if there’s information on locations where one would have to go, and just a little bit more information about how the process works.....”

Oh my God! You have it, I’m sorry. Maybe It’s because I did it on my phone and it was a little small, so all I saw was the login [create account button].” – (Participant 09, Straight woman)



Theme 3: Needing education tailored to testing needs

Tailoring design and implementation to accommodate varying user needs can promote equity

- Participants suggested changes to the website to improve accessibility for marginalized populations, as well as better explanations of tests that were available
- Participants found education GetCheckedOnline website was sometimes not at par with in-person services, and thought it could be tailored to different testing scenarios (e.g., routine vs concerned testers)

“I think if you are on GetCheckedOnline... either you are trying to be precautious, or you suspect something’s wrong with you. So, maybe for people that suspect there’s something wrong with them that there is an option to talk to a doctor or a nurse. Even if it is video chat or message to guide you as to what to do .” – (Participant 01, Man, 28 years)



Theme 3: Needing additional testing options

Tailoring design and implementation to accommodate varying user needs can promote equity

- Participants suggested adding new lab locations and options for self-collecting specimens at home would have helped them test through GetCheckedOnline.
- These options could better match users' expectations of "online" services.

"It would be nice if more labs offered the service. Its not that it was a waste of time by any means... but for me personally, I wonder if there was a little bit more information on where one could go and like that it was not all online. To be honest, when I heard about tested online, I thought in my head maybe that .."oh you get a kit in the mail or something and then you send it back" ." – (Participant 09, Straight woman)



Take home messages and inferences

- Nearly a third of clients have experienced missed opportunities for testing on GetCheckedOnline.
- Implementation factors including ease of getting to a lab for specimen collection and testing through mail-in options are factors users consider in relation to their existing access and available resources for testing.
- Ease of using the website as a factor associated with missed opportunities is mainly related to the website-lab interface.
- Need to optimize the service cascade where possible.
- Consider additional options for testing as current model may not remove all barriers for all use contexts, especially for equity-seeking groups.
- Optimizing the testing model through a focus on GetCheckedOnline-lab interoperability may reduce experiences of missed opportunities.



Take home messages and inferences

- The role of gender, income, employment and immigrant factors must be considered in exploring updates to the design and implementation.
- Design and implementation updates can improve the GetCheckedOnline's fit for equity-seeking groups.



Future steps

- Further engagements with community partners to understand the implications of findings for service updates
- Ongoing exploration of user journeys to inform equity-focused service updates

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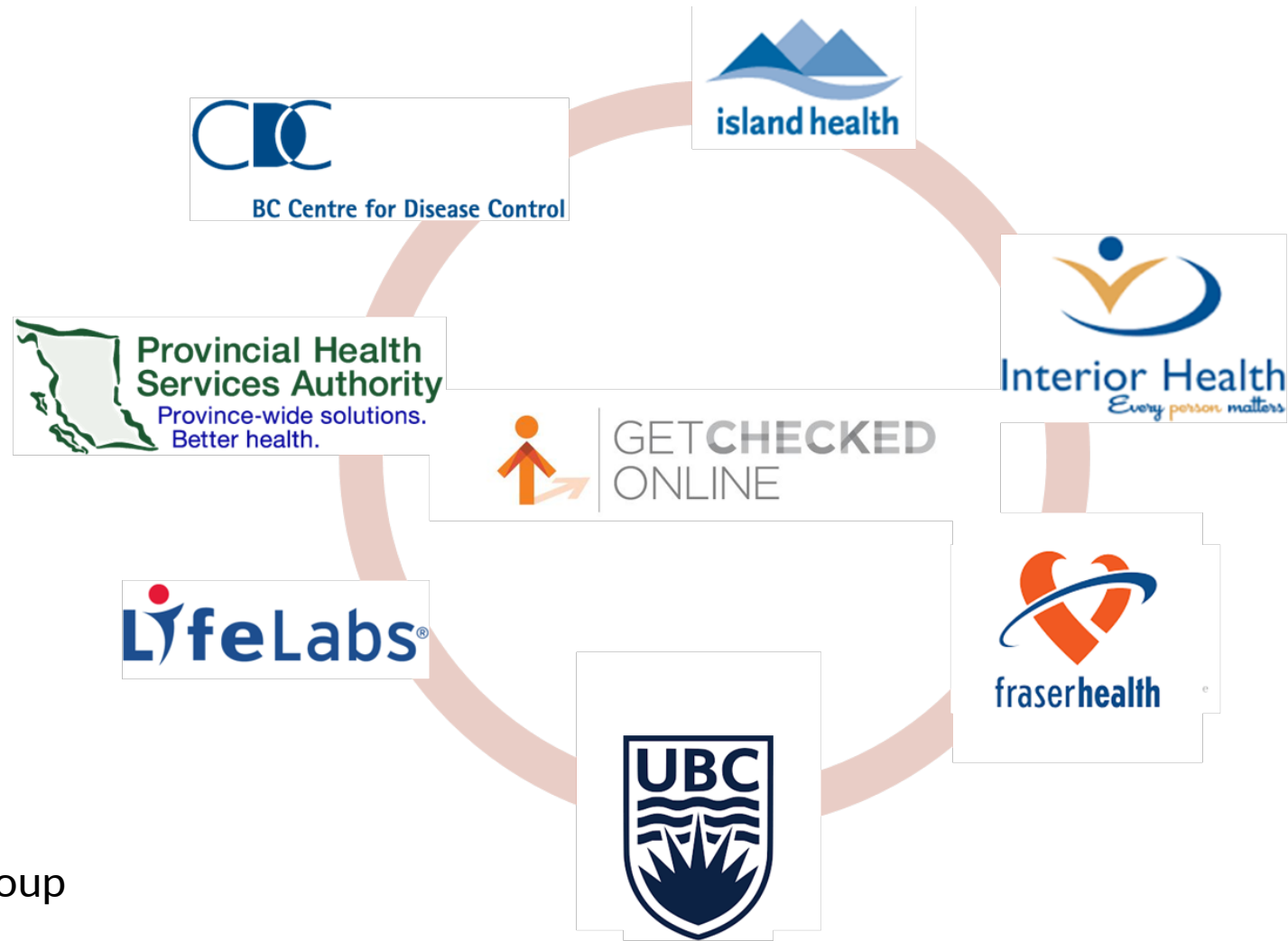
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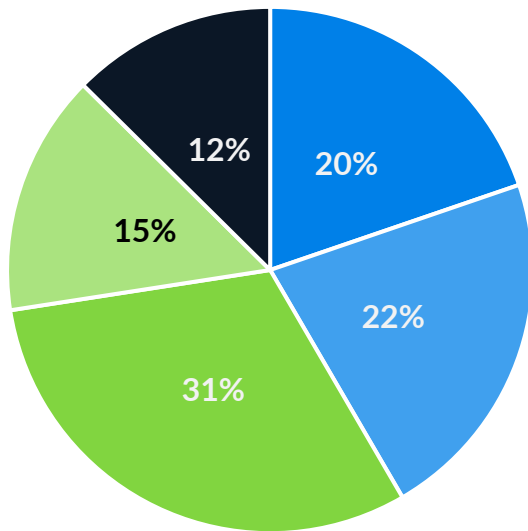


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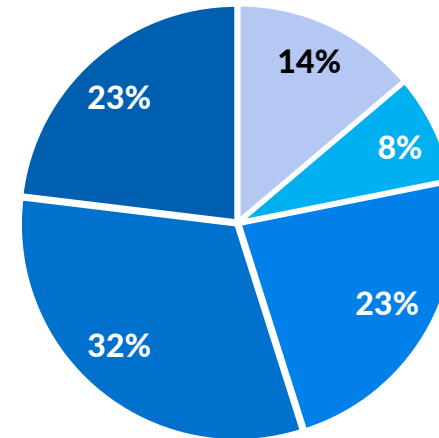
Description of the sample

Age



- 24 years or less
- 25-29 years
- 30-39 years
- 40 years or more
- Prefer not to say/Don't know

Health authority



- Fraser
- Island
- Interior/Northern
- Vancouver
- Prefer not to say/Don't know



Description of the sample

