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Acceptability and usability of a digital tool for prompting syphilis testing in general practice

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BACKGROUND

In Australia, infectious syphilis notifications increased 2.7-fold during 2012-2021 (n=5570 in 2021). Most were transmitted via male-to-male sex but increased >5-fold for women, 68 congenital syphilis cases were recorded.¹ Timely diagnosis and management are crucial to reducing transmission and harms. Digital tools in the electronic medical record (EMR) may prompt syphilis testing.

We explored the useability and acceptability of digital tool for prompting syphilis testing in Australian general practice.

METHODS

We co-designed a syphilis module (FHT-syp) in an existing software [Future Health Today (FHT)], that was first developed for chronic disease. FHT applies algorithms to EMR data to identify at-risk patients who can be targeted for testing or care.² FHT-syp identifies i) currently pregnant women, and ii) people recently tested for STI or HIV but not syphilis, and, prompts syphilis testing via pop-up recommendations and links to clinical guidelines and patient information. We first tested FHT-syp in a simulated general practice environment, then implemented it in 52 general practices. Semi-structured interviews were conducted with general practitioners (GPs) (n=9) and practice nurses (PNs) (n=3) as end-users to explore FHT-syp acceptability and useability. The theoretical framework of acceptability (TFA)³ guided our analysis. Preliminary results are provided.

RESULTS

Of 12 interviewees, 75% (n=9) had used FHT before interacting with FHT-syp [a little (n=4), moderate (n=2), a lot (n=3)]. Only one had engaged with FHT-syp in their clinical work and others interacted with it for the interview. Key findings are shown by TFA construct (Table 1) and example quotations.

Table 1: TFA construct and key finding

Affective: How users felt about FHT-syp	Users viewed a syphilis testing prompt as useful and liked that it directly linked to current guidelines and printable patient factsheets.
Burden: Effort to engage with FHT-syp	New and experienced users found FHT-syp simple to engage with but may not discuss syphilis testing due to the patient agenda and time constraints.
Ethicality: Extent FHT-syp fits with user values	Pregnant women and people recently tested for other STIs were relevant for syphilis testing prompts. Testing recalls must be managed carefully to avoid harm (eg. patient with undisclosed pregnancy termination to a partner).
Perceived effectiveness: Extent FHT-syp achieved its objective	FHT-syp alerted some users of STI guideline updates, leading to changed practice to include syphilis with all STI testing. Many were unsure about prompting repeat test in pregnancy due to uncertainty about defining high risk. Much antenatal care occurs out of general practice, EMR data for the prompt maybe unreliable.
Coherence: Knowledge of how FHT-syp works	Some users thought prompts should occur for risk groups (eg. men who have sex with men) or real time with another STI test order.
Self efficacy: Confidence to perform behaviour	Prompts gave users authority to discuss syphilis testing or to ask patients to return at another time for testing.
Opportunity costs: Costs to engage with FHT-syp	Interacting with FHT could reduce engagement with the patient.

I'm a huge fan of FHT... In regards to syphilis, I think, for an area that I'm not overtly familiar with off the top of my head, it's relatively easy to navigate. (PN_8)

"it's highlighted the change in the guidelines. It's maybe not so influential for that individual patient at that individual moment. But if it's a long-term thing that's been embedded into my learning, then I think that is actually a really good thing." (GP_9)



You haveall sorts of vulnerabilities about chasing up patients in in the STI and reproductive field. So we just have to be, yeah, mindful. (GP_2)

I think the concept of having that as a recommendation gives doctors the authority and also support to recommend testing." (GP_1)

CONCLUSION

A digital tool for prompting syphilis testing was useable and acceptable to new and experienced FHT end-users. Linkage to STI guidelines facilitated end-users to be abreast of updated guidelines and to alter routine STI testing practices. Enhancements will focus on communicating high risk in pregnancy.

References: 1. King J, et al. HIV, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2022. The Kirby Institute, UNSW Sydney. 2. Hunter B, et al. Future Health Today: codesign of an electronic chronic disease quality improvement tool for use in general practice using a service design approach. *BMJ open*. 2020;10:e040228. 3. Sekhon *et al*. Development of a theory-informed questionnaire to assess the acceptability of healthcare interventions. *BMC Health Services Research*. 2022. doi.org/10.1186/s12913-022-07577-3

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