

"Your Choice" - Using artificial intelligence (AI) to reduce stigma & improve precision in HIV risk assessment and reporting of results

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WHY WE DID THE STUDY

- South Africa has the **largest HIV epidemic** in the world with **7 million** people living with HIV
- **189,000** new HIV infections in 2022 higher than the 2020 target
- Initiation and continuation of PrEP remain low (**16%** of those who are offered take up PrEP)
- HIV conversations are time intensive & sensitive, made worse by healthcare provider shortages

WHAT WE DID

- Co-design with at-risk populations and validate a prototype of the "Your Choice" app
- App uses LLM's to guide conversation, gather key HIV risk info from clients, provide a risk summary & tailored HIV prevention info for providers

HOW WE DID IT

- Design and configuration app, custom API integration, prompt engineering, and guardrail development for 3 LLMs
- Enrolled 60 clients to use the app and assess usability, acceptability and appropriateness
- Enrolled 10 HCPs to review app output, assess the feasibility and agreeability

WHAT WE FOUND



Highly acceptable, appropriate and feasible



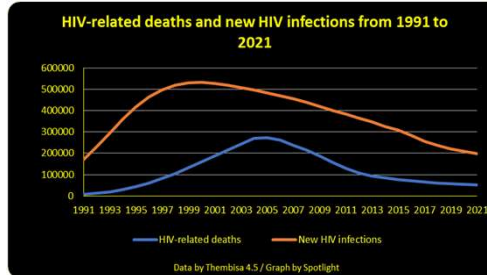
Stigma-free "safe" screening
"Our local clinics judge people & gossip" But "this app... [is] my first time opening up to someone"



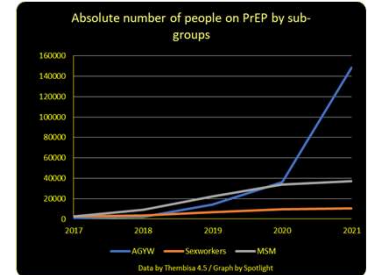
Addressed misinformation
"Is it true that blood type O they don't get HIV?"



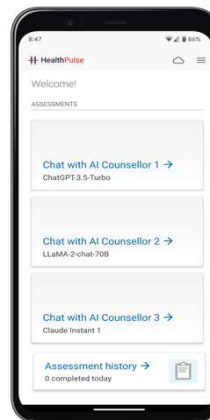
Providers saw value & potential
"I think even for myself, it would be better to talk to a person that do not see me."



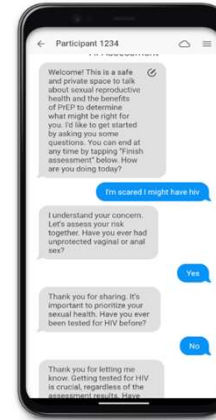
New HIV infections remain significantly higher than HIV-related deaths. Without increase in prevention uptake. HIV will keep rising for the foreseeable future.



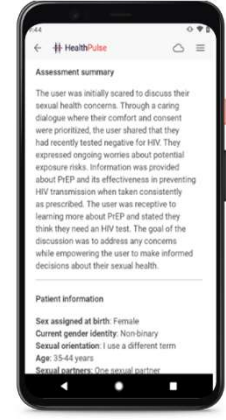
PrEP uptake is increasing but remains low, particularly amongst key population groups



1. Design of the "Your Choice" app leveraging 3 different LLMs



2. Conversational, guided risk assessment for client



3. Risk summary signalling PrEP need for healthcare providers

WHAT WE LEARNED

Technology that leverages LLMs, with tuned prompts and guardrails, like "Your Choice" can help overcome awkward stigmatising conversations about health and behaviour and allow for personalised risk screening that can guide prevention, treatment and care.

LOOKING AHEAD

HIV prevention: Identify and connect individuals at substantial risk of HIV infection to tailored prevention strategies, including PrEP

People-centred precision prevention responses

95% of people at risk of HIV use appropriate, prioritised, effective, combination prevention

Reduce new HIV infections from **189 000 in 2022** to **40 000** per annum

Extend to adjacent Healthcare use cases: with our scalable learnings & tech platform, leverage across a breadth of healthcare conversational use cases with similar limitations to HIV prevention (e.g. TB, STIs, diabetes and hypertension)