Acceptability and feasibility of a urine-based tenofovir adherence assay in Kenya

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Kenneth Ngure[1], Phelix Okello[2], Vallery Ogello[2], Peter Mogere[2], Stephen Gakuo[2], Deepalika Chakravarty[3], Charlene Biwott[2], Purba Chatterjee[3], Jennifer Velloza[3], Nelly Mugo[2], Monica Gandhi[3]

[1]School of Public Health, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya, [2]Partners in Health Research and Development, Center for Clinical Research, Kenya Medical Research Institute, Nairobi, Kenya, [3] Department of Medicine, University of California, San Francisco (UCSF), USA .

PUMA

BACKGROUND

- Objective measures of oral pre-exposure prophylaxis (PrEP) adherence, especially point of care (POC) measures that enable real-time assessment, intervention and feedback, have the potential to improve adherence.
- Our team previously developed and validated a novel urine-based POC measure of adherence.

OBJECTIVE

Our study aimed to determine whether this urine assay for real-time monitoring of PrEP adherence is acceptable and feasible among women taking PrEP, and health care providers.

METHODS

- We conducted semi-structured in-depth interviews with 20 women on PrEP enrolled in the POC assay arm of the PUMA trial and their 8 providers in Thika, Kenya.
- PUMA trial: NCT03935464, evaluating the impact of implementing POC urine tenofovir testing and providing real-time feedback on long-term PrEP adherence).
- Interviews were conducted after the 12-month study follow-up period.
- Interview guides explored acceptability, feasibility, and perceived benefits of, and concerns about POC urine adherence testing for PrEP among participants and providers.
- We analyzed transcripts using rapid qualitative analysis approaches.

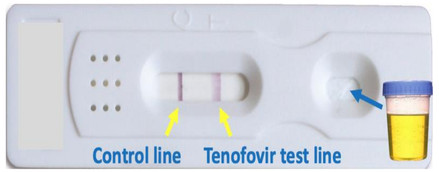


Figure 1: Interpretation of POC Urine TFV Assay

RESULTS

- Median age
  - ✓ Women on PrEP 24 year(IQR 23-36)
  - ✓ Health Providers 33 years (IQR 31-38)
- Most participants reported the POC urine assay improves PrEP adherence since they always wanted to receive positive results.

I used to forget taking medication but since they brought this thing of testing (urine assay kit), at least I do not forget, I take the medication daily, since I know I have to be tested ***(IDI: 24-year-old woman)***

- Participants reported less worry of acquiring HIV due to positive urine assay test results.

*Another advantage is that even if you have sex with someone you suspect because you have taken those drugs and you are tested, so even if you don't trust the person if you take the drugs, you cannot be infected (****IDI: 21-year-old woman****)*

- Providers reported real-time feedback enables counselling tailored to individual needs "evidence-based counselling
- Providers reported that the test would be more feasible if the test kits were widely available and marketed for clinical use

*You are able to discuss with the participants about adherence in real-time it has made things easy because they (clients) are even honest because they will tell you that "I haven't taken my drugs because I didn't think that I was at risk" (****KII: Study Counsellor****)*

- Providers reported the test would be more feasible if the test kits were widely available and marketed for clinical use
- Women liked that the POC test was clinic-based due to subsequent counseling and interpretation of results aided by clinic providers.

At home no one will counsel you, but at the clinic at least you will get advice from the doctors ***(IDI: 25-year-old woman)***

- Participants reported embarrassment associated with providing urine sample.
- Providers reported concerns that the kit not measuring long-term adherence may affect retention of clients with poor adherence.
- Providers and participants reported the test was initially confusing to interpret since it is the opposite of other rapid tests (HIV and Pregnancy tests).

*During the introduction of this kit, it was a bit challenging but after understanding the principle and how it works, with time, it was easy to interpret the result (****KII: Study Clinician****)*

Real-time monitoring/feedback via the POC assay is acceptable and feasible among adherence-challenged women on PrEP in Kenya.

CONCLUSIONS

- Our findings suggest that the POC urine TFV adherence test is highly acceptable and feasible for women on PrEP and their providers.
- Future studies should evaluate the impact of this novel test on adherence patterns over time in diverse populations.

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Contact: kngure@jkuat.ac.ke

UCSF University of California San Francisco

KENYA MEDICAL RESEARCH INSTITUTE KEMRI

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