Acceptability of an mHealth intervention to promote the use of pre-exposure prophylaxis among individuals at increased risk of HIV. The case of the *Jichunge* smartphone app in Dar es Salaam, Tanzania.

Abstract

Background: Reducing HIV infection rates among at-risk populations is more likely to contribute to achieving the 2030 goal of ending the epidemic. Countries in sub-Saharan Africa, including Tanzania, have started rolling out pre-exposure prophylaxis (PrEP), but adherence to the daily pills poses a challenge. Evidence indicates that mHealth is a promising solution for promoting uptake, retention, and adherence to PrEP. However, evaluation data of its implementation in Africa settings are scarce. This study aimed at assessing acceptability and initial use of mHealth in promoting PrEP use among female sex workers (FSW) and men who have sex with men (MSM) in Dar es Salaam, Tanzania.

Methods: FSW and MSM residing in Dar es Salaam who owned smartphones and were eligible for PrEP were recruited using respondent-driven sampling and provided with the Jichunge, a smartphone-based application designed to promote adherence to PrEP and retention in PrEP services. The app offers users information about HIV and PrEP, reminds them to take their daily pill, allows them to consult a doctor and peer educator, and includes an online forum where may engage in discussions with other PrEP users.

Results: A total of 885 participants (470 FSW and 415 MSM) with a median age of 26 and 21 years, respectively, were recruited. Most (559; 63.2%) opened the app and registered pill-taking (523; 59.1%) at least once. About a third of the participants accessed the app's PrEP and HIV editorial contents (348; 39.3%) and participated in the discussion forum (277; 31.3%). A total of 172(19.4%) consulted a doctor or peer educator via the app. FSW were significantly more likely

than MSM to open the app (FSW:74%; MSM: 50.8%; p<0.001), register daily pill use (FSW:71.7%; MSM: 44.8%; p<0.001), access editorial contents (FSW:47.0%; MSM: 30.6%; p<0.001), and engage in the discussion forum (FSW:34.3%; MSM: 27.9%; p=0.044). Online consultation was not statistically significant different between the two populations (FSW:20.1%; MSM: 18.1%; p=0.336).

Conclusion: The use of different services of Jichunge was significantly high. This suggests that mHealth is acceptable and can be a valuable platform to promote the use of PrEP and other services among HIV at-risk populations in Tanzania.