EFFECTIVENESS OF HIV PRE-EXPOSURE PROPHYLAXIS AMONG FEMALE SEX WORKERS IN RWANDA

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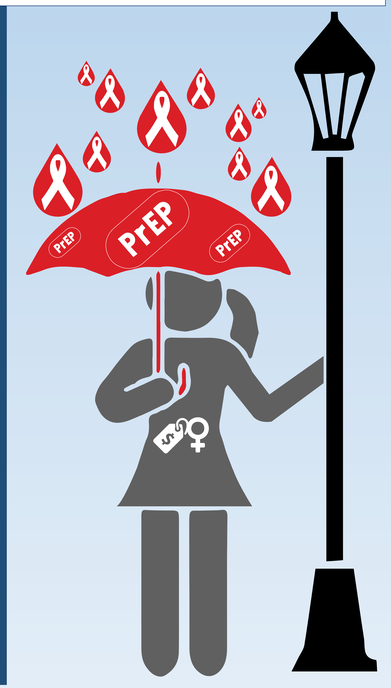
BACKGROUND

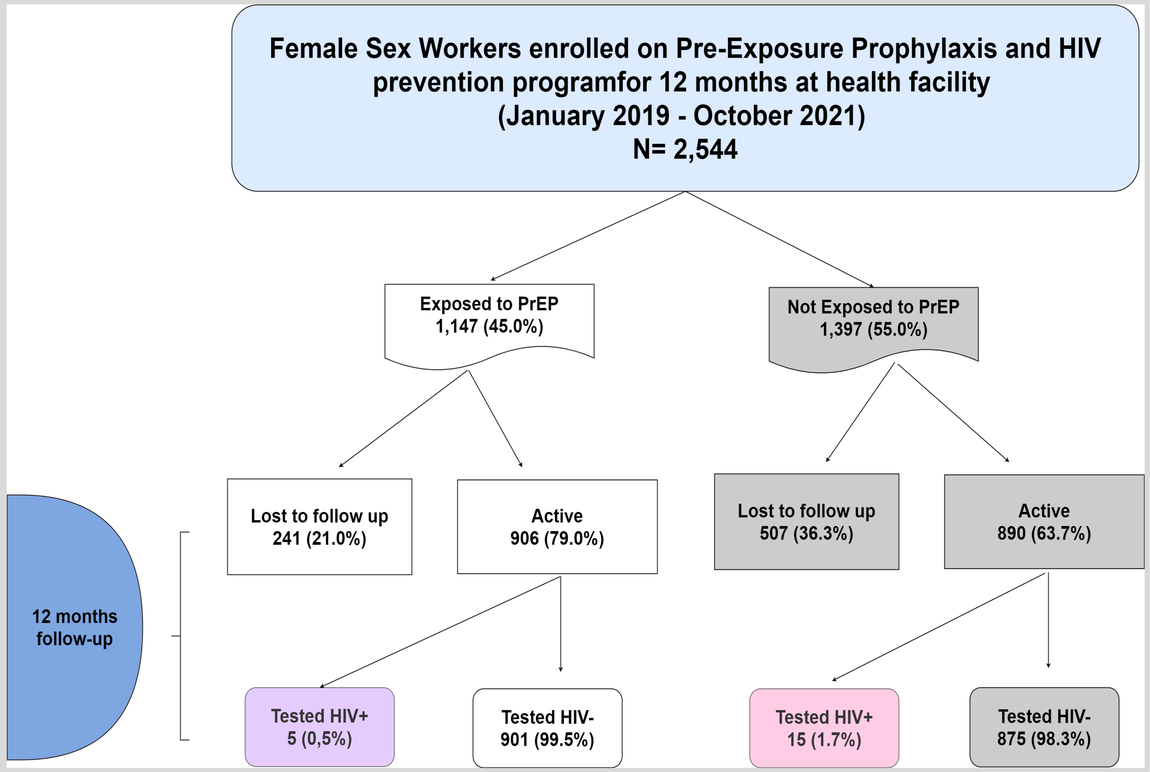
Recent epidemiological analyses showed that the Rwandan HIV epidemic is mixed, with pockets of high HIV prevalence in specific high-risk populations such as Female sex workers, contributing to up to 46% of all new HIV infections. WHO Guidelines in 2015 recommend using tenofovir-based Pre-Exposure Prophylaxis (PrEP) in individuals at substantial risk of HIV, such as FSWs, as part of prevention programs. We aimed to evaluate the effects of the provision of PrEP to FSWs within a health program in urban settings of Rwanda.

METHODS

This is a retrospective cohort study of HIV-negative female sex workers who have been exposed or not exposed to PrEP since 2019 in 22 out of 59 health facilities in the city of Kigali. We included eligible HIV-negative FSWs aged 18 years and older who consented to take PrEP for life (exposed) and compared them to those who did not consent to take PrEP (unexposed). Data were extracted in a CSV format for analysis from an anonymised electronic database. We assessed with a logistic regression model the risk of HIV seroconversion at twelve months of follow-up after weighting by inverse probability treatment weighting using a propensity score to control for confounding and reduce imbalance across different treatments.

"We estimated **69%** lower risk of HIV infection among FSW actively followed-up at 12 months' participation in the PrEP program compared to participation in the pre-existing prevention program (adjusted odds ratio 0.31, 95% confidence interval:0.11-0.87)"





RESULTS

From January 2019 to October 2021; 2,544 HIV-negative FSW were followed-up in PrEP providing facilities. The majority of FSW 51.9% (1,322/2,544) was aged 18-29 years, 63.0% (1,604/2,544) lived alone and 73% (1,856/2,544) had only attended basic school. In total, 45.1% (1,147/2,544) of FSW participated in the PrEP program while 54.9% (1,397/2,544) were not.

At 12 months of follow-up 78.9% (906/1,147) and 63.7% (890/1,397) of FSW were retained in PrEP and in the HIV prevention program, respectively. At 12 months' follow-up, 0.56% (5/906) of FSW in the PrEP program and 1.69% (15/890) of FSW in program without PrEP became HIV-positive. We estimated 69% lower risk of HIV infection among FSW actively followed-up at 12 months' participation in the PrEP program compared to participation in the pre-existing prevention program (adjusted odds ratio 0.31, 95% confidence interval :0.11-0.87)

CONCLUSIONS

In this pilot study incidence of HIV infection during a short time follow-up of 12 months was lower in FSW who were retained in the PrEP program compared to FSW who were ineligible or did not consent to participate. The long-acting PrEP should solve the lower retention on PrEP.

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