

Improving HIV Clinical Outcomes Among Female Sex Workers in Rwanda: A Study of Trends and Influential Factors

Authors: Deo Mutambuka¹, Dr. Gilbert Biraro², Dr. Gallican Nshogoza Rwibasira², Yvonne Delphine Nsaba Uwera³, Jean Berchmans Tugirimana¹

¹ Rwanda Network of People Living with HIV/AIDS (RRP+); ² Rwanda Biomedical Center ; ³University of Rwanda

INTRODUCTION

In Rwanda, HIV is still a serious health concern, particularly for important groups like female sex workers (FSWs). Infection rates among FSWs remain higher than the national norm, despite a decline in HIV prevalence from 51% in 2010 to 35.5% in 2019. In order to guide focused initiatives and enhance care, this study examines changes in HIV prevalence and variables associated with clinical poor outcomes among FSWs.

METHODS

A cross-sectional analysis was conducted of data from the 2023 Integrated Biological and Behavioral Surveillance survey among FSWs in Rwanda. The study population included FSWs aged 15 years and above and was conducted using respondent-driven sampling methodology from 2019-2023

A multivariable logistic regression was used to identify characteristics associated with viral load non-suppression define as (>1000 copies /ml) in FSW living with HIV. Variables evaluated included behavioral, demographic, and geographic characteristics of FSW. Analyses were done in Stata 17 software and associations were evaluated by

RESULTS

In total, 2542 FSW participated in the 2023 IBBS and 2,542 participants were included in the regression analysis. HIV prevalence among FSW was estimated to be 32.5%. In the multivariate logistic regression analysis, viral non-suppression among FSW was associated with province of residence (Kigali City), being married, unawareness of HIV-positive status, having 3-5 regular paying partners in the last 30 days, and more than 10 years of selling sex (Table 1).

Variable	AOR	95% Confidence Interval
Living in Kigali City	0.2	0.04-0.7
Married	11	1.6-72.9
Unaware of HIV status	4.6	2.4-8.9
3-5 regular partners in last 30 days	0.4	0.1-0.9
> 10 years selling sex	0.4	0.1-0.9

Table 1. Variables associated with viral non-suppression in FSW living with HIV

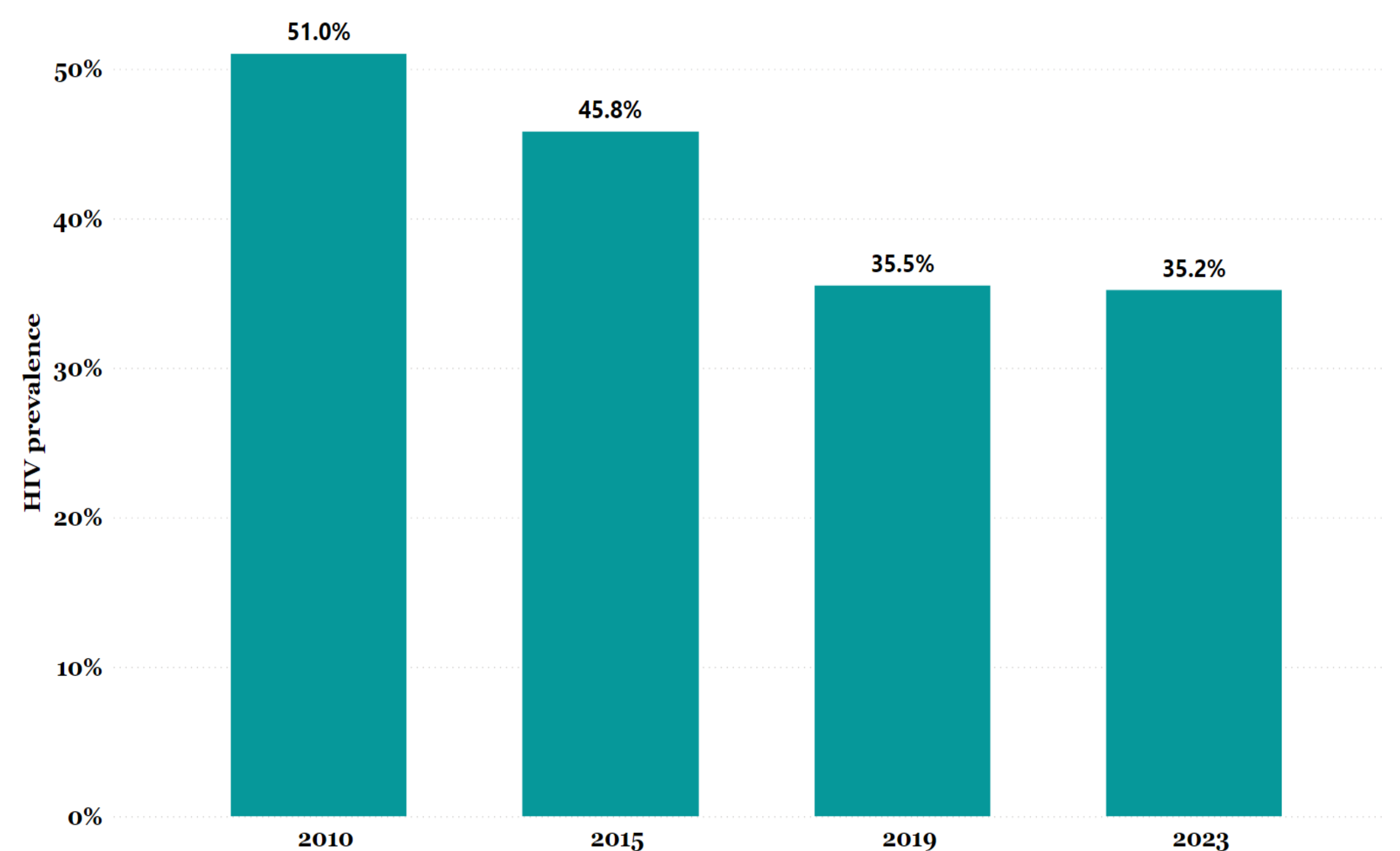


Figure 1. HIV prevalence trends among FSW in Rwanda

DISCUSSION

HIV prevalence in FSW is declining, but is still high (Figure 1). Key predictors of viral load non-suppression among FSW included geographical location, marital status, and knowing one's status, in addition to working patterns. FSWs based in Kigali, married FSWs, and those who did not know their HIV-positive status had a heightened risk of non-suppression. Long-term sex work and higher frequencies of partners were associated with increased risk. Specific targeted interventions are required to address the factors highlighted by these findings.

RECOMMENDATIONS

Key drivers of viral load non-suppression among FSWs require focused interventions. Recommendations to improve clinical outcomes and strengthen HIV care for this vulnerable population include: 1) Enhance urban-based interventions, particularly in Kigali; 2) Customize intervention programs for married FSWs, emphasizing the role of adherence and support; 3) Scale of the HIV testing program to improve awareness of HIV status for early detection and timely treatment; and 4) Develop individualized care plans for FSWs who have been involved in sex work for a long time and have multiple regular partners to optimize treatment adherence