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Recent HIV Testing among General and Key Populations in Rural Uganda: A Population-Based Study

Holly Nishimura[1], Ruth Young[1], Joseph G. Rosen[1], Nora S. West[1], Joseph Ssekasanvu[2], Robert Ssekubugu[3], Fred Nalugoda[3] Gertrude Nakigozi[3], Steve Reynolds[3], Larry W. Chang[2], David Serwadda[3], Joseph Kagaayi[3], M. Kate Grabowski[2]

[1]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; [2]Johns Hopkins School of Medicine, Baltimore, MD;
[3]Rakai Health Sciences Program, Rakai, Uganda

BACKGROUND

- Frequent HIV testing is necessary to identify individuals with incident HIV infection and rapidly enroll them into HIV care and treatment programs.
- Guidelines emphasize regular HIV testing based on risk of HIV exposure; however, most studies in sub-Saharan Africa measure the lifetime HIV testing prevalence rather than the duration of time elapsed since the last HIV test.
- As a result, it is difficult to ascertain the coverage of HIV testing as metrics poorly reflect the goals of testing strategies and may overestimate reach.
- We assessed prevalence and correlates of past-year HIV testing for men and women and by membership in a key or vulnerable population group using data from a population-based study in south-central Uganda.

METHODS

Setting: Rakai District (population ~518,000) is mostly rural and located in south-central Uganda.

Study Design: Cross-sectional

Data source: This study included 5,935 men and 6,619 women ages 15-49 participating in the Rakai Community Cohort Study (RCCS), a population-based open cohort of individuals residing in Rakai District, Uganda, between 2016 and 2018.

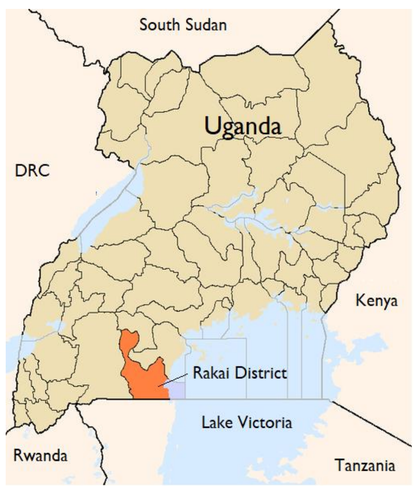


Figure 1. Map of Rakai District, Uganda

Measures:

- Recent HIV-testing was a self-reported measure and defined as HIV testing in the <u>past 12-months</u>
- Key and vulnerable populations: fisherfolk, motorcycle taxis drivers, uniformed personnel, clients of female sex workers, female sex workers, pregnant women

Statistical Analysis:

- Demographic and behavioral correlates of recent testing were identified a priori and assessed for association with recent HIV testing using multivariable Poisson regression with robust standard errors. Measures of association were reported as adjusted prevalence ratios (aPR) with 95% confidence intervals (CI). Analyses were stratified by sex.

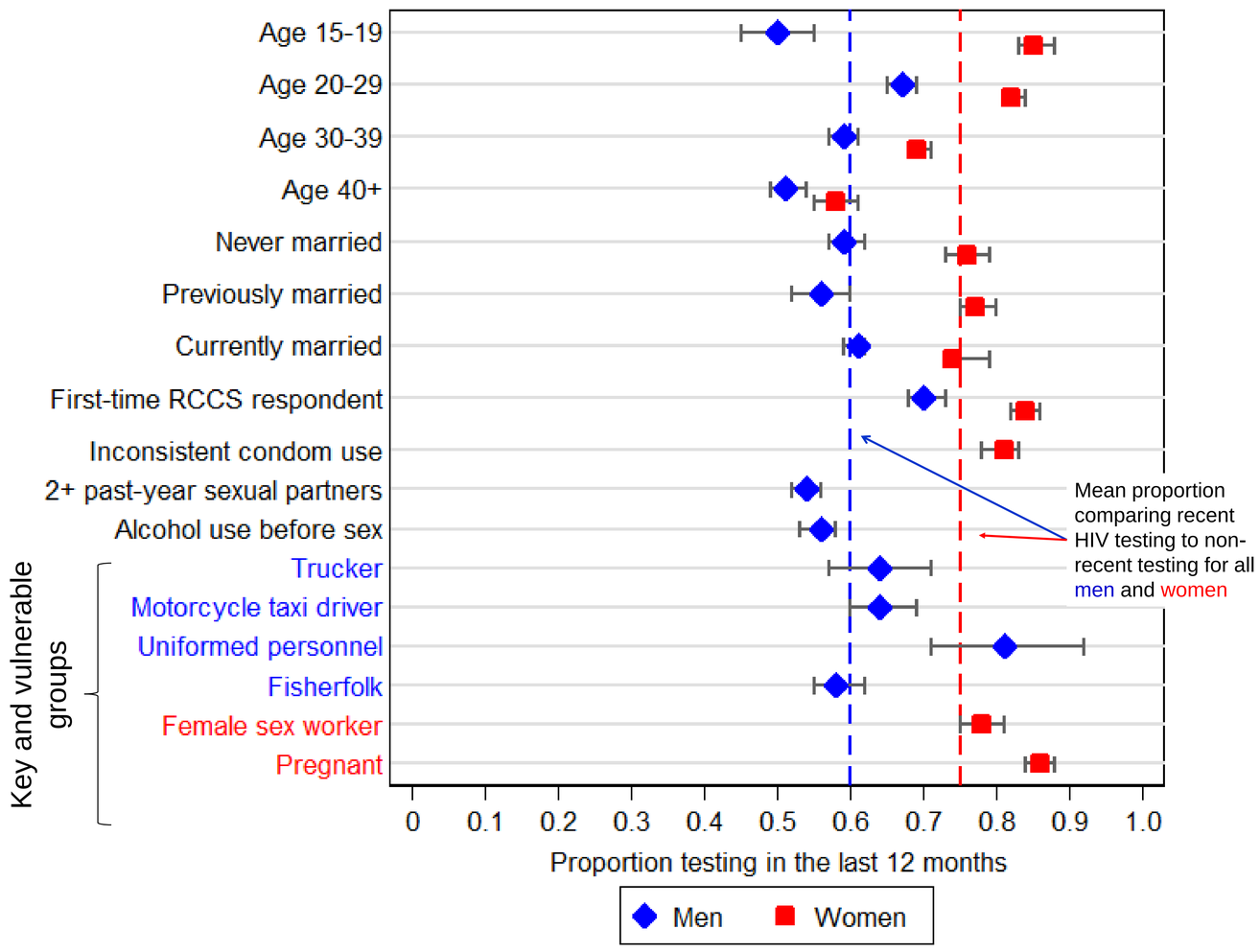
RESULTS

- 5,935 men and 6,619 women were included in the analysis. 74.6% of women and 59.9% of men reported recent HIV testing.
- About 30% of both men (n=1,812) and women (n=1,957) were members of key or vulnerable populations of whom 61% of men and 80.4% of women reported recent testing.

Recent HIV testing and incident HIV

- For men, 54.9% of incident cases were among those who tested for HIV in the past 12 months. For women, 65.3% of incident cases were among those who had tested in the past 12 months. The relationship between recent HIV testing and incident HIV was not statistically significant.

Figure 2. Prevalence and 95% confidence intervals for recent HIV testing by sex and selected sociodemographic and behavioral characteristics



Sociodemographic and behavioral correlates of recent HIV testing by sex

Men

- Overall, recent HIV testing was more likely in men aged 20-29 versus other age groups, unmarried versus currently married men, and first-time RCCS participants versus previous RCCS participants. Men who reported alcohol use before sex versus no reported alcohol use or multiple versus a single past-year sexual relationship were less likely to report recent testing.
- Men in 3 key or vulnerable groups (truckers, motorcycle taxi drivers, and military/uniformed personnel) were more likely to report recent HIV testing compared to men who did not report membership in those respective groups. Fisherfolk were less likely to have tested recently compared non-fisherfolk.

Women

- Overall, recent HIV testing was more likely in women who were first-time RCCS participants versus previous RCCS participant and women who reported inconsistent condom use with one or more past-year sexual partners versus women who reported consistent condom use. Recent testing was less likely if women were aged 40-45 versus aged 20-29 or previously married versus currently married.
- Women in key or vulnerable groups (sex workers and currently pregnant women) compared to women who did not report membership in those respective groups were more likely to report recent HIV testing.

CONCLUSIONS

- High rates of recent HIV testing, particularly among women and members of key or vulnerable populations, in this rural population-based sample, suggest universal testing targets are within reach.
- Data were collected prior to changes in PEPFAR testing guidelines focusing on targeting HIV testing based on risk. Further study is needed to determine the extent to which individuals are testing after possible exposure to HIV.
- Additional outreach efforts, through differentiated testing modalities (i.e., self-testing, community-based approaches), could support targeted testing services to reach men, fisherfolk, and older adults.

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Contact: Holly Nishimura
holly.nishimura@jhu.edu

Johns Hopkins Bloomberg School of Public Health · Johns Hopkins School of Medicine · Center for AIDS Research, Johns Hopkins University · Rakai Health Sciences Program, Improved Health Through Research · CDC Centers for Disease Control and Prevention · NIH NIAID