Migration, HIV-infection, and access to combination HIV prevention in Rakai District, Uganda


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Background

- Migration has long been associated with HIV spread in Sub-Saharan Africa (SSA); however, the extent to which migrants contribute to total HIV burden at the local level and whether these mobile populations are accessing HIV treatment and prevention services is largely unknown.

- Here, we assess migration patterns and their association with local HIV burden in 38 communities in Rakai District, Uganda.

Methods

- We surveyed 22,901 individuals aged 15-49 residing in 38 communities in rural Rakai District, Uganda using data from the Rakai Community Cohort Study (RCCS), a open population-based survey of HIV incidence, behavior, and health care utilization.

- Data for this study were collected in the two most recent RCCS surveys, RCCS R15 and R16, conducted between 2011-2015.

- The 38 communities were classified into 3 types: agrarian communities (57.7% HIV prevalence ~12%), trading communities (57.6% HIV prevalence ~17%), and Lake Victoria fishing landing sites (n=4, HIV prevalence ~38%) (Fig 1A).

- Migration was estimated, and the predominant geographic sources of HIV burden identified (Figs 1B-C).

- Most in-migrants or out-migrants originated from within Rakai District and the neighboring districts of Masaka, Kampala, and Tanzania (Figs 5).

- Interpolated map of HIV prevalence (Fig 2).

- Migration was more common in trading and fishing communities (Fig 3A).

- The proportions of total HIV burden and newly detected cases due to in-migration were assessed and related to community type (agrarian, trading, or fishing) (Fig 4).

- The interplay between assortative sexual mixing and level of migration was estimated (Fig 6).

- There is substantial migration at the community-level in rural Uganda.

- While migration networks are geographically widespread, most movements are relatively local (9-63%).

- In-migrants account for ~25% of total HIV burden and ~60% of newly identified cases in communities.

- HIV prevalence in migrating women is significantly higher than in non-migrating women, a disparity not observed in men.

- HIV-infected migrants tend to move to areas with higher HIV prevalence (Figs 6).

- HIV-infected migrants are significantly less likely to self-report ART use.

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