

Titre

Quantifying the impact of internal migration on the risk of acquiring HIV in Namibia

Encadrant

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Description

Background:

Twenty-six million people are living with HIV in sub-Saharan Africa; epidemics are widely dispersed, due to high levels of mobility. However, global elimination strategies do not consider mobility. In a previous work, we focused on the impact of circular mobility at short time scales (e.g., daily, seasonal commuting for work). We used mobility network from mobile phone data. We coupled it to geographically-resolved HIV prevalence data, and built spatial networks of flows of HIV risk. We found that mobility generated 40% of the total risk of acquiring HIV.

REF: Valdano et al. (2022) Using mobile phone data to reveal risk flow networks underlying the HIV epidemic in Namibia. *Nat Comm* **12**:2837
<https://www.nature.com/articles/s41467-021-23051-w>

Project:

This project aims at understanding the role of a completely different type of mobility: migration. We will use internal migration data from the Namibian census, and build migration networks. We will couple the migration networks to data on HIV prevalence, treatment coverage, and rates of viral suppression at high spatial resolution. We will quantify the effect of migration in driving and reshaping the risk of acquiring HIV. We will investigate whether these new risk networks we will create may help inform the deployment of resources for HIV prevention and treatment.