

Behaviour, not mobility, is a risk factor for HIV



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Many different types of migration exist and people are mobile for many different reasons. Moreover, people who are mobile are intrinsically different to those who are not. Therefore a high HIV prevalence in a particular mobile population does not necessarily mean that mobility itself increases susceptibility to infection.

In *The Lancet HIV*, Nuala McGrath and colleagues¹ assess the association between HIV and migration by use of survey data from all residents in the Africa Centre Demographic Surveillance Site in rural KwaZulu-Natal, South Africa. No differences in HIV prevalence were identified between migrants and non-migrants of either sex. However, in residents (but not non-residents), HIV prevalence was slightly higher in those who reported migrating at least once in the previous 2 years than in those who did not: adjusted odds ratio 1.18, 95% CI 1.10–1.26, for women; 1.19, 1.07–1.33, for men. Interpretation of this finding is difficult. The fact that HIV prevalence was increased in migrants, but only resident migrants, suggests that this increased HIV prevalence might be partly or wholly caused by people who are HIV positive returning to their homes to receive treatment or because they are sick.

Palk and Blower² recently reported a somewhat different association between mobility and HIV in Lesotho. They noted that men (but not women) who travelled frequently (ie, made five or more trips in the past year) had a borderline significantly increased risk of HIV infection compared with men who did not travel (adjusted odds ratio 1.31, 95% CI 1.01–1.68).

These studies assessed the association between migration and HIV at an individual level. They assess whether migration can increase an individual's risk of HIV infection. Studies of the relation between migration intensity and HIV prevalence at an ecological level are needed to clarify whether migration plays a part in the substantial variation in prevalence of HIV between different populations worldwide. Findings from a previous study³ showed that only four of 13 measures of migration intensity were related to national peak HIV prevalence. The association was negative in all four cases. Most countries with generalised HIV epidemics had lower than average prevalence of migration. South Africa, with its high population movement and HIV prevalence, is an exception. However in two

nationally representative surveys³ from South Africa, no associations were reported at an individual level between various measures of migration and HIV infection. Neither were associations identified at an ecological level between migration and HIV prevalence stratified by ethnic group.³ Taken together, the individual-level evidence suggests that migration might still be implicated in increased risk of HIV infection for some individuals. The population-level evidence, however, shows that differences in migration intensity are not the key determinants of differences in HIV prevalence.

How then might migration increase an individual's risk of HIV? In McGrath and colleagues' study,¹ the prevalence of some markers of multiple sexual partners were higher in migrants than in non-migrants for women, but not men. This finding suggests that migration is causally related to increased prevalence of sexual risk behaviour for women. However, confounding by non-cohabiting partners is possible. Women who spent more than ten nights away from home in the past 6 months were more likely to report multiple partners, casual partners, and concurrency. That women who have partners in addition to their cohabiting partners are more likely to spend more nights away from home is unsurprising. However more nights spent away from home did not necessarily cause increased risk behaviour. In the study from Lesotho,² men and women who travelled (irrespective of the number of trips they made) were more likely to have concurrent partners than were those who did not travel: odds increased with frequency of travel.

Mobility might have a greater effect on antiretroviral adherence than on HIV transmission. High mobility might lead to difficulties in obtaining and using antiretroviral therapy, which could lead to treatment interruptions, poor outcomes, and generation and transmission of antiretroviral-resistant strains of HIV. This possibility is especially important in view of the implementation of large-scale treatment-as-prevention interventions in KwaZulu-Natal and elsewhere.⁴

*Robert Colebunders, Chris Kenyon

Institute of Tropical Medicine, Antwerp 2000, Belgium (RC, CK);
and University of Antwerp, Antwerp, Belgium (RC)
bcoleb@itg.be

We declare no competing interests.

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