

Demographic and Socioeconomic Patterns of HIV/AIDS Prevalence in Africa

Despite an accumulation of evidence about patterns of HIV prevalence in Africa, many misconceptions persist

The demographic and socioeconomic patterns of the prevalence and incidence of HIV/AIDS in Sub-Saharan Africa should shape programs and policies to combat the epidemic. With new and expanded data sets, researchers are increasingly able to both measure HIV status and collect detailed socioeconomic data in population-based samples. This enables more-detailed analyses than were previously feasible. A new paper by Beegle and de Walque explores the methods and unusual evidence on the link between demographic factors, socioeconomic status, and HIV/AIDS.

Having direct measures of HIV status is important because single risk measures may not be consistent with actual HIV status. For example, clinical trials on the efficacy of circumcision in preventing HIV show that circumcised men are less likely to contract HIV. Yet in some countries the opposite association is observed: in Cameroon, Ethiopia, and Malawi HIV rates are higher or at least not lower among circumcised men. In Kenya HIV prevalence is higher among men who used a condom the last time they had paid sex than among men who did not. These results do not contradict the scientific evidence of lower HIV risk with use of condoms and circumcision, but reflect the fact that other behaviors can counteract the protection they afford.

Understanding HIV patterns is complicated by the connections between covariates. In national samples of Ethiopian women and Kenyan men there is a positive correlation between education and HIV status. But this correlation disappears in urban and rural subgroups because HIV infection in Africa is higher in urban areas, where the education levels of adults are also higher. Consequently, how one interprets the link between education and HIV status depends critically

on how the correlation is modeled.

To what extent is poverty to blame for the AIDS epidemic? Globally, the countries hardest hit by the AIDS epidemic are poor. In Sub-Saharan Africa, however, some of the hardest hit countries are relatively richer. Despite the lack of evidence, poverty continues to be associated with the spread of the epidemic. HIV/AIDS, however, is contracted very differently from other prevalent contagious diseases. In fact, it is associated with behaviors and characteristics often associated with higher income (lower poverty) and education: more concurrent partners, geographic mobility, and urbanization.

Early marriage has often been cited as an HIV risk factor for young women. Yet, overall, data drawn from several national surveys do not support the hypothesis that early marriage increases the HIV risk for women. At the same time, with rare exception in the countries studied, women married at younger ages are not less likely to contract HIV.

A pervasive, if unstated, belief is that males are largely responsible for spreading the infection among married and cohabiting couples. Evidence on discordant couples (couples in which only one partner is HIV-positive) yields two findings that challenge conventional notions about HIV transmission. First, in at least two-thirds of HIV-positive couples (couples with at least one HIV-positive partner), only one partner is HIV-positive. Second, in many such couples only the woman is HIV-positive. HIV prevention policies should take into account the fact that partners who are not yet HIV-positive are an important target group and that women are almost as likely to transmit the infection to their uninfected partners as men are.

Several important messages emerge. First, it is important to bring a critical eye to empirical evidence on the link between socioeconomic status and HIV, especially in relation to definitions, sample design, and empirical methods. Sexual behaviors that may be viewed as proximate determinants

of HIV status are not necessarily correlated with actual HIV status. For example, risky sexual behaviors with low-risk partners may not increase the likelihood of contracting HIV. The details of sample and methods matter in interpreting results. A positive education-HIV correlation may mask the urban-rural pattern of the disease, rather than indicate an actual association between schooling and prevalence.

Second, there are gaps in knowledge and thus a need to continue to improve the evidence base. The introduction and scaling up of antiretroviral therapy (ART) in most African countries profoundly affect the dynamics of the epidemic and have the potential to modify the links between demographic and socioeconomic variables and HIV. If ART is more easily available for specific groups (such as wealthier or urban populations), HIV prevalence may shift, controlling for changes in incidence. By reducing AIDS-related mortality, ART modifies the link between HIV prevalence and incidence, reinforcing the need for accurate measures of incidence, potentially the more appropriate indicator of the current state of the epidemic.

Finally, even with better data sources it will still be difficult to generalize results across countries. Moreover, even within countries patterns across regions and groups can be starkly different. As shown by the results presented here, few consistent and significant patterns of prevalence by socioeconomic and demographic status are evident.

Kathleen Beegle and Damien de Walque. 2009. "Demographic and Socioeconomic Patterns of HIV/AIDS Prevalence in Africa." Policy Research Working Paper 5076, World Bank, Washington, DC.