The AIDS Epidemic and Its Economic Roots

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Accessibility
Economists have a vital role to play in helping public health officials and policymakers understand the AIDS epidemic and design efficient policies to limit its impact. AIDS is first and foremost a public health problem, but it is a problem with deep economic roots. In Africa, an estimated 24.5 million people were living with HIV at the end of 2005, approximately 60% of all HIV cases in the world. Many explanations for the steady incidence rate of HIV have been proposed, such as gender, presence of other STDs, drug injections and circumcision. Public health experts have long promised that effective education campaigns are lacking in much of the developing world, but once these materialize, officials predict that they will bring down the incidence rates and the prevalence of HIV in Africa.

Uganda’s first AIDS control program was set up in 1987 to educate the public about how to avoid becoming infected with HIV. The program promoted the ABC approach (abstain, be faithful, use condoms), ensured the safety of the blood supply and started HIV surveillance. The ABC education campaign is widely associated with bringing adult HIV prevalence down from around 15% in the early 1990s to around 5% in 2001. The country is considered by many public health officials as having implemented a well-timed and successful public campaign.

Likewise, a variety of other countries have enacted policies to counter the rise in the HIV prevalence, such as a greater emphasis on safe sexual behaviors. However, much of this discussion has occurred ad hoc. Extorting individuals in most African countries to engage in safe sexual behaviors seems to have little effect on incidence rates. In theory, it seems reasonable that people would adopt safer sexual practices, including monogamy, in response to HIV risks. Why is it that this prediction fails to hold true in practice?
The Economic Framework and Behavior Change in Africa

Recent AIDS studies point to limited changes in sexual behavior in Africa. Since around 1985 a number of studies were undertaken, in the United States, Australia and other developed countries, to determine the reasons why gay men adapted to the risks in developed countries, to determine the reasons why gay men adapted to the risks. Individuals with higher income and longer expected life span are more likely to respond to HIV risk by lowering their number of sexual partners.

One explanation of the limited behavior change in Africa relative to the United States lies in the fact that US gay men featured in the study were wealthier and had longer life expectancy than individuals studied in Africa. Individuals who expect to be wealthier in the future have more incentive to invest in their future health and hence derive more happiness from the increase in wealth. This wealth, in turn, allows them to enjoy other activities and goods whose benefits outweigh those of unsafe sex.

It turns out that an increase in life expectancy for an individual is a stronger predictor of fertility and sexual behavior patterns than individual income. Empirical studies have found a positive causal link between an increase in average life expectancy at birth and investments in schooling and health.

### Determinants of Behavior

Empirical results suggest a strong causal link between income, life expectancy, and behavior change. All three factors explain differences in the behavioral response between HIV risk groups in Africa and in the United States. Individuals with higher income and longer expected life span are more likely to respond to HIV risk by lowering their number of sexual partners.

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Determine the magnitude of behavioral differences across groups, the study uses data on gay men between 1984 and 1999 and estimates future utility losses for a given individual: the expected dollar value of the future income lost from HIV infection. The study finds that a $10,000 increase in the “price” of a sexual partner in Africa decreased the probability of having multiple sexual partners by 3.2 percentage points. Among men in the United States, this decrease was around 3.5 percentage points. These results suggest a similar level of responsiveness for these two groups. However, the major difference between the groups is that the price per partner is much higher in the United States than in Africa. This suggests that if Africans were as rich and had life expectancies as long as people in the United States, they might experience similar behavior change.

As the data suggests, individuals who live in areas with high malaria prevalence and lower life expectancies have lower response to HIV education campaigns.
**Community Health Policy Review**

**STUDENT CONTRIBUTIONS**

In many sub-Saharan African countries, financial incentives to change sexual behavior in response to HIV risks is very low. Policymakers must recognize that the issue is not entirely due to cultural differences. There is potential for significant reductions in HIV transmission in Africa through the treatment of other sexually transmitted diseases. Such an approach would cost around $3.50 per year per life saved. Treating AIDS itself costs around $500 per year. There are reasons to provide AIDS treatment in Africa, but cost-effectiveness is not one of them.

The second difference lies in the in-surmountable difference in life expectancy due to mortality associated with other non-HIV infectious diseases widely prevalent in the African continent. Life expectancy in much of the continent is already low not only due to HIV but also because of high prevalence of respiratory and other infectious diseases. What does this imply for behavior change? If your life expectancy is only 40-50 years due to environmental and disease factors, you might be more willing to take a 3% risk associated with having unprotected sex with one more sexual partner than a guy man in America who otherwise expects to live almost 80 years. Stated simply, if life expectancy in Africa were the same as it is in the United States, we would see the same change in sexual behavior and the AIDS epidemic would begin to slow down. But this hypothetical is not supported by the difference in the life expectancies without HIV in the two continents.

Non-HIV mortality risks are the areas that health policymakers, economists, international organizations, nongovernmental organizations, and others concerned with the social and economic implications of the epidemic need to address most urgently. They involve complex issues that include matters of health, sociology, psychology, the economics of the epidemic, and the AIDS epidemic would begin to slow down. But this hypothetical is not supported by the difference in the life expectancies without HIV in the two continents.

As governments and NGOs consider interventions like drug treatment, which change the cost of infection, the possibility of behavior change as a function of life expectancy and future income should be considered. Targeting peoples with higher income and higher life expectancy within these countries are the strategies most likely to elicit the desired behavioral response that governments and development organizations would like to see.

Furthermore, because mortality trends and poverty remain fundamental barriers to HIV prevention in Africa, interventions designed to decrease mortality risks, such as malaria, could even promote HIV prevention more than interventions targeting HIV prevention directly.

**References**


4. Ibid.


