

Sexual Behavior and HIV in Malawi

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ABSTRACT

We propose a rational theory of sexual behavior, where people explicitly take the risk of HIV infection into account. Risky sex has two margins: the use of condoms and engaging in extra-marital affairs. The model exhibits important general equilibrium effects since an increase in the overall prevalence rate raises the infection probability from a one-time sexual encounter which in turn affects the demand for sex. To capture the spread of HIV through generations, we embed the model of sex choice into an OLG framework. The model also allows for HIV transmission through marriage. A spousal age gap together with a gender-specific desire for extra-marital affairs allows us to match HIV-age profiles for men and women. We use data from the Malawi Diffusion and Cultural Identity Project (MDCIP) to calibrate the model. In particular, micro data on sexual behavior allows us to infer the degree of heterogeneity in promiscuity. Similarly, data on condom use is used to calibrate the utility differential between protected and unprotected sex. We then use the model to quantitatively analyze several policies intended to curb HIV. Improved access to anti-retroviral drugs lowers the transmission risk per sexual encounter, but at the same time allows sick people to live longer and be more sexually active and thereby infect more people. Moreover, if sex becomes less risky, people will respond by engaging in more sexual activity. The calibrated version of our model allows us to assess this trade-off quantitatively. We also analyze a decrease in the cost (or availability) of condoms. Finally, we find that income subsidies for the old that make people value longevity more, and thereby reduce risky sexual activity, may substantially impact HIV prevalence.