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BY ELIZABETH GAY

## INTERVENTIONS TO ADDRESS THE ECONOMIC CAUSES AND CONSEQUENCES OF HIV/AIDS

### Overview

Ending the AIDS epidemic by 2030 is an ambitious and globally important goal.<sup>1</sup> At the end of 2014, there were 37 million people in the world living with HIV/AIDS, the leading cause of death among women of reproductive age.<sup>2</sup> Ending HIV/AIDS requires strategic investments in programs and policies proven to work.

For more than 30 years, researchers have sought to identify the most effective and cost-effective interventions to prevent and treat HIV/AIDS. Evidence generated over the past 10 years from the PopPov Research Initiative and other findings from sub-Saharan Africa provide insights on the connections between HIV and household and national economics, and on what interventions might contribute to ending the epidemic. This brief shares research on the role of financial and educational interventions to reduce new HIV infections.

### Ending HIV/AIDS Is an Economic Imperative

HIV/AIDS is connected to poor health and premature death, and can have economic consequences for individuals and households. A growing body of evidence shows that the HIV/AIDS epidemic may negatively affect a nation's economic growth and development.<sup>3</sup>

HIV/AIDS-related deaths present a challenge for countries seeking economic growth. A study investigating the impact of HIV/AIDS found that the epidemic reduced per capita income in African countries by 12 percent.<sup>4</sup> Over time, AIDS increases premature deaths among young adults and lowers population size, contributing to a reduction in the number of working-age people who can help grow a nation's economy. In Malawi, the children of HIV-positive mothers were nearly three times more likely to die before age 5 than children of HIV-negative mothers. Researchers also found that mortality was higher among children whose mothers died from HIV/AIDS.<sup>5</sup> As a result of HIV-related mortality, a country's economy may miss out on

### About the Population and Poverty Research Initiative

The William and Flora Hewlett Foundation's Population and Poverty (PopPov) Research Initiative, in partnership with other funders, has supported a global group of researchers looking at how population dynamics affect economic outcomes. Research funded through the PopPov Initiative sheds light on pathways through which fertility, health, and population affect economic growth, providing insights and an evidence base relevant to achieving the Sustainable Development Goals. Findings show that investing in women's health, education, and empowerment improves economic well-being for individuals and households, and contributes to economic growth.

the potential contributions of children who could have grown to become skilled workers.

Evidence indicates that HIV/AIDS can reduce life expectancy by 15 to 20 years, thereby reducing the number of potential workers and raising the number of dependents (children and older nonworking adults) per worker by up to 25 percent in countries with a high prevalence of HIV.<sup>6</sup> This has important implications for economic development and the ability of countries to harness a demographic dividend. The demographic dividend refers to accelerated economic growth that may occur when the population has fewer dependents than working-age people. This opportunity for economic growth must also be supported by investments in health, education, and human capital.

Fewer workers and more dependents limit national productivity and the opportunity for economic growth. One study found that the HIV/AIDS epidemic can delay industrialization of an agricultural economy by more than a century.<sup>7</sup> Another study in South Africa found that HIV is associated with unemployment. Being HIV-positive increased the risk of unemployment by approximately 7 percent

and the risk was higher for those with lower educational attainment. For people who did not complete high school, being HIV-positive increased the risk of unemployment by approximately 11 percent.<sup>8</sup>

The increased availability of antiretroviral therapy (ART) for HIV/AIDS has minimized the economic impact of the epidemic. With improved access to effective treatment, people may live longer, healthy, and productive lives.<sup>9</sup> Lower HIV-related morbidity and mortality keeps many households from economic loss.<sup>10</sup> Indeed, increases in life expectancy as a result of ART have been connected to increased labor supply and greater investments in human capital.<sup>11</sup> Evidence published in 2015 further suggests that ART provision for HIV-infected individuals can have positive effects that spill over into the community, such as improved employment levels among uninfected community members.<sup>12</sup>

Based on the body of evidence, ending HIV/AIDS would not only mean better health for individuals but better financial security for households and economic growth for nations as well.

## Economic Interventions Can Alleviate the Epidemic

Unstable individual and household income or finances may contribute to an increased risk of HIV infection. While the data on a causal link between poverty and HIV infection are mixed, data on economic shocks suggest that economic insecurity at the household level may have some role in the spread of HIV.<sup>13</sup>

Individuals may respond to financial constraints through earlier marriage, sexual debut at a younger age, and transactional sex. For example, young women whose households are financially strained may enter sexual relationships with older partners, initiate sexual activity earlier, or marry earlier as they seek greater financial security from partners. A study of young adults in South Africa found that community-level poverty is associated with beginning sexual activity at a younger age and that an economic shock, such as a death or loss of employment and income in the household, increases the likelihood of sexual debut.<sup>14</sup>

A 2015 analysis of data from 19 sub-Saharan African countries found that in agricultural communities that are sensitive to rainfall, a drought—and resulting sudden, unanticipated loss of resources—increases HIV infection by 11 percent. This effect is found in areas with existing high HIV prevalence, suggesting that shocks increase the spread of HIV in communities that are already affected.<sup>15</sup> Changes in sexual behavior in response to resulting financial insecurity may be one explanation for the increase in HIV infection.

The effect of shocks is less prevalent in urban areas and areas less sensitive to rainfall. The analysis further shows that an economic shock at the national level is associated with increased rates of HIV infection.<sup>16</sup>

Groups that are vulnerable to sudden economic shocks could benefit from interventions that enhance their financial security. It is possible that cash transfer programs and interventions that increase educational attainment could reduce the risk of HIV infection.

## Cash Transfers Show Promise

Cash transfer programs have been studied as a possible intervention for a variety of health issues, with positive results. Studies on the use of conditional and unconditional cash transfers for HIV prevention also show promise. In particular, a growing body of evidence indicates that cash incentives can increase uptake of health services and decrease risky sexual behaviors, key factors for HIV prevention.<sup>17</sup>

In Malawi, a cash transfer program was found to decrease the prevalence of HIV among girls ages 13 to 22. The conditional cash transfer program provided monthly payments to a girl and her guardians if, in the past month, she attended school 80 percent of the time school was scheduled. The unconditional cash transfer program provided monthly payments to a girl and her guardian if they showed up at the transfer point. Girls in both the conditional and unconditional cash transfer programs reported having partners closer to their own age and lower frequency of sexual activity than those girls in the control group.<sup>18</sup> Having partners closer to their own age is interpreted as a positive sign that young women are not choosing and depending on older partners to provide financial support.

A cash transfer intervention in rural Tanzania showed some promise for combating HIV through its demonstrated effects on sexually transmitted infections (STIs). Two groups were evaluated in the study: one that was eligible to receive \$30 over the course of the one-year study period and another that was eligible to receive up to \$60 over the course of the one-year study period. Both amounts are considered substantial to households because the average annual income among study participants was \$250. In order to receive the funds, study participants must have completed STI testing every four months and had negative results. Findings show a reduction in STI prevalence in the group that was eligible for \$60 over one year and no change in the group that could only receive \$30 over one year.<sup>19</sup>

These studies contribute to a growing body of evidence showing that cash transfers, by addressing economic

drivers of risky sexual behavior, might be able to reduce the transmission of HIV. More robust research could answer lingering questions about the most effective cash transfer models for HIV prevention, the duration of any intervention's effects, and the groups that could benefit the most from a cash transfer intervention.

## Invest in Education to Create Change: Botswana Case Study

A 2015 analysis of education policy reform in Botswana indicates that increasing secondary school attainment reduces the risk of HIV infection.

In January 1996, the government of Botswana implemented a policy change that required 10 years of schooling in order for students to have completed junior secondary school, instead of nine. In Botswana, the completion of junior secondary school is required for many vocational training programs. Many young people also discontinue their schooling after completing junior secondary school. As a result of the policy change, the average years of schooling in Botswana increased by nearly one year.

The analysis compared cohorts of students affected by the policy change and those who were not affected and showed that each additional year of secondary school led to an 8-percentage-point reduction in the risk of HIV infection overall. For women, each additional year of secondary school led to a 12-percentage-point reduction in the risk of HIV infection; whereas for men, each additional year of secondary school reduced the risk of HIV infection by 5 percentage points (see figure).<sup>20</sup> These results are consistent with evidence from other countries on the benefits of secondary school in reducing HIV risk behaviors.<sup>21</sup>

The study authors suggest that these effects occur because grades 10 to 12 could be a critical point in a young person's life where sexual behavior patterns are formed.

Increasing educational attainment could help curb the HIV epidemic and benefit communities and society in other ways as well, such as reducing child mortality.<sup>22</sup> In particular, an educated, skilled, and healthy workforce is critical to a nation's economic growth and development.

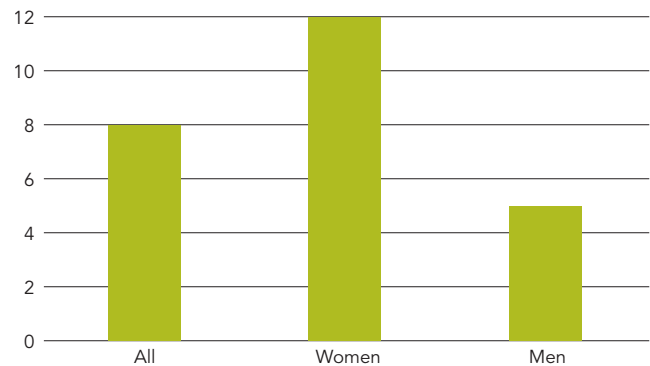
## Recommendations for Action

As global leaders strive to end HIV/AIDS by 2030, there will not be one single solution to the global epidemic. Ending it requires efforts on multiple fronts. While HIV prevention efforts and the provision of ARTs will continue to be critical, recent research shows the promise of interventions that address two important drivers of the epidemic: household economics and educational attainment.

### FIGURE

#### Women in Botswana Experience a Greater Reduction in HIV Risk With Each Additional Year of Secondary School Compared to Men.

Percentage Point Reduction in HIV Risk for Each Additional Year of Schooling by Gender, Botswana



**Sources:** Jan-Walter De Neve et al., "Length of Secondary Schooling and Risk of HIV Infection in Botswana: Evidence From a Natural Experiment," *Lancet* 3, no. 8 (2015): 470-77.

**Invest in cash transfer programs that reach young people.** Policymakers' investment in cash transfers could help curb the spread of HIV, especially among young people. Cash transfers can reduce risky sexual behaviors by meeting the financial needs of households and individuals.

**Implement policies that support increased secondary school attainment.** Increasing access to and completion of secondary school for young people can work to reduce their risk of HIV infection. The benefits of increased educational attainment extend beyond personal health to influence national economic growth.

**Identify programs and policies that help people weather economic shocks, especially in rural areas.** An economic shock can be devastating for households that are already financially insecure. In order to prevent people from turning to risky behaviors to meet their financial needs, it is important to identify policies or programs that support quick rebounds from economic shocks.

Policy change is critical to making progress on the global goal to end the HIV/AIDS epidemic by 2030. Data show that addressing household economics and educational attainment in particular can save lives and influence economic outcomes at the household and national level.

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1875 Connecticut Ave., NW  
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