

POLICY BRIEFS ON

ECONOMIC IMPACT OF HIV



8.

INTERACTIONS BETWEEN HIV AND POVERTY

This brief forms part of a body of work on the Economics of HIV, funded by the Bill & Melinda Gates Foundation (INV-002382). The authors acknowledge the contributions of the participants of the ‘Economics of HIV’ meeting in Cascais, Portugal, in September 2018 for general direction on this work, and thank participants of the ‘Distributional Impact of HIV’ webinar in March 2021 for comments on this brief. Additionally, the brief was reviewed in-depth by Arjun Vasan from the US Treasury and Charles Birungi from UNAIDS. We are grateful for the excellent work of James Baer in proofreading the briefs, and Carla Hauptfleisch in designing them. The findings and conclusions contained within this brief are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation or of the institutions the authors represent.

Recommended citation:

Markus Haacker, Gesine Meyer-Rath: Interactions Between HIV and Poverty. Policy brief #8 of series “Economic Impact of HIV”. Johannesburg, June 2021.

8.

INTERACTIONS BETWEEN HIV AND POVERTY

KEY POINTS

- Poverty can increase vulnerability to HIV, but so does social opportunity. Overall, the picture on socio-economic correlates of HIV is not consistent across countries.
- HIV contributes to poverty through income loss and the increased costs of accessing care. But some employment losses among people affected by HIV result in employment gains by other individuals, so the macroeconomic impact is smaller than the direct effects on households affected by HIV.
- Poverty appears to act as a barrier to treatment access. Treatment adherence tends to be higher for patients with higher socio-economic status.

The link between HIV, poverty and other socio-economic factors has played an important role in positioning HIV as a major development challenge. For example, the 2011 United Nations "Political Declaration on HIV and AIDS" declared that the spread of HIV/AIDS was often both a cause and consequence of poverty (UN General Assembly, 2011). Such concerns have been supported by data on the impacts of HIV on the household level, and data on socio-economic

determinants of vulnerability to HIV, as well as the association across countries between HIV and factors like poverty, income inequality or gender inequality. However, there is no consistent picture regarding the link between HIV and socio-economic factors within or across countries, and HIV has not obviously contributed to poverty or inequality in the population overall.

Poverty and inequality as contributors to HIV

HIV prevalence is correlated with some types of inequality (income, gender) across countries. Empirical analyses based on national survey data suggest links between poverty and some HIV risk behaviour, but the evidence on the socio-economic gradient of HIV is uneven overall.

Concerns about the links between HIV and poverty played an important role in positioning HIV as a global development challenge at the beginning of the global HIV response. For example, UNAIDS (1998) highlighted the fact that "89% of people with HIV live in sub-Saharan Africa and the developing countries of Asia, which between them account for less than 10% of global gross national product".

This perception gave way to a more differentiated view. It was noted that at least across sub-Saharan Africa, HIV was concentrated in some of the most advanced countries (Halperin, 2001), and that HIV was more strongly associated with high rates of inequality (Piot et al., 2007).

These correlations are illustrated with more recent data across sub-Saharan Africa in Figures 8.1 and 8.2. HIV prevalence is indeed high in some of the most advanced countries in the region (Botswana, South Africa) where poverty rates tend to be lowest, and low in some of the least developed ones (Burundi, Liberia, Madagascar) with high rates of poverty. The association between HIV prevalence

and income inequality is even stronger – the eight countries with a Gini index exceeding 50 include the six countries with the highest rates of HIV prevalence anywhere. Interpreting the correlations between HIV prevalence on one hand, and poverty or inequality on the other, is not straightforward. First, the correlation is predominantly driven by five

geographically adjacent countries in Southern Africa (Botswana, Eswatini, Lesotho, Namibia and South Africa) with very high levels of HIV prevalence, and could reflect other factors specific to that region. Second, the correlations are not robust if additional variables like GDP per capita are included in a regression (Haacker, 2016).

Figure 8.1: HIV prevalence and poverty across sub-Saharan Africa

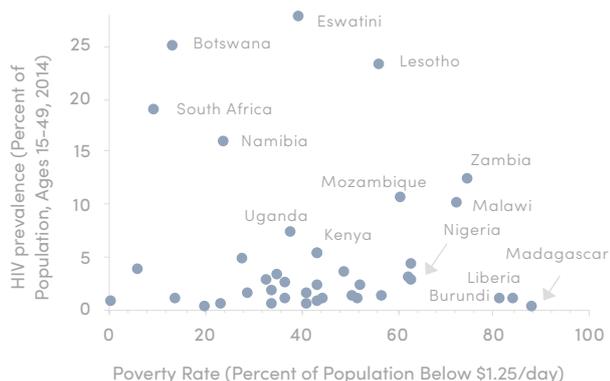
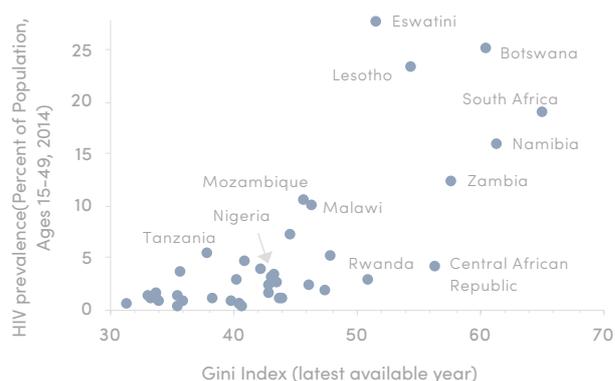


Figure 8.2: HIV prevalence and inequality across sub-Saharan Africa



Source: Haacker (2016)

Note: Figures show HIV prevalence for 2014 and the latest available year for estimates of poverty and inequality.

Because HIV is a sexually transmitted disease, and women are disproportionately affected, gender inequality is considered an important driver of HIV, “depriv[ing] women and girls of basic rights and opportunities and their ability to prevent HIV and access the services they need” (UNAIDS, 2020). One important driver of gender disparity in the impact of HIV is the higher risk for women of contracting HIV through vaginal sexual transmission. Another key factor – important especially for disparities in HIV prevalence at early ages – is the lower age at first sex for women (Sia et al., 2016). However, there is no clear link between HIV and summary measures of gender inequality (as measured by various indices with a focus on socio-economic aspects and participation) across countries – HIV prevalence tends to be lower in countries with higher levels of gender inequality (Kenyon & Buyze, 2015), and the association between HIV prevalence and gender inequality becomes statistically insignificant when other socio-economic variables are also considered (Kenyon & Buyze, 2015).

Data from Demographic and Health Surveys (DHS) offer an opportunity to assess socio-economic aspects of HIV both within and across countries (as estimates including an HIV component are available for numerous countries). According to two studies pooling a large number of such survey data (Hajizadeh et al., 2014; Gaumer et al., 2021), greater wealth and urban residence were associated with a higher probability of being HIV positive. Parkhurst (2010)

found that HIV prevalence tended to be higher in wealthier households in low-income countries, but not in middle-income countries. Magadi & Desta (2011) found that HIV prevalence was higher for women who had completed at least primary education. Effects of educational attainment on men were smaller and not significant. The link between education and HIV prevalence, though, may vary across countries (Fortson, 2008; Asiedu et al., 2012) and over time. In five out of seven countries studied by Hargreaves et al. (2015) where more than one DHS survey had been available, HIV prevalence among the population with secondary education declined relative to the population with no completed education, but this trend was not significant in a pooled regression.

Overall, these findings are consistent with a link between HIV and social opportunity, rather than a narrative on poverty and inequality as principal drivers of HIV. However, important gaps remain in our understanding of the socio-economic determinants of HIV. Some of the reviews discussed are more than five years old, and the underlying data are even older (especially considering that estimated HIV prevalence is a result of infections that may have occurred many years earlier). As a consequence, the data do not capture many of the changes which have occurred over the last 10 years, as populations have continued to adapt to HIV and treatment coverage has increased steeply.

HIV as a contributor to poverty

In addition to its health consequences, HIV poses an economic burden on households affected, and frequently is a cause of poverty. The aggregate effects of HIV on poverty rates and economic inequality, however, are less clear, as some such losses are offset by gains elsewhere, e.g., as other individuals take up employment lost by people affected by HIV.

The direct effects of HIV on household members and surviving dependents are compounded by its economic consequences. HIV results in income losses to those living with HIV through reduced productivity and loss of employment due to ill health (see Brief #6), and to household members who have to devote time to care and treatment. Costs of accessing treatment can be substantial, even when antiretroviral therapy is provided free of charge. The costs of accessing care for people receiving antiretroviral therapy have been estimated at 9 percent of average household income in South Africa (Cleary et al., 2013), and at about 5 percent of average household income in Malawi, where each clinic visit absorbed seven hours of a patient's time on average (Pinto et al., 2013). However, innovations to reduce supply-side costs of providing access to care (such as task-shifting and differentiated care, with less frequent interactions with health services for stable patients) also bring down these household costs of accessing care. HIV also negatively affected school attendance and nutritional status of children in affected households, because of reduced economic circumstances or – especially for older children – caregiving responsibilities (Alkenbrack Batteh et al., 2008; Heymann & Kidman, 2009). Treatment has been shown to be effective in reversing or preventing losses of

productivity and employment (Brief #6) and in mitigating the adverse effects on young dependents (Goldstein et al., 2010).

Deaths can further impoverish households through income losses (if the deceased has been an income earner) and funeral costs, which can amount to the equivalent of an annual income in some countries (e.g., South Africa; see Case et al., 2013). However, these effects dissipate over time as households recover or re-form. For Kenya, Beegle et al. (2008) estimate that household consumption per capita drops by 7 percent in the five years following a death, but that this effect subsequently becomes smaller and statistically insignificant. Other effects can be more persistent – orphanhood negatively affects child development and educational attainment, and consequently the economic prospects of children affected (Beegle et al., 2010).

To gauge the macroeconomic implications of these household-level effects, it is important to consider that not all the losses experienced by households affected by HIV are net losses from a macroeconomic perspective. For example, an employment loss by a person who dies or becomes too sick to work is often offset – from a macroeconomic perspective – by the gain of another individual who takes over the employment. Such effects operating through the labour market can offset much of the direct effects of HIV on incomes (Salinas & Haacker, 2006; Jefferis et al., 2008). In line with these findings based on economic modelling, high HIV prevalence has not been associated with increases in poverty or inequality (Figures 8.3 and 8.4).

Figure 8.3: HIV prevalence and changes in poverty

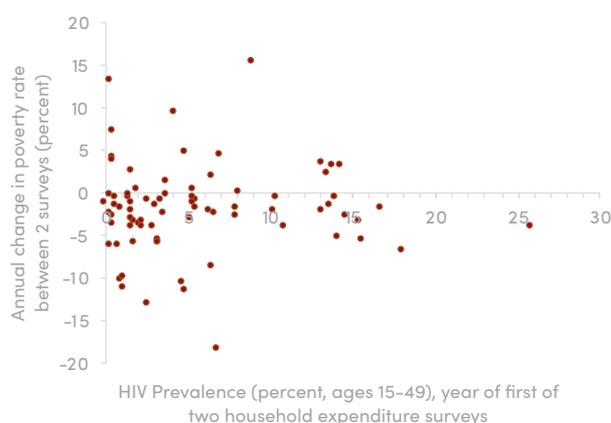
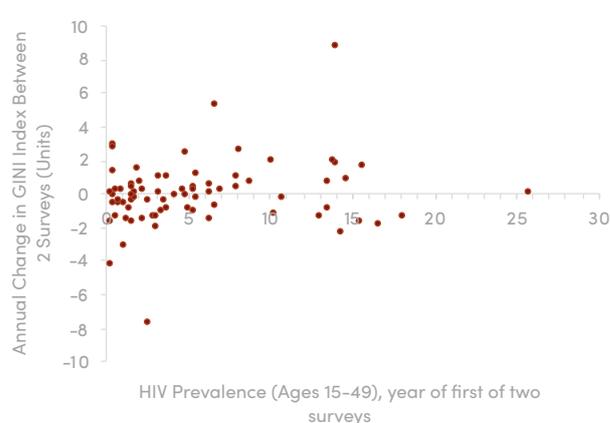


Figure 8.4: Changes in inequality and HIV prevalence



Source: Haacker (2016), using data from the World Bank's World Development Indicators (in turn based on national surveys) and HIV prevalence data from UNAIDS.

In summary, the adverse economic impacts on households affected by HIV are well documented, and effective mitigation requires tackling both the health and economic consequences. However, much of the economic losses of individuals affected by HIV are offset by gains elsewhere, so

that the aggregate economic effects of HIV on households are smaller than the direct effects. Judging from trends in poverty and inequality across countries, HIV appears to have had no noticeable impact on poverty rates or the degree of income inequality.

Poverty as a barrier to treatment access

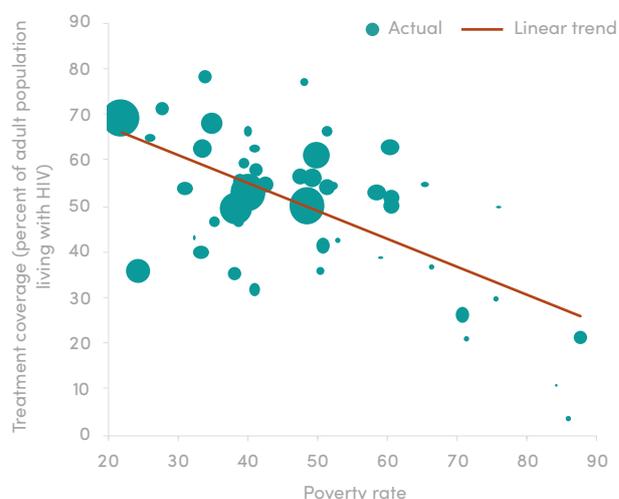
Although antiretroviral therapy is usually delivered free of charge, costs of accessing treatment and care can be substantial for affected households. The impact of poverty-related barriers in access is not well understood, although it could have important consequences for effective HIV control and impact mitigation.

The presence of socio-economic barriers to access to treatment is important for an economic assessment of the impacts of HIV, and for effective policies to combat the disease, for at least three reasons. First, differential access to treatment results in selective-mortality bias in cross-sectional surveys; data on the socio-economic gradient of HIV prevalence could therefore yield a misleading picture of the distribution of the burden. Second, if barriers to access to treatment mirror socio-economic disadvantages (e.g., poverty), poverty-related indicators at the national level could improve because of higher mortality among the poor, but mask a deterioration in the consequences of poverty. Third, understanding barriers to access and identifying underserved populations is important for designing effective policies to expand treatment access.

The evidence on economic barriers for households accessing HIV services is consistent with the (sparse) evidence on the socio-economic differences in treatment coverage and effectiveness. In South Africa, treatment access gradually expanded from “richer more urban regions where hospitals resided” to “clinics, which are [also] located in poorer and less densely populated regions” (Burger et al., 2017). Haacker & Birungi (2018) studied the determinants of treatment access across Kenyan counties and found that poverty is the statistically and substantially most important predictor of treatment coverage (Figure 8.5).

This picture is reinforced by evidence on treatment adherence – an important aspect of the effectiveness of treatment. A review by Peltzer & Pengpid (2013) across 25 low- and middle-income countries found that adherence is generally positively correlated with socio-economic status. This is especially true for income, for which 14 studies (out of 36) found a significant positive relationship, and only one study a negative one. A review by Heestermans et al. (2016) documents that cost barriers to treatment, poverty and food insecurity were important determinants of non-adherence.

Figure 8.5: Treatment coverage and poverty across Kenyan counties, 2015



Source: Haacker and Birungi (2018).

Notes: Size (area) of circles represents number of people living with HIV in respective county.

Discussion

In summary, the empirical evidence on the links between HIV, poverty and inequality is weak and inconsistent. The adverse impacts of HIV on affected households, including the economic repercussions and the risk of impoverishment, are well documented. However, poverty or inequality overall have not been associated with higher HIV prevalence, and high HIV prevalence has not resulted in higher rates of poverty or inequality. The absence of obvious aggregate effects, though, does not invalidate concerns about poverty- or gender-related risks of contracting HIV and

lack of choice, HIV as a cause of poverty, and the specific difficulties encountered by poor households in coping with the health and economic consequences of HIV. Even though some macroeconomic effects mitigate the aggregate effects of HIV on poverty, the economic consequences compound the direct health impacts with regard to the welfare of households affected by HIV, and exacerbate health-related economic risks, especially in the absence of universal health coverage.

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