JANUARY 2024

POLICY BRIEF

Financing the HIV/AIDS Response in Sub-Saharan Africa Considering Priority Populations:

Going the Last Mile: Progress, Challenges and Next Steps

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EXECUTIVE SUMMARY

- Last-mile HIV/AIDS treatment and prevention are a central challenge of national governments and international organizations, considering the strides made in the last two decades combined with a recent plateau in overall progress.
- Sustainable financing becomes more important every year as international funding streams from PEPFAR, the Global Fund, and high-income countries decrease and domestic funding becomes a more integral part of programming.
- Although Malawi, Kenya, and South Africa have vastly different economies, prevalence rates, and population sizes, each case highlights the need to engage local communities for efficient service delivery, especially for women and children in rural areas, and for young people facing stigma. Prioritizing localized approaches, such as community health workers or regional analyses can help these countries transition from donor dependency.
- Donor dependency introduces a level of instability and uncertainty that can hinder the production of local infrastructures that build resilience. The dominant reliance on external funders for research has resulted in a lack of centralized research and data collection processes. This has led to the oversight of local risk factors.
- To ensure sustainable and effective responses to HIV/AIDS, robust partnerships must strike a balance between embracing integrated health systems whilst still ensuring momentum is maintained for the HIV and AIDS initiative. This requires investment in health infrastructure, fiscal sustainability, and a strong emphasis on financial accountability.

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BACKGROUND

Substantial, Yet Slowed Progress

Over the past two decades, significant strides have been made in the global response against HIV/AIDS: 30 out of the 38 million people living with AIDS today are receiving life-saving treatment (UNAIDS, 2023). This progress has been strongest in Sub-Saharan Africa, a region disproportionately affected by the epidemic, with a strong decline in overall HIV prevalence and mortality rates. According to the 2023 UNAIDS Global Aids Update, substantial progress has been achieved in increasing access to antiretroviral therapy (ART), reducing new infections, and preventing mother-to-child transmission. Notably, increased access to HIV treatment resulted in 20.8 million AIDS-related deaths averted between 1996 and 2000, and vertical transmission programs have averted 3.4 million new infections in children since 2000 (PEPFAR, 2023). This comes as a result of the many partnerships across countries, communities, donors (including the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund), and the private sector. Considering Sustainable Development Goal 3.3 to end AIDS as a public health threat by 2030, it is evident that a new path has been forged towards achieving this goal.

Recent Plataeu and Remaining Challengeswith Priority Population

Although these efforts have been instrumental in reducing the global HIV/AIDS burden, there is strong, untapped potential for further improvements in HIV prevention. Particularly in many parts of Sub-Saharan Africa, extremely high risks of HIV infections leave cetain populations facing heightened vulnerability. To that end, as of 2022, around 58% of districts in Sub-Saharan Africa with a very high HIV incidence were not covered with dedicated prevention programs for adolescent girls and young women (UNAIDS, 2023). Moreover, antiretroviral therapy coverage for pregnant and breastfeeding women has leveled off over the last seven to eight years, in addition to a slowing decline in the number of new HIV infections in children (Figure 1). To prevent vertical transmission, the future HIV/AIDS response must pay special attention to children, women, and adolescents as priority populations. Beyond the burden of HIV/AIDS, prolonged structural factors such as gender inequalities, discrimination, and poverty stand in the way of many women and adolescent girls' economic and sexual autonomy, which are critical in supporting comprehensive HIV response. Therefore, addressing gender disparities and focusing on the unique needs of communities in the context of HIV prevention and treatment are imperative for sustained progress. In addition, this brief will emphasize recommendations on the development of tangible, tailored strategies and interventions for priority populations to compose the global HIV/AIDS response moving forward. This next phase of the global response to HIV/AIDS demands a targeted and comprehensive approach, ensuring that no one is left behind on the path to achieving the 2030 goals.

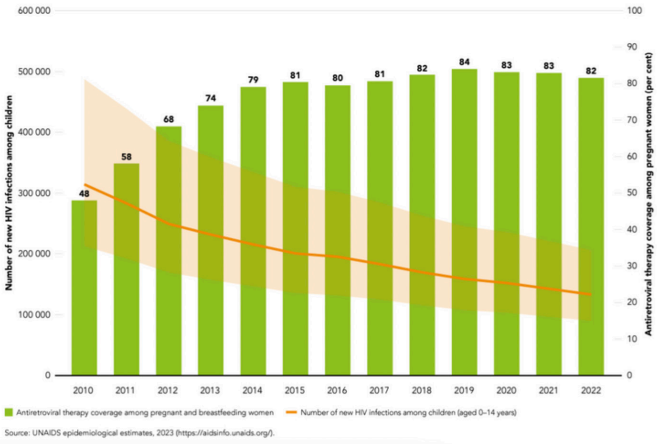

Figure 1: *Numbers of new HIV infections among children (aged 0- 14) years and antiretroviral therapy coverage among pregnant and breastfeeding women, global, 2010-2022. From 2023 UNAIDS Global AIDS Update.*

Funding Challenges

The Joint United Nations Program on HIV/AIDS (UNAIDS) estimates that there are 1.5 million children under the age of 14 years living with HIV/AIDS. Funding earmarked specifically for HIV/AIDS has historically been substantial, but both domestic and international funding has been declining (UNAIDS, 2022). Significantly, those receiving ART will require treatment for the rest of their lives (CDC, 2023), meaning countries must budget to support ART treatment for decades to come. This illustrates the challenge facing countries with high HIV prevalence–finding ways to continue existing levels of support amidst future funding challenges.

The total funding for HIV programming in low and middle-income countries declined by 2.6% from 2021 to 2022 (Figure 2). This decline in funding was driven primarily by a decrease in international funding, which

declined by 3% over that same period, but also by a slight decrease in domestic funding. Because of these dynamics, the share of domestic funding has increased to 60% in 2022, up from 50%, in 2010, and similarly, the share of international funding has been decreasing, down from 50% in 2010 to 40% in 2022 (UNAIDS, 2022). While middle- income countries have been able to create domestic funding streams and programs, low- income countries without robust budgets have struggled to keep established programs funded at their current levels, as will be discussed later in this report.

A second challenge is the central but uncertain

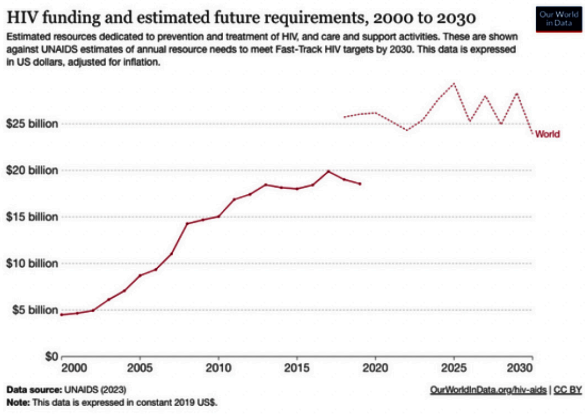

Figure 2: *Annual total HIV expenditures, showing the recent decline in funding over the last several years (solid red) and the gap between these expenditures and estimated requirements to meet UNAIDS targets (dotted red). From Roser and Ritchie (2023). HIV/ AIDS. https://ourworldindata.org/hiv-aids.*

role of the United States in HIV/AIDS prevention and treatment. Over the last few decades, PEPFAR, the United States government's main HIV program, has provided more than $110 billion over its lifetime, including a scheduled total of $4.9 billion in funding for the 2023 fiscal year (Kaiser Family Foundation, 2023). Similarly, the United States contributed 45% of the total budget for The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund, 2023). While this funding has been consistently reauthorized every five years over the past two decades, since its initial authorization in 2003 under President George W. Bush, the future status of PEPFAR and other funds for HIV/AIDS is uncertain. As the political battle over abortion in the United States rages on, PEPFAR has been caught in the crossfires as unsupported claims that it is used to support abortions led to opposition from anti-abortion lawmakers (Spitzer, 2023).Given the United States' central role in HIV/AIDS funding and the fact that many of the countries most affected by the global HIV crisis are those whose significant poverty limits their ability to develop stable domestic financing streams, many low and middle-income countries will face challenges in the years to come. This report will outline how these countries can maximize their limited resources to fund HIV initiatives, with a particular focus on programming for priority populations, and provide case studies of these ideas in action.

FINANCING

Paradigm Shift in Global Health Financing

As noted above, a major obstacle hindering the implementation of HIV prevention and treatment programs is inadequate funding. This lack of funding is part of a larger paradigm shift in global health financing, both in the amount of funds available and the goals of global health financing. This shift is reflective of changing economic conditions, geopolitical climate, and global health crises like the COVID-19 pandemic which force a reevaluation of priorities. This is most evident in the Future of Global Health Initiatives (FGHI) 2023 Report (Witter et al., 2023). This report evaluates the progress made by Global Health Initiatives (GHIs) and provides recommendations for GHIs to fit within the current global health landscape. It notably emphasizes achieving Universal Health Coverage (UHC), advocating for country-led approaches, promoting sustainable financing models, and stressing the need for increased accountability and efficiency.

A critical aspect of this shift is the move from disease-siloed approaches to more integrated and cohesive health financing strategies, closely aligned with the overarching goals of UHC. "Disease-siloed approach" refers to a method of healthcare funding where resources are allocated to a specific disease. A notable drawback of this method is that it often results in vertical programs operating in isolation from each other, raising concerns about sustainability and coordination within the overall healthcare system. "Integrated health financing," on the other hand, involves consolidating resources and efforts to support a more holistic approach to healthcare. For The Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), this includes using their expertise to widen the scope of the work to include other relevant diseases and to ensure funding is matched to country-specific epidemiological needs. Of note, this shift has merits.

The emphasis on sustainable development and

country ownership is necessary. By advancing towards models that favor UHC and integrated financing, countries are poised to build more.resilient health systems, something the COVID-19 pandemic demonstrated is necessary. This shift is also necessary as health interventions are most successful when they are adaptable to the local, cultural, and financial contexts. However, there are potential implications of shifting from a disease-siloed approach to funding.

LIMITATIONS

1. Challenges in Targeted Funding:
Disease- siloed funding, while having limitations, has been instrumental in providing targeted resources for specific health challenges like HIV/AIDS. This approach ensures dedicated funding and attention to the unique complexities of each disease. Moving away from this could potentially dilute the focus and resources specifically earmarked for HIV/AIDS, possibly slowing down the progress made in this area. This is especially relevant when considering priority populations, ensuring funds for targeted strategies against gender-based violence or vertical transmission.

2. Transition Period Challenges:
The transitionfrom a disease-siloed approach to an integrated healthcare system will require time, during which there may be uncertainties and gaps in funding for specific diseases like HIV/AIDS. This period could temporarily impact the momentum and continuity of existing HIV/AIDS programs.

3. Risk of Overshadowing Specific Needs:
HIV/AIDS programs have specific needs distinct from other health initiatives. The shift towards integrated care might overlook these unique requirements, especially in areas like specialized treatment, stigma reduction, and community-based interventions. This could lead to a one-size-fits-all approach, which may not be as effective in addressing the nuances of HIV/AIDS care and prevention.

4. Deprioritization of Disease-Specific Expertise:
Specialized knowledge and strategies developed for HIV/AIDS might be underutilized or deprioritized in an integrated system. This could result in a loss of expertise and a decline in the quality of HIV/AIDS-specific interventions.

The Global Fund's response to the report reflects its commitment to adapting to meet the changing needs of global health (FGHI Written Response, 2023). In it, they recognize the FGHI's goals to enhance GHI's support in countries whilst also preventing further fragmentation in the global health landscape. However, in their critique, the Global Fund presents concerns related to the methodology, structure, and factual accuracy of this report. Nonetheless, it is evident that Global Health Financing is shifting. The question at hand then becomes how to ensure causes like the HIV and AIDS initiative maintain their momentum while also considering priority populations and their specific financing needs.

CASE STUDIES

Malawi

Malawi is a low-income country with a population of 16 million and GNI of $860 per capita (Geoffroy, Harries et al. 2014). Currently, Malawi maintains an HIV prevalence of 7.1% for adults aged 15 to 49 years, with a pattern of steady decline (UNAIDS 2022). Malawi has demonstrated significant strides in its response to the HIV/AIDS epidemic, halving its HIV/AIDS prevalence over the past 10 years (Payne, Wadonda-Kabondo et al. 2023). Its response commenced with the implementation of the Short Term Plan in 1986, which evolved into the current National HIV/AIDS Strategic Framework (Mwale 2002). As the first country to sign onto the United States PEPFAR program in 2009, Malawi has shown long-term commitment to reducing HIV/AIDS (USAID 2023). Notably, the nation has achieved the second and third UNAIDS 95-95-95 targets well before the 2030 deadline, with 97.8% on treatment and 96.9% of those with viral suppression. (Payne, Wadonda- Kabondo et al. 2023). This 95-95-95 program strives to have 95% of adults living with HIV know their status; 95% of those who know their status on antiretroviral treatment (ART); and 95% of those on treatment with viral load suppression. In order to continue to make strides in HIV/AIDS progress, Malawi must identify and target its priority populations of adolescents and women across both urban and rural areas.

While Malawi has been successful in its overall HIV/AIDS response, it struggles in particular with heterogeneity across age, region, and gender. Currently, Malawi's prevention programs focus on condom use, pre-exposure prophylaxis, and prevention of mother-to-child trans

mission (Kabaghe, Singano et al. 2023). These prevention programs have successfully reduced new HIV infections, but adolescent girls and young women continue to be disproportionately at risk (UNAIDS 2022). USAID identified Malawi as a country with a high HIV burden with adolescent girls and women at particular risk; this is demonstrated by the UNAIDS Determined, Resilient, Empowered, AIDS-free, Mentored and Safe (DREAMS) project in Malawi which targets these priority populations (USAID 2023). Therefore, prioritizing interventions that address vulnerabilities, such as those targeting young women and efforts to rectify gender inequality, remains crucial.

Currently, large age disparities drive transmission patterns, especially from older men to younger women (Beauclair, Helleringer et al. 2016). Women in the age groups from 25 to 39 display HIV prevalence at a rate double that of men, reflecting their status as a vulnerable group (Project 2022). In particular, younger women face intimate partner violence at a much higher rate, with 28.1% of women aged 15-19 reporting partner violence compared to 23.6% of women aged 25-49 (UNAIDS 2022). Regardless of age, 24.3% of women report intimate partner violence; given that intimate partner violence has been linked to worse HIV/AIDS outcomes, Malawi must focus on reducing this statistic (Wetzel, Tembo et al. 2021). Children have lower access to HIV/AIDS treatment and knowledge of prevention programmes compared to adults. Approximately 84,000 children under the age of 15 years live with HIV (Kalembo, Kendall et al. 2019). Many more children face the impact of HIV/AIDS, with up to 80% of street children having been orphaned by HIV/AIDS (Mandalazi, Banda and Umar 2013).

These children thus face the dual challenge of losing their families and being put at higher risk for HIV/AIDS. Only 63% of children from 0-14 years old living with HIV have access to ART medicines, greatly impeding progress towards the 95-95-95 targets (UNAIDS 2022). This is in stark contrast to the 93% of adults receiving ART, thus identifying adolescents as a priority population (UNAIDS 2022).

Additionally, HIV/AIDS prevalence increases in rural areas that are isolated from healthcare facilities. The distance to primary and secondary care facilities increases from 10 kilometers in urban areas to 50 kilometers in rural to remote areas, identifying a weakness in Malawi's healthcare infrastructure (McBride and Moucheraud 2022). Currently, healthcare facilities are reachable by, on average, 85 minutes of walking (Palk, Okano et al. 2020). In addition, lack of spatial data regarding the directing of funding makes it difficult to strengthen geography-based prevention programmes. Healthcare infrastructure must be improved to minimize the average distance to the nearest healthcare facility as well as better recorded to granularly target high-risk urban neighborhoods and rural areas.

Malawi finances its HIV/AIDS response by relying almost entirely on external donors. While expenditure on HIV/AIDS totals 2.6 million, 2.5 million of this expenditure is sourced from international donors (UNAIDS 2022). These donors consist primarily of PEPFAR and the Global Fund, which compose 95% of its funding (PEPFAR 2021, State. 2021). Given Malawi's high dependency on external funding, focusing on the sustainability of financing and projects is imperative.

Kenya

Kenya has a per capita GNI of $2170, between that of Malawi and South Africa for a population of 54.02 million, and has an HIV prevalence among 15-49-year-olds of 3.7% as of 2022 (Centers for Disease Control and Prevention [CDC], 2021). This prevalence, combined with the fact that in 2019, 90,000 of the 1.4 million Kenyans living with HIV were under the age of 14, puts Kenya among the countries with the greatest number of women and children living with HIV (Bliss and Simoneau, 2021). Simultaneously, however, in the decade before COVID-19, Kenya made great strides in reducing vertical HIV transmission for these priority populations. Most importantly, the country has reduced the number of new HIV infections among children by 24% since 2010. The current challenge in Kenya is figuring out how to replace donor funding with national funding for a two- fold goal: to prevent further new infections in women and children and provide children with treatments in a more timely and sustained manner (Bliss and Simoneau, 2021).

Since 2013, Kenya has increased the proportion of their total budget allocated to health by 15% (U.S. Department of State, 2021). However, for every dollar that the domestic government spent on HIV in 2017, donors contributed 2.2 times more (McDade et al., 2021). Kenya faces key challenges in three areas, according to the PEPFAR Sustainability Index, where they receive support from donors such that their domestic health systems may collapse without this support. The first area is service delivery. Donors provide extensive technical assistance, and those living in informal settlements still

find it difficult to access health service points repurposed during COVID-19 (Bliss and Simoneau, U.S. Department of State, 2021). 40% of the population lives in these informal urban settlements, making it difficult for exposed children to get tested promptly (Bliss and Simoneau, 2021). Especially given that child- friendly versions of ART drugs are necessary to ensure that children survive, delayed testing has made it such that many children die of HIV before they reach the age of five (Bliss and Simoneau, 2021). A case study done in Nairobi found that healthcare workers at health service points were not well-trained enough, driving young people away due to stigma and discrimination from their peers (UNAIDS 2023). The second area is domestic resource mobilization. There is currently no institutionalized measurement program to track finances, meaning that donors are not reflected entirely in the national budget (McDade et al., 2021). Lacking centralized data collection programs makes it difficult to mobilize domestic resources in a targeted manner for women and children specifically, and to make a transition plan from donor dependency. The last area Kenya currently faces challenges with is the efficiency of health systems and the integration of HIV services into them. Currently, it takes weeks for test results to reach families, which means infants have a higher chance of dying if they are not given life-saving treatment fast enough (Bliss and Simoneau, 2021). Health systems currently do not have the funds to entirely support same-day point-of-care tests, however, which makes it difficult to integrate these into the primary care system (Bliss and Simoneau, 2021). Although Kenya faces these three challenges, they currently lead initiatives to both expand their community health worker programs and provide them with further training and stipends which has allowed them to make more progress. For example, in April 2023, Kenya announced that it would pay monthly stipends and the cost of insurance for 100,000 community health workers, most of whom are women (Wakhusama 2023). Community health workers can ensure that children and women who are at an increased risk of developing HIV stick to their treatment plans and can help with access to services, making them integral to Kenya's push towards independence from donors. Especially for women and children living in informal settlements where there is food insecurity, community health workers can also ensure that they do not skip doses due to lack of food (a current common practice for those who take ART with food). Further, integrating key leaders in the community into the healthcare system proved to be efficient in the analysis done in Nairobi, breaking down the stigma to establish friendly health service centers for kids (UNAIDS 2023).

Overall, if Kenya provides higher quality training for community healthcare workers, it could propel them into transitioning out of donor dependency in their HIV response.

South Africa

South Africa differs from our other case studies as it is a high-middle-income country with a GNI per capita of 6,780 USD (World Bank, 2022). The nation has one of the highest HIV prevalence of 18.8% with an estimated 7.8 million people living with the virus (Satoh and Boyer, 2019). Having a population similar to that of Kenya (59.8 million) and a relatively strong economy, South Africa serves as a unique case study.

Despite the daunting number of cases, South Africa has employed an extensive HIV/AIDS response over the past thirty years. South Africa's government has excelled in strong government effectiveness and control relative to similar states, according to the World Bank's Worldwide Governance Indicators (PEPFAR South Africa 2021). This is reflected in the massive gains South Africa has made towards the UNAIDS 95-95-95 targets. 94% of all people living with HIV are aware of their status, and impressively, the percentage of people who receive antiretroviral therapy has increased from 24% to 76% in twelve years (UNAIDS 2022). These strides in reducing HIV incidence are largely attributed to the spread of ART treatment and preventative measures such as condom promotion (Leigh et al, 2022). The South African government has funded a large share of treatment programs, whereas outside donors have driven significant shares of spending in prevention (Phaswana-Mafuya et al, 2023). This poses a threat to sustainability as the nation's transmission rate is still some of the highest in the world.

South Africa appears to be in a transitory stage with the hopes of moving towards a domestically financed HIV/AIDS response. This entails implementing a national health insurance system that integrates HIV funding (Results for Development, 2017). South Africa can consider this move partly thanks to the way they have leveraged private sector engagement in combating HIV/AIDS. This has led to innovative ways to provide service delivery and employ health workers. Because of the extensive private networks of pharmacies, health workers, and researchers, South Africa is well-positioned to scale up HIV services by increasing testing and initiating treatment programs (Dominus and Golub, 2018).

Ultimately, this transition for South Africa is unfeasible in the current day because prevention measures are mainly funded through external donors. External donors

finance much of the outreach and research aimed at addressing the social and economic determinants of HIV (Guthrie et al, 2018). Donors like PEPFAR and the Global Fund have established the institutions and monitoring systems that make scaling preventative research and programs possible. However, this same infrastructure is not established within purely domestic channels. Some preventative measures that are essential to sustaining current progression include but are not limited to shifting towards community-centered approaches, maintaining TB/HIV integrated testing effectiveness, facilitating localized donor coordination and accountability measures, and critically factoring in the HIV risks for adolescent girls and young women (AGYW).

Adolescent girls and young women are an inordinate amount of the population living with HIV/AIDS. It is crucial to employ risk analyses on a provincial and district level to better understand the structural and biological factors contributing to high transmission rates amongst these priority populations. Domestic funding is the only form within South Africa that is relegated directly to the provincial and district levels (Guthrie et al, 2018) meaning the research and prevention measures implemented through external organizations have a more generalized scope. This contributes to large epidemiological oversights. AGYW are facing unique challenges influenced by local contexts, including varying levels of education, healthcare infrastructure, home environment, and social norms (Houle et al, 2020; Hill et al, 2018). By focusing on localized approaches, researchers can tailor community-specific interventions and foster community engagement. to increase health outcomes.

Thus, the South African government must build its disease prevention infrastructure through global health partnerships, so that it may move away from its reliance on external funding.

The South African case study highlights the potential drawbacks of prioritizing country ownership without considering the sustainability of the response and without clearly exploring the differences in where international and domestic funding is being allocated. This oversight can be detrimental to the current progression and illustrates the importance of catering to priority populations.

RECOMMENDATIONS

Framework for Financing

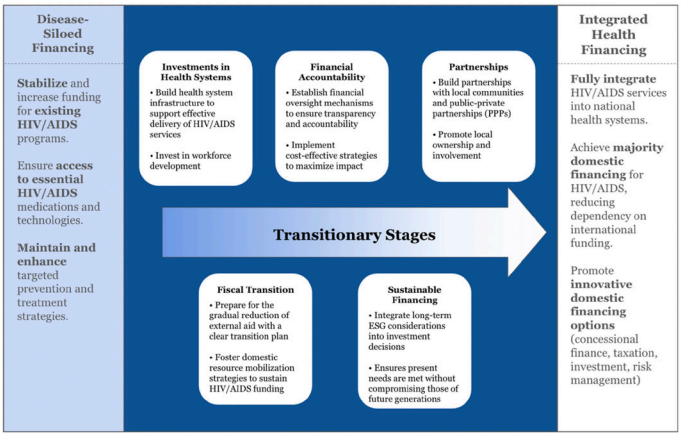

Figure 3: *Framework for financing of HIV/AIDS initiative. This framework outlines how to approach the shift from disease-specific funding towards a more integrated health financing approach.*

Continued and increased financing is paramount to ending AIDS in children by 2030. Current financing mechanisms, largely siloed and disease-specific, have been successful in initiating global responses to HIV/AIDS as evident in the UNAIDS report. However, in addition to continued financing, these mechanisms need to adapt to ensure long-term sustainability. The integration of these funds into broader health initiatives can yield comprehensive care models if done properly.

In this report, this proposed framework (Figure 3) emphasizes a progressive shift from traditional, disease-specific financing towards a more robust and integrated health financing system. This recommendation will allow for a transitionary period and ensure the HIV and AIDS initiative remains properly funded without losing its momentum.

Immediate actions require securing and increasing the financial support for ongoing HIV and AIDS initiatives. This would also ensure necessary prevention and treatment strategies are in place to maintain the momentum necessary for the HIV and AIDS initiative. The ultimate goal is to fully integrate HIV/AIDS services into national health systems, ensuring that they are a seamless part of universal health coverage. This goal also encompasses complete domestic financing and strong country ownership concerning HIV/AIDS. This framework would consider the FGHI's recommendation, focusing on country-led approaches with an emphasis on integrated health strategies.

The following were identified as key transitionary stages:

1. Strengthen Partnerships:
Establish strong, multi-sectoral partnerships, particularly local community ties and public-private partnerships (PPPs), to leverage the unique strengths of each sector. Such partnerships can drive localized responses to HIV/AIDS, ensuring interventions are culturally appropriate and community-endorsed.

2. Invest in Health Systems:
Investments should focus on building the infrastructure necessary to support the effective delivery of HIV/AIDS services. Strengthening the health system is vital, from enhancing the capabilities of the healthcare workforce to ensuring facilities are equipped to manage the complexities of HIV/AIDS treatment and care. Investing in both community health workers and point-of-care services can integrate HIV/AIDS services better into primary care. Combining rapid diagnostic services with long-term follow-up can ensure that those in rural areas, especially children who require life-saving ART urgently, are not adversely affected by a lack of health service points.

3. Financial Accountability:
Establish robust financial oversight mechanisms to ensure transparency and accountability. This involves implementing cost-effective strategies that maximize the impact of HIV/AIDS funding and ensure that every dollar is accounted for and directed towards impactful interventions.

4. Fiscal Transition:
Countries must prepare for a gradual reduction of external aid by developing clear transition plans that outline the path to fiscal sustainability. This includes fostering domestic resource mobilization and creating resilient strategies to sustain HIV/AIDS funding without over-reliance on international support.

5. Sustainable Financing:
A crucial consideration within financing is sustainability, as this ensures that present needs are met without compromising those of future generations. Focusing on this model, it is essential to recognize that health falls within the social component of the environmental, social, and governance framework (Beton, 2023). Therefore, health should not be an isolated concern but should be understood in conjunction with other factors. Consequently, a comprehensive approach to financing the principles of the UN's sustainable development goals is necessary for health financing and progress. Essentially, sustainable financing involves integrating long-term ESG considerations into decision-making (Beton, 2023).

Toolkits for Sustainable Finance

Delving into the nuances of sustainable financing, several toolkits emerge as viable means to achieve sustainable finance objectives.

1. Sumptuary taxes, exemplified by the implementation of levies on items like alcohol, tobacco, and sugar-sweetened beverages, not only bolster financing and improve health outcomes but also reduce long-term sector spending needs (Beton, 2023). A systematic literature review on the effect of sin taxes on potentially harmful goods in Latin America showed that sin taxes are linked to reduced consumption, increased revenues, and a positive contribution to overall population health (Miracolo et al., 2021). Furthermore, these targeted taxes can extend beyond products directly linked to negative health outcomes. Consider the implementation of a congestion tax in Stockholm, Sweden, which not only resulted in reduced air pollution levels but also contributed to a decline in respiratory illnesses like asthma (United Nations Environment Programme, 2019). This underscores the effectiveness of broad sin taxes applied to issues like pollution control, waste management, and environmental conservation in not only fostering positive health outcomes but also in diversifying country income streams to continue to finance broader health programs.

2. Strategic commercial investments
emerge as a crucial strategy to strengthen health systems by directing targeted funds into specific industries and fostering the growth of the private sector. While the primary source of domestic financing for African countries currently lies in tax collection, the scale of required infrastructure projects, future initiatives, and large-scale projects necessitates exploring alternative funding channels (Eyraud, 2021). Investing in the African private sector presents advantages, focusing on the potential of its youthful population and abundant natural resources to drive advancements in healthcare (Eyraud, 2021). Consequently, these strategic investments can

catalyze the development of local sectors, including pharmaceuticals. Currently, the reliance on imported pharmaceutical products in Africa is high, reaching up to 70%, and local vaccine production capabilities address less than 1% (African Development Bank, 2022). Therefore, by fostering the establishment and improvement of local pharmaceutical capacities, African nations can reduce global dependence, ensure supply security, and promote wealth creation on a broader scale (African Development Bank, 2022).

3. Lastly, **risk management programs** employ instruments to recognize, evaluate, and mitigate financial risk exposure associated with ongoing projects and investments, therefore, enduring the success of these endeavors. These programs may include debt restructuring, blended finance, credit enhancement, and/or matching programs, all to drive investment while working to reduce the financial and political risk associated with such investment (Beton, 2023).

In conclusion, these diverse financial tools and strategies represent not just methods to develop existing infrastructure and engage the private sector, but pathways to drive holistic economic growth across low- and middle-income countries. When used strategically, these toolkits have the potential to encourage diversification, decrease dependence on specific sectors, drive independence, and ultimately reduce the future reliance of low- and middle-income countries on foreign financing sources. This ensures a more sustainable and resilient trajectory for both present and future generations.

Multidimensional Approach to Measure Health Sustainability

While developing approaches and toolkits to achieve financial sustainability is significant, it is crucial to acknowledge that we cannot fix systems we cannot measure (Beton, 2023). Hence, it is important to develop frameworks and metrics to measure the progress of sustainable finance initiatives within health. As emphasized earlier, evaluating the sustainability of health financing in the context of public health challenges, such as the HIV/AIDS epidemic, transcends mere examination of health outcomes like HIV prevalence rates, ART uptake, and morbidity. Instead, it demands a comprehensive approach that factors in diverse dimensions, encompassing environmental, social, and economic metrics. Even within these realms, various measures can be applied.

Originally designed for evaluating sustainability in Indian healthcare, Figure 4 presents an essential conceptual model and a comprehensive approach for assessing sustainability in healthcare at large (Mehra & Sharma, 2021). It assesses sustainability across three dimensions, emphasizing various sub-measures within each dimension. More importantly, this multi- dimensional approach emphasizes two main key points: the greening of healthcare optimizes the environmental, social, and economic performance of healthcare, and indicators for a sustainable healthcare system should be grounded in the pursuit of holistic "health" care rather than exclusively "sick care" (Mehra & Sharma, 2021).

These dimensions and metrics are not exhaustive. Instead, countries must collaborate and establish a similar model, with a consensus on the specific metrics to assess success in health and HIV/AIDS financing. However, the essential point is that these metrics should encompass multiple sectors, acknowledging that health is a product of our broader global environment.

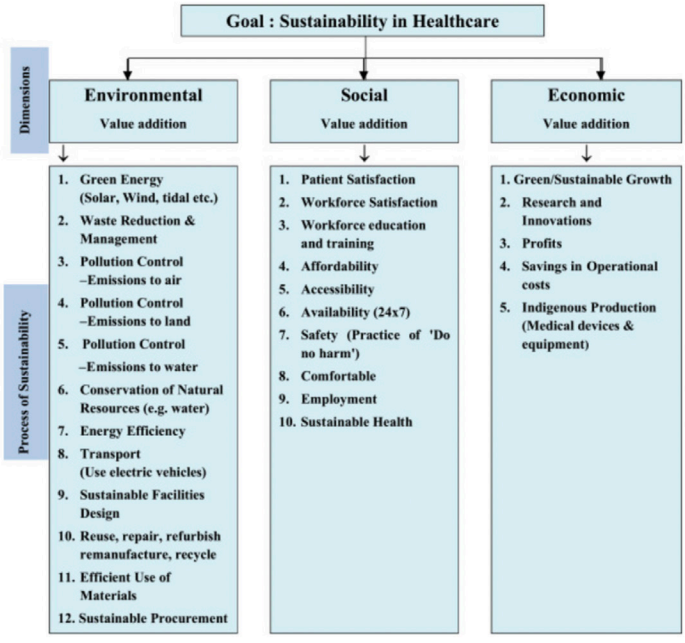

Figure 4:
Concept model for sustainability in healthcare adopted from Mehra R., & Sharma, M. K, 2021

How to Cite

Evanson F, Garmroudi D, Kim L, Liang C, Rajagopalan A, Ransom G, Salem M, Fallon C, Panter-Brick C, and Bains A (2024) Financing the HIV/AIDS Response in Sub Saharan Africa Considering Priority Populations: Going the Last Mile. Policy Brief, Global Health Studies Program, Jackson School of Global Affairs, Yale University.

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