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The Investment Case for Global AIDS Funding: Getting Smarter, Showing Results

For the first time in a more than 30-year struggle against HIV, the world possesses the tools needed to lay a foundation to end AIDS.[1,2] Over the last year, overwhelming evidence has emerged that underscores the urgent need to invest *now* in proven strategies to save lives and prevent new infections. More than merely cost-effective, investments in HIV programs actually save money—not a generation from now, but within the next several years.

Health and Economic Benefits of Scaled-Up Antiretroviral Therapy

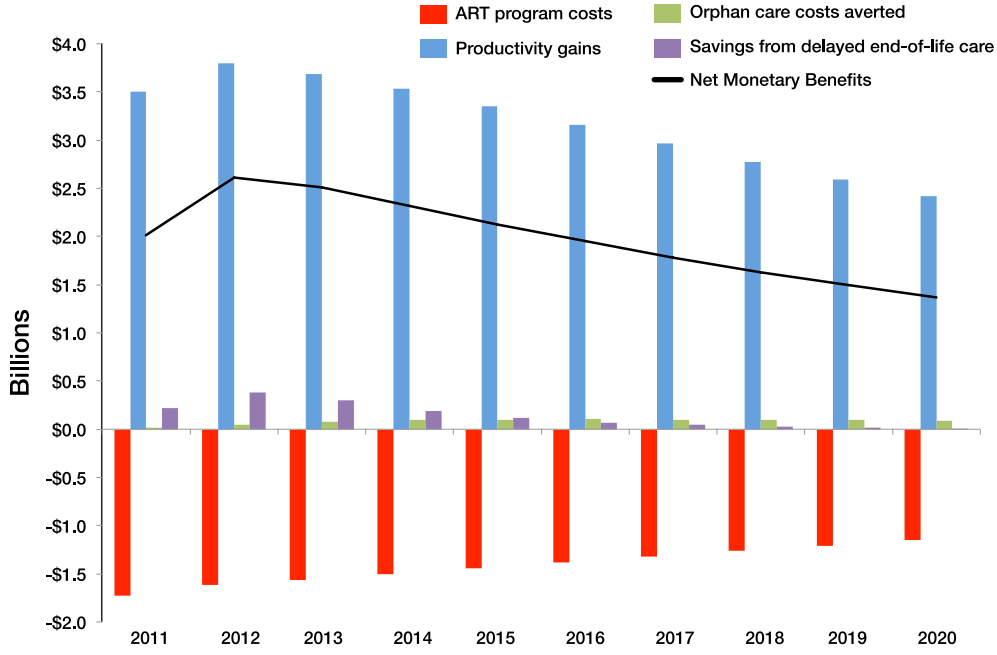
Antiretroviral therapy (ART) saved 6.6 million lives from 1995 to 2012.[3] Moreover, the mechanism by which ART improves the health of people living with HIV—sharply reducing viral replication—also makes it one of the most powerful HIV prevention tools available.[4] According to a large clinical trial, early initiation of ART reduces the risk of HIV transmission by 96%.[5]

The prevention benefits of ART have also been confirmed in the real world. In KwaZulu-Natal, South Africa, the risk of HIV acquisition was 38% lower in communities where HIV treatment had been scaled up in comparison to communities with minimal treatment access.[6] Rapid scale-up of HIV treatment has been associated with a 90% reduction in HIV incidence in Ethiopia, a 70% decline in new infections in Botswana and Malawi, and a more than 50% drop in new infections in Namibia and Rwanda.[7]

By restoring people living with HIV to health and by averting new HIV infections, ART not only saves lives but also precludes substantial future spending on expensive HIV treatment services. According to calculations by an international team of experts (Figure 1), antiretroviral treatment programs in developing countries result in long-term economic returns of 81% to 287% in the form of increased labor productivity, averted orphan care, and deferred medical care.[8] Realizing these economic returns is not confined to the distant future either. An international team of medical and bio-economic experts found that the delivery of ART to HIV-positive individuals with HIV-negative partners in South Africa could generate cost savings *within five years*.[9]

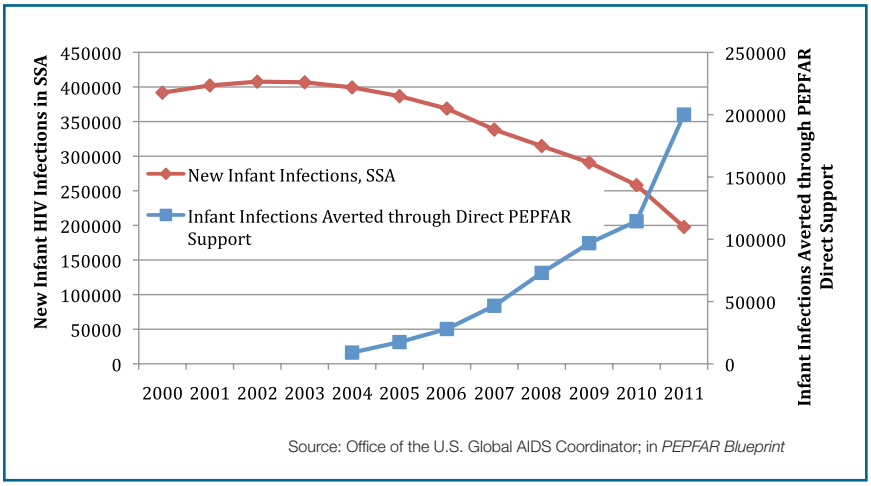
As evidence has emerged regarding the superior health results achieved when treatment is initiated early in the course of HIV infection, new opportunities have arisen to maximize the health

Figure 1. ART Programs: Costs and Benefits



Source: Resch S, Korenromp E, Stover J, et al. Economic returns to investment in AIDS treatment in low and middle income countries. PLoS ONE. 2011;6:e25310.

Figure 2. Decline in New Infant HIV Infections in Sub-Saharan Africa and Increase in Infant Infections Averted through PEPFAR Direct Support



Source: Office of the U.S. Global AIDS Coordinator; in *PEPFAR Blueprint*

and economic benefits of ART. In 2013, the World Health Organization recommended much earlier initiation of HIV treatment, including for all people in certain categories (e.g., pregnant women, children under five, HIV-positive individuals with HIV-negative partners, and people with HIV-related tuberculosis or hepatitis B) regardless of CD4 count.[10] These new guidelines almost double the number of people eligible for ART. Were HIV treatment to be rapidly scaled up in line with these new recommendations, an additional three million AIDS-related deaths and 3.5 million new HIV infections would be prevented.[11]

Coupling HIV Treatment with Scale-Up of Core HIV Prevention Strategies

In addition to ART, HIV prevention tools also save money at the same time that they save lives. Services to prevent mother-to-child HIV transmission, which prevented 670,000 children worldwide from becoming infected with HIV from 2009 to 2012, have also been found to result in actual cost savings.[12] Achieving 80% coverage of adult male circumcision in 13 priority countries in sub-Saharan Africa would avert more than 3.3 million new HIV infections by 2025 and save an estimated $16.5 billion in future medical costs.[13]

Strategically scaling up HIV treatment and combining it with a set of core HIV prevention interventions would turn the tide against HIV and lower the cost trajectory for the AIDS response. Key HIV prevention strategies include preventing mother-to-child transmission, voluntary medical male circumcision, behavior change programs in high-prevalence settings, and focused programs for populations most at risk (e.g., men who have sex with men, people who inject drugs, and sex workers). According to modeling commissioned by UNAIDS, scaling up a reoriented service portfolio that prioritizes these core interventions would enable total resource needs for the global response to begin to decline within five years.[14]

The AIDS Response Has Taken Steps to Maximize the Impact of Investments

From global to country levels, key stakeholders have reoriented and adapted their approaches to ensure that investments in HIV prevention and treatment programs produce maximum value for money.

The President's Emergency Plan for AIDS Relief

The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) is the largest health program in history devoted to a single disease. In 2012, PEPFAR financed HIV treatment for more than half of all people worldwide receiving ART, prevented 230,000 infants from becoming infected with HIV (Figure 2), and was the world's primary funder of adult male circumcision programs in sub-Saharan Africa.[15] From 2004 to 2008, PEPFAR saved more than 740,000 lives in sub-Saharan Africa—with adults living in PEPFAR focus countries 16% less likely to die of any cause than those residing in African settings where PEPFAR support was less intensive.[16]

In 2012, with the goal of accelerating progress toward an AIDS-free generation, PEPFAR unveiled a blueprint calling for the de-prioritization of less effective programs and strategies, and for enhanced funding for high-value, high-impact strategies, including antiretroviral treatment, prevention of mother-to-child transmission, adult male circumcision, and programs for key populations.[17]

As PEPFAR programs have been scaled up, economies of scale have been realized, with the annual per-patient cost of HIV treatment services declining from $1,053 in 2005 to $339 in 2011, meaning that every dollar of PEPFAR support goes nearly three times as far as it once did.[18] In addition, PEPFAR has implemented results-linked expenditure analysis in the 20 countries that account for 95% of the program's budget, permitting rapid programmatic corrections in response to real-time economic and financial data.[19]

The Global Fund to Fight AIDS, Tuberculosis and Malaria

Established in 2001, the Global Fund has provided more than $13 billion in funding for HIV programs in developing countries. In some countries, especially those without large PEPFAR programs, the Global Fund is the primary funder for HIV prevention and treatment services.[20]

With the aim of enhancing the strategic impact of its investments, the Global Fund has adopted a new funding model that prioritizes assistance to low-income countries with heavy HIV burdens and intervention portfolios that will have the greatest positive effect. Under the new funding model, the Global Fund will work with countries to develop grant programs that support the most cost-effective approaches and that focus services where they will achieve the best results.

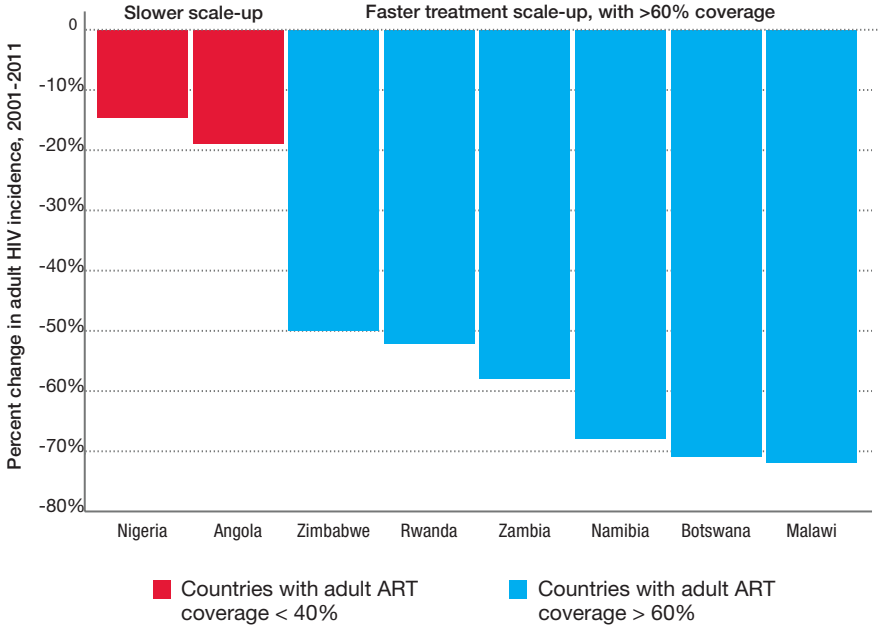
Developing Countries

Leadership by developing countries with the greatest HIV burden is helping ensure that investments in HIV prevention and treatment programs achieve maximum effect (Figure 3). Having recommended that countries take an investment approach to their AIDS response, UNAIDS is working with countries to develop evidence-based investment cases that reorient national approaches to maximize impact and ensure sustainability. As of December 2013, 14 countries had begun aligning national responses with investment principles, and an additional 30 have announced plans to develop national HIV investment cases in the next two years.[21]

After conducting investment analyses of their AIDS response, numerous countries are working to revise their programmatic portfolios to enhance strategic impact and increase health and economic returns on investment:

- *Kenya.* Kenya is taking steps to enhance services for young women and key marginalized populations, and to focus service scale-up on the nine counties that account for 54% of new HIV infections.[22] By aligning its AIDS response with investment principles, Kenya expects to prevent more than 1.15 million new HIV infections and more than 760,000 AIDS-related deaths.
- *Nigeria.* To maximize the return on HIV investments, Nigeria is prioritizing four core services (i.e., HIV prevention for key populations, HIV testing, doubling the number of people receiving ART, and preventing new infections among children) and focusing spending on the 12 states and the Federal Capital Territory that represent 70% of the national HIV burden.[23] This new approach, Nigeria has concluded, will avert 105,000 new infections, prevent 46,000 people from dying of AIDS, and produce economic benefits totaling $1.2 billion.
- *Belarus.* After finding that its emphasis on services for the general population was both inefficient and ineffective, Belarus has committed to increase coverage of ART while dramatically increasing spending on programs for men who have sex with men, people who inject drugs, and sex workers.[24] Belarus projects that it will save $200 million over five years by implementing this new approach.
- *Jamaica.* Jamaica's epidemic is driven by transmission among men who have sex with men and sex workers; yet until recently, the country allocated a mere 3% of its HIV budget to prevention programs for these populations. After a systematic review, Jamaica has embarked on an initiative to increase funding for programs focused on key populations.[25]

Figure 3. Countries That Scaled Up Treatment Faster Have Reduced HIV Incidence More Significantly Over the Past Decade



Source: UNAIDS 2011 Estimates; in *Treatment 2015*

Early Investments Maximize Long-Term Health and Economic Benefits

Investing *now* is essential to maximize the return on investments. According to UNAIDS, declines in HIV incidence have been substantially greater in countries where HIV services have been rapidly scaled up.[26] Studies focused solely on HIV treatment have reached similar conclusions, with earlier scale-up resulting in greater gains in the AIDS response.[27]

Increasingly, experts speak of an important "tipping point" that occurs when the annual increase in the number of people receiving ART exceeds the number of new HIV infections. In 2012, 13 high-prevalence countries had reached this critical milestone as a result of scaled-up AIDS responses.[28]

Investing now to bring essential HIV prevention and treatment services to scale enables the global response to outpace the epidemic itself, saving both lives and money over the long run. By contrast, shortchanging HIV spending now merely allows the epidemic to expand, adding to long-term health and economic costs.

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