





FOREWORD by the Members of the Coalition for Children Affected by AIDS

This report on donor commitments to children and adolescents affected by HIV and AIDS is intended to help all of us—governments, non-governmental organizations, donors, service providers, policymakers, academia, advocates, and communities—improve the health and well-being of children and adolescents affected by HIV. The number of new HIV infections among children is more than eight times the global target. Two-fifths of all children born with HIV go undiagnosed, and half are not treated. And while children represent only 5% of people living with HIV, they account for 15% of AIDS-related deaths. These and other grim statistics in the *UNAIDS Global AIDS Update 2022* put in stark relief just how far behind the targets we are.

This report comes at a time of renewed focus on children and adolescents globally. The *Global AIDS Strategy 2021-2026*, the new strategies of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund, the Global Alliance to End AIDS in Children by 2030, and the 2021 *Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030—* to name but a few—all pinpoint children and adolescents as critical populations for whom we have committed to targets.

This report provides a piece of the puzzle that will help us achieve our goals. Previously, not having adequate information on investments has made our work extremely challenging. This report provides us all with new data to focus attention on where it is needed for policy, advocacy, and programming. In an era when resources are constrained and needs exacerbated by COVID-19, economic crises, and conflict, it is more important than ever to identify where money is being spent, on what, and to what effect.

We now have hard data to corroborate what many of us working on the front line of the HIV response have long known—that there is a major gap between our targets for children and adolescents and our investment in them. The precise size of that gap is less important than the fact that we are far off the level of financial support required. We must not deprioritize funding for them. Rather, we should be calling for more intensified funds and asking that programs are properly resourced, that investments are ring-fenced, and that we keep better track of them. This

report reminds us that we all have a responsibility to use resources efficiently and smartly—to get it right and do more of what works. And it reminds us that many of the costs of delivering support to children and adolescents affected by HIV are associated with building strong health systems and human capital—costs that could, and should, be shared with other sectors, not just HIV.

The process of creating this report has already produced major changes. In particular, PEPFAR has, for the first time, published an in-depth analysis of its global investments on children and adolescents. The Global Fund has made new commitments to track spending on children and adolescents in more detail. And we now have a methodology for identifying spending on children and adolescents that any donor can use.

The research process also started a dialogue that is as important as the report itself. We held several global working group meetings and a session at the AIDS 2022 conference in which leading specialists from a broad range of sectors considered the technical and political challenges with respect to funding for children and adolescents, and how to overcome them.

The Coalition for Children Affected by AIDS is leading an initiative to better understand funding for children and adolescents affected by HIV. This is a long-term endeavor of which this report is just a first step. It was commissioned in partnership with WHO, UNAIDS, and UNICEF. We are extremely grateful to the authors, John Stover and Peter Stegman at Avenir Health; our partners; PEPFAR and the Global Fund for their close collaboration and openness; and the many people who fed in technical support—all of whom are acknowledged at the end of this report.

The Coalition is just at the beginning of a journey. Over time, we seek to build a fuller picture, analyzing, for example, financing from private trusts and foundations and domestic sources and taking a deep dive into particular countries. We warmly invite collaboration in the next phases of this endeavor.

Yours,

The Members of the Coalition for Children Affected by AIDS



EXECUTIVE SUMMARY

About 2.2 million children and adolescents (ages 0–17 years) are living with HIV today (AIDSinfo 2021). That number has dropped from a peak of 3.3 million in 2006 but still represents a significant threat to the health and well-being of children. There are still 210,000 new infections and 107,000 AIDS deaths each year. Only a little more than half (57%) of children living with HIV are receiving life-saving antiretroviral therapy (ART). In addition, nearly 15 million children have been orphaned due to the death of one or both parents from AIDS (UNICEF 2022).

UNAIDS has developed a bold plan to end the AIDS epidemic by 2030. That plan calls for increased spending on critical interventions to reduce the rate of new infections, avert deaths of people living with HIV, and provide support to those affected by AIDS. That plan would reduce new HIV infections among children to less than 23,000 per year by 2030. Scaling up efforts to achieve the targets of the plan will require increases in expenditures. UNAIDS estimates that to meet these targets about \$2.8 billion (\$US) is needed annually in low- and middle-income countries on services for children ages 0–17. Current expenditures amount to about \$1.8 billion. PEPFAR currently accounts for almost half (46%) of current expenditures for children and adolescents, the Global Fund accounts for about 10%, and the rest comes from other donors and national governments.

At the current cost of services, an additional \$160 million per year is needed to reach the UNAIDS coverage targets for the key biomedical interventions: prevention of mother-to-child transmission, early infant diagnosis, ART, and voluntary medical male circumcision for children and adolescents ages 0–17. In addition to limited funding, efforts face health system constraints, demand limitations, and difficulties in identifying all children living with HIV.

Although children ages 15–17 represent a small portion of key populations (sex workers, men who have sex with men, transgender people, people who inject drugs), current coverage of services is so low for those groups that as much as an additional \$410 million could be needed to reach the UNAIDS coverage targets for children 15–17. Other barriers may be just as important, including political will, legal barriers, and stigma and discrimination.

Additional resources are undoubtedly needed to improve support for orphans and vulnerable children and to provide support to adolescent girls and young women at highest risk. However, estimating the total resource needs is difficult since not all such children are at high risk. Those needing services can only be identified locally by those who know their situations.

Vulnerable children and adolescents need a combination of biomedical, social, and economic supports to survive and thrive. This is well articulated in UNAIDS' *Global AIDS Strategy 2021–2026 and UNICEF's Framework for Country Programming*. We need to strengthen our joint efforts to fully support the services that we know are essential to protect our children and adolescents.

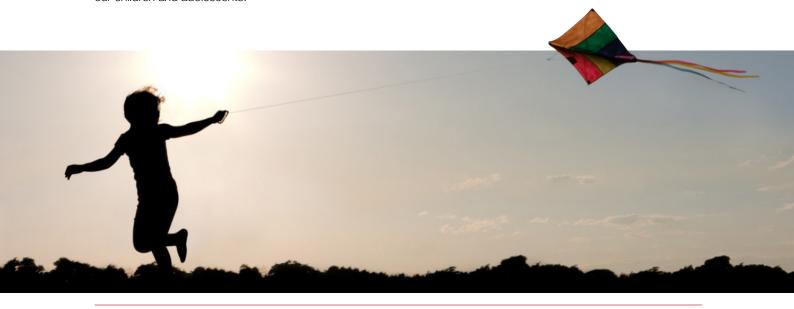


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ACRONYMS

AIDS acquired immunodeficiency syndrome

AGYW adolescent girls and young women

ART antiretroviral therapy

CCABA Coalition for Children Affected by AIDS

COP Country Operational Plan

COVID-19 coronavirus disease 2019

EID early infant diagnosis

HIV human immunodeficiency virus

OVC orphans and vulnerable children

PEPFAR U.S. President's Emergency Plan for AIDS Relief

PMTCT prevention of mother-to-child transmission

UNAIDS Joint United Nations Program on HIV/AIDS

UNICEF United Nations Children's Fund

WHO World Health Organization

VMMC voluntary medical male circumcision

INTRODUCTION

The new *Global AIDS Strategy 2021–2026* highlights the critical importance of addressing the needs of children, adolescents, and caregivers affected by HIV and AIDS (UNAIDS 2021c). It describes how many have been left behind by the HIV response and the actions necessary to enable them to overcome the social and economic barriers to accessing HIV support.

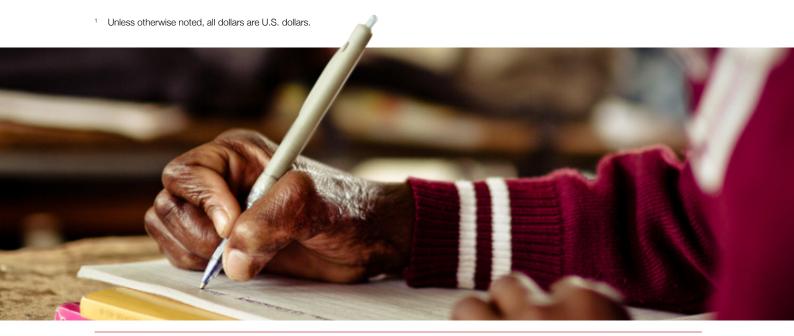
Although many donors express their commitment to vulnerable children, adolescents, and caregivers in policies and strategies, assessing to what extent that translates into resources and action can be difficult. This report is a first step toward enabling donors, and those who work alongside them, to assess the extent of their commitment and what more can be done. It is both an evaluation of and a technical resource for donors, as well as a tool for those supporting donors and advocating to them.

The report analyzes trends in funding over recent years and reflects on what we can learn from those trends. It also sets out what levels of funding are estimated to be required to achieve the 2025 targets, and where the funding shortfalls lie. Finally, it outlines what interventions would be most cost-effective, acknowledging the intersections between HIV, COVID-19, universal health coverage, and overall health systems strengthening.

The report focuses on resourcing by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund in recognition of the fact that they are the largest international donors to the prevention and treatment of HIV/AIDS. At the time of this writing, both PEPFAR and the Global Fund have recently set new strategies in support of global AIDS-related targets (PEPFAR 2021a; Global Fund 2021a). The Global Fund Seventh Replenishment has so far received pledges of US\$14.25 billion¹ to support its work over the next three years. Final figures will be available by the end of 2022. Also, PEPFAR is currently collecting its expenditures for fiscal 2022, which will be available mid-November 2022.

Commissioned by the Coalition for Children Affected by AIDS, this report was completed in partnership with Avenir Health, World Health Organization, UNAIDS, UNICEF, and the many people who provided technical support as part of a working group (see Acknowledgments).

The report is largely exploratory in that it seeks to understand what data do and do not exist and what that says about HIV/AIDS funding for children and adolescents. It is the first in a series looking at resourcing for children and adolescents affected by AIDS more broadly. Over time, the Coalition for Children Affected by AIDS seeks to build a fuller picture with analyses of other international, national government, and private resourcing.



METHODOLOGY

The financial analysis is based largely on publicly available data accessed via the PEPFAR Panorama Spotlight dashboard, the Global Fund Data Explorer, and the UNAIDS HIV Financial Dashboard. The PEPFAR online database allows examination of spending by a number of predetermined categories, some of which are specific to children and others of which include both children and adults. To identify total funding for children, PEPFAR conducted a special analysis to allocate shared categories by age group. That analysis is based on budgets rather than expenditures.

The Global Fund's financial Data Explorer website (Global Fund 2021b) displays different funding categories: pledges and contributions, signed amounts, commitments, budgets, and disbursements. It also allows one to see the level and geographic range of its disbursements, as well as Global Fund budgets by broad program category. The database does not allow the tracking of funding by beneficiary group. In particular, it does not have the level of granularity necessary to track investments made in services specifically for children or adolescents.

This report and analysis have benefited from several consultations with members of the Coalition for Children Affected by AIDS and other stakeholders, including those who participated in a global working group. They provided valuable guidance and interpretation to focus the work and make it most useful to donors and national governments.

Consolidated, publicly available data on funding for children and adolescents are often fragmented and incomplete. Most data are summarized and general at best. For example, donors currently only differentiate between funding for those who are less than 15 years old and those 15 years old and older, which makes it difficult to draw global conclusions about support to different types of interventions or population groups. The Global Fund's financial management system is not presently set up to track funding for children and adolescents, hindering the field's ability to draw conclusions.

To gain a country-level perspective and to provide insight into what countries are experiencing in terms of programming and funding for children and adolescents affected by HIV, interviews were conducted with program personnel and stakeholders in Haiti, South Africa, and Tanzania. UNAIDS country directors and strategic information advisers in each country nominated individuals with whom Avenir Health could conduct informal interviews.

The following individuals were interviewed:

- Soeurette Polican, Organisation de Développement et de Lutte contre la Pauvreté
- Eva Marly Steide, Housing Works, country director, South Africa
- Joan van Neikerk, South African National AIDS Council, Children's Sector
- Zeni Thumbadoo, National Association of Child Care Workers, Tanzania
- Ulrike Gilbert, UNICEF, chief HIV and AIDS
- Neema Makyao, AMREF, public health specialist
- Mastidia Rutaihwa, National AIDS Control Program, Community Development, Gender, Elderly, and Children
- James Kamuga, National AIDS Control Program
- Boniface Silvan, National AIDS Control Program, program officer
- Sylvester Kwilasa, National AIDS Control Program

Each interview was conducted around a set of basic, broad-ranging questions/prompts to facilitate discussion about relevant local-level concerns:

- What are the major gaps you see in supporting children and adolescents? Where are programs falling short of reaching our goals?
- Which programs most concern you? (for example: antiretroviral therapy [ART], prevention of mother-to-child transmission [PMTCT], testing, pre-exposure prophylaxis [PrEP], condoms, support to orphans and vulnerable children [OVC], social protection, economic support)
- Is adequate funding a major constraint in improving program coverage?
- What other constraints are there? (for example, difficulty finding all the HIV children estimated to exist; lack of staff; difficulties in identifying children at risk; health system constraints such as low antenatal care attendance).
- What are your priorities for improving services for children and adolescents in the near future?
- To what extent is funding strengthening government partners and local civil society partners?

THE SITUATION OF CHILDREN AND ADOLESCENTS

Worldwide, HIV/AIDS impacts the lives of millions of children and adolescents. There were an estimated 2.2 (1.7–2.7) million children and adolescents (ages 0–17) living with HIV in 2021 (AIDSInfo 2021). Every day, around 570 children and adolescents become newly infected and 290 die from AIDS-related causes (AIDSInfo 2021). The treatment gap for children and adolescents is of particular concern. Only 52% of all children and adolescents (ages 0–14) living with HIV are on HIV treatment (UNAIDS 2022a).

According to UNAIDS, "Gaps in the testing of infants and children exposed to HIV have left more than two fifths of children living with HIV undiagnosed. The number of children on treatment globally has declined since 2019, leaving almost 800,000 children living with HIV not on antiretroviral therapy in 2020" (UNAIDS 2021a, page 21). And, "nearly two thirds of children not on treatment are aged 5 to 14 years—children who cannot be found through HIV testing during postnatal care visits" (UNAIDS 2021a, page 22).

Many millions of children and adolescents—both HIV-positive and -negative—are grappling with the impacts of the disease, which include poverty, the loss of a parent/caregiver, sexual exploitation and abuse, early childhood development delays, poor mental health, violence, stigma, and missing out on education. In addition, an estimated 15 million children, while not living with HIV, face particular challenges associated with perinatal exposure to the virus (Slogrove et al. 2020). For example, many are born too soon or too small or are at increased risk of cognitive delays in early childhood. These children constitute a critical and growing population that requires far greater attention. Additionally, an estimated 14.9 million children have lost one or both parents due to AIDS.

Governments, donors, and civil society have committed to meet global targets for children and adolescents in the *Global AIDS Strategy 2021–2026* and the 2021 General Assembly *Political Declaration on HIV and AIDS*, including the following 2025 targets:

- Ninety-five percent of pregnant and breastfeeding women living with HIV have suppressed viral loads.
- Ninety-five percent of HIV-exposed children are tested by two months of age and again after cessation of breastfeeding.
- The 95–95–95 testing and treatment targets² are achieved within all subpopulations, age groups, and geographic settings, including children living with HIV. (UNAIDS 2021c; United Nations General Assembly 2021)

In addition, there is global commitment that 75% of all children living with HIV have suppressed viral loads by 2023 and 86% by 2025, in line with the 95–95–95 HIV treatment targets" (UNAIDS 2021a).

"Efforts to eliminate the vertical transmission of HIV to children in settings with a high burden of HIV have been a standout achievement of the global AIDS response for much of the last decade. In fact, new HIV infections among children declined by more than half (53%) from 2010 to 2020, due mainly to the increased provision of antiretroviral therapy to pregnant and breastfeeding women living with HIV. However, that momentum has slowed considerably" (UNAIDS 2021a, page 108), and "these successes have been overshadowed by a heartbreaking tragedy: as HIV testing and treatment programs expand, children living with HIV are often being left behind" (UNAIDS 2021a, page 108).

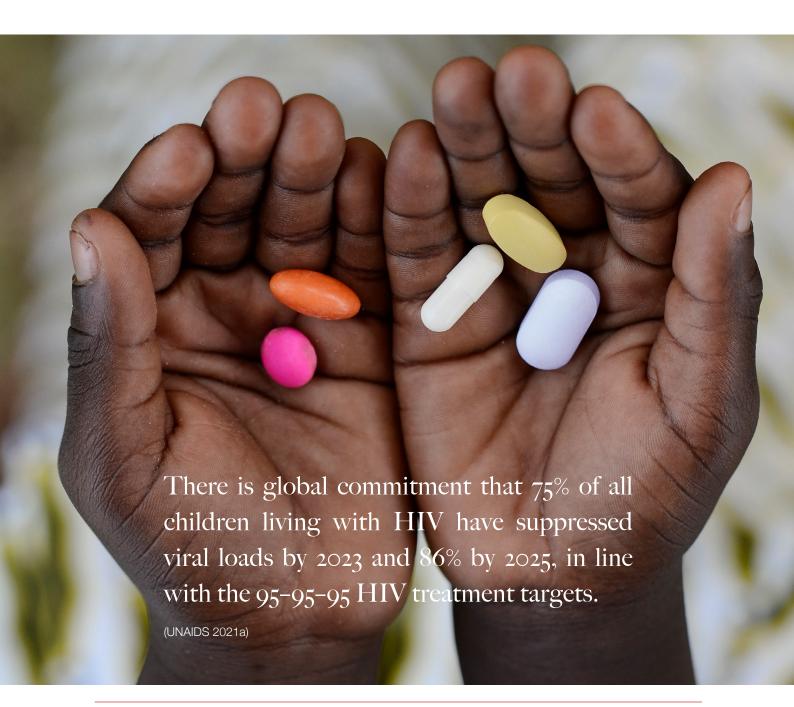
None of the previous global 2020 HIV-related targets for children and adolescents was met, including the Start Free, Stay Free, AIDS Free targets and those agreed to in the 2016 Political Declaration on HIV and AIDS (UNAIDS 2021b). Indeed, over the last four years, progress on child and adolescent HIV treatment and prevention has slowed, halted, and, in some cases, reversed. In 2020, the number of children ages 0–9 years who newly acquired HIV was more than eight times the UNAIDS target for new infection. UNAIDS notes that "most of the 150,000 new HIV infections among children in 2020 could have been prevented" (UNAIDS, 2022c). This is partially due to insufficient PMTCT programming: "Nearly 65,000 child infections occurred in 2020 because women already living with HIV were not diagnosed during pregnancy and did not start treatment" (UNAIDS, 2022c). Around 620,000 children living with HIV needed ART but were not enrolled into treatment programs. And UNAIDS recommended improvements in early infant diagnosis (EID),

The 95-95-95 targets refer to 95% of people living with HIV knowing their status; 95% of them on ART; and 95% of those on ART being virally suppressed.

testing for children who are breastfeeding, and treatment retention programs. Children and adolescents affected by HIV are also among those least served by efforts toward social and economic targets across the Sustainable Development Goals, including universal health coverage (United Nations 2019).

Children and adolescents facing broader structural and social exclusion are especially vulnerable—both to HIV/AIDS and COVID-19 and the broader impacts of each disease. These include the children of sex workers and other key populations (Csaky et al., CCABA 2017) and adolescent mothers and their children (Csaky and Ameyan 2020). They have less access to services and support and more complex needs.

Countries with the highest HIV burden are also those with fragile health systems and the least access to COVID-19 vaccines. East and Southern Africa together compose the region with the highest overall HIV burden. However, other regions, particularly West and Central Africa, Central and Eastern Europe, and Southeast Asia, are increasingly areas of concern, especially due to the lack of effective health systems in place to respond. For example, West and Central Africa accounted for more than one-third of new HIV infections among children globally in 2020 (UNAIDS 2021a).



HOW MUCH FUNDING IS NEEDED?

As part of its *Global AIDS Strategy 2021–2026*, UNAIDS has estimated the total resource requirements to achieve the end of AIDS as a public health threat by 2030 in low- and middle-income countries (UNAIDS 2021c). The estimates are based on the number of people needing a service and the unit cost of providing that service. Population sizes and program coverage are based on national estimates. Unit costs are based on national costing studies where available and on averages by country income group otherwise. The strategy sets coverage targets for 39 different interventions and target populations (UNAIDS 2020). Whereas children and adolescents would be affected in some way by progress in all of these interventions, 11 of them are specifically targeted to children and adolescents. Table 1 shows the interventions and resources needed to meet the targets. The total is just over \$2.8 billion annually. The major components are treatment (30%), socioeconomic support, mainly for orphans and vulnerable children (10%), economic empowerment programs for adolescent girls and young women (AGYW) (8%), and PMTCT (7%). Above-site-level and program management costs add another 25%.

For some interventions, such as treatment and PMTCT, the population in need of the service is obvious (all people living with HIV and all HIV-positive pregnant women, respectively). For some others, such as PrEP, UNAIDS has set coverage targets to estimate the global need. National programs and donors may define need differently. For example, PEPFAR country operational plan guidance encourages programs to use local knowledge to determine high-risk AGYW in need of PrEP. This issue is especially important for support to orphans and vulnerable children. Although UNAIDS provides estimates of the number of orphans and the number of AIDS orphans, such estimates are not the same as "need" for support. Not all orphans need external support, and many children who are not orphans may be vulnerable because of extreme poverty or ill parents. Global estimates exist for the number of orphans, but children needing support must be determined locally.

We describe the methods and assumptions behind these estimates more fully in the Annex.

³ Above-site programming refers to expenditures that support activities at the district, regional, or national level as opposed to programs directly serving beneficiaries.



Table 1. Resource Needs for HIV for Children and Adolescents in 2025

Intervention and Target	Resource		Targets by	Risk Group		Basis of Risk Categories
Population	Needs (Millions of US\$)	Very High Risk	High Risk	Medium Risk	Low Risk	
Adolescent girls and young w	vomen (15-17)					
PrEP	\$22	50%	50%	5%	0%	Incidence among AGYW in the district of residence and person's own risk behaviors
STI treatment	\$32	80%	80%	10%	10%	Incidence among AGYW in the district of residence and person's own risk behaviors
Comprehensive sexuality education	\$53	90%	90%	90%	90%	Incidence among AGYW in the district of residence and person's own risk behaviors
Economic empowerment	\$232	\$0	20%	0%	0%	Incidence among AGYW in the district of residence
Adolescent boys and young r	men (15-17)					
STI treatment	\$16	80%	80%	10%	10%	Incidence in the district of residence and person's own risk behaviors
Comprehensive sexuality education	\$57	90%	90%	90%	90%	Incidence in the district of residence and person's own risk behaviors
Voluntary medical male circumcision	\$43	90%	90%	90%	90%	Target is men and boys in 15 priority countries
PMTCT						
PMTCT	\$200	95%	95%	95%	95%	For all HIV+ pregnant and breastfeeding women
Treatment						
Ages 0-14	\$361	90%	90%	90%	90%	All children living with HIV
Ages 15-17	\$470	90%	90%	90%	90%	All children living with HIV
Testing	\$61	95%	95%	95%	95%	Children
Key populations (15-17)		Services		PrEP		
Sex workers	\$41	90%	85%	15%	0%	National HIV prevalence
MSM	\$96	90%	50%	15%	0%	MSM prevalance, ART coverage and behaviors
Transgender	\$38	90%	50%	15%	0%	TG prevalance, ART coverage and behaviors
PWID	\$144	75%	15%	5%	0%	Availability of NSP and OST
Prisoners	\$18	100%	15%	5%	0%	National HIV prevalence
Other						
Socioeconomic support (mostly OVC)	\$263					Community-defined need
Above site level costs	\$387					
Program management	\$301					
TOTAL	\$2 838					

PrEP = pre-exposure prophylaxis; STI = sexually transmitted infection; PMTCT = prevention of mother-to-child transmission; MSM = men who have sex with men; PWID = People who injet drugs; OVC = Orphans and vulnerable children; TG = Transgender people ART = antiretroviral therapy; NSP = Needle and syringe programs OST = Opioid substitution programs.

SPENDING ON CHILDREN AND ADOLESCENTS

Whereas the need for global response to HIV/AIDS has continued to increase, total funding for HIV/AIDS has been relatively constant for the past four years (UNAIDS 2021d). As Figure 1 shows, the total amount of funding available, from all sources, peaked in 2017 at just over \$22 billion and has declined slightly over the period 2017–2021. Domestic resources have plateaued in recent years and have not been able to close the gap, leading to a chronic underinvestment in key programmatic areas to reach targets among important groups, especially children and the youth.

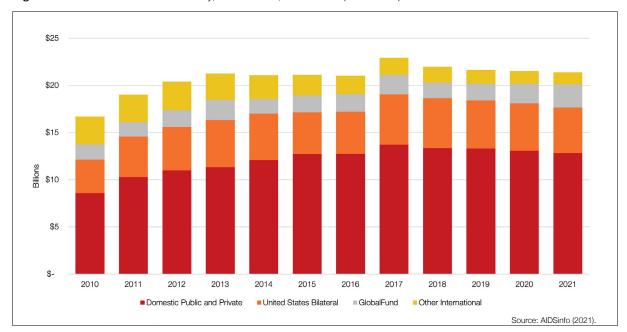


Figure 1. Trends in resource availability, 2010–2021, all sources (2019 US\$)

UNAIDS developed an approach to tracking HIV expenditures at the national level called a National AIDS Spending Assessment (NASA). Such assessments are time-consuming and so are not done in all countries in all years, but some sort of assessment has been done for at least one year for nearly 100 countries. The median year of reported estimates is 2017. More recent studies have been conducted in several countries, but the reports have not yet been released. The aggregate data provide a picture of current and past spending on HIV programs affecting children and adolescents. These estimates indicate spending of just under \$1.8 billion. (See the Annex for a description of the methods and assumptions used to prepare this estimate.)

Tables 2 and 3 show the aggregated estimates by source of funding and use of expenditures, respectively. Figures 2 and 3 show the same information graphically. Figure 4 shows spending by country. About half of the spending is in just four countries: South Africa, Kenya, Mexico, and Mozambique. As expected, most spending for children occurs in the high-burden countries in Sub-Saharan Africa; however, Mexico, Russia, Thailand, and Haiti are in the top 20. For Mexico, the spending is almost all on PMTCT. For Russia, most spending is on pediatric treatment and PMTCT. For Thailand, two-thirds is for social protection.

Figure 5 shows spending with countries grouped by income category. The largest amount is spent in the upper-middle-income category. This includes South Africa, Brazil, Mexico, Russia, and Argentina.

These figures probably underestimate total spending as they represent the most recent year available for each country, which ranges from 2013 to 2020. However, they provide the best available comprehensive estimate and probably present a good picture of the distribution of expenditures. The total spending of almost \$1.8 billion represents 65% of total needs as described in Table 1.

Table 2. Expenditures on Programs Supporting Children and Adolescents by Source of Funding

Source	Amount	Percent of Total
National governments	\$ 814,000,000	46%
Private (households, NGOs, corporations)	\$ 74,000,000	4%
PEPFAR*	\$645,000,000	36%
Global Fund	\$ 149,000,000	8%
Other bilateral donors	\$ 38,000,000	2%
Other multilateral donors	\$34,000,000	2%
Other sources	\$ 25,000,000	1%
Total	\$1,779,000,000	100%

^{*} The PEPFAR figure in this table represents estimates of PEPFAR spending in the available NASA reports. A more complete and updated estimate of PEPFAR funding is presented in the next section of this report.

Table 3. Expenditures on Programs Supporting Children and Adolescents by Use

Intervention	Amount	Percent of Total
РМТСТ	\$420 000 000	22%
Pediatric ART	\$364 000 000	19%
Cash transfers for AGYW	\$2 000 000	0%
PrEP for AGYW	\$6 000 000	0%
VMMC	\$109 000 000	6%
Key populations	\$7 000 000	0%
Social protection	\$466 000 000	25%
Sub-total	\$1 374 000 000	
Above site level costs	\$275 000 000	15%
Program management	\$220 000 000	12%
Total	\$1 869 000 000	
Percent of total expenditures	13%	

PMTCT = prevention of mother-to-child transmission; ART = antiretroviral therapy; AGYW = adolescent girls and young women; PrEP = pre-exposure prophylaxis; VMMC = voluntary medical male circumcision

Figure 2. Distribution of expenditures by source

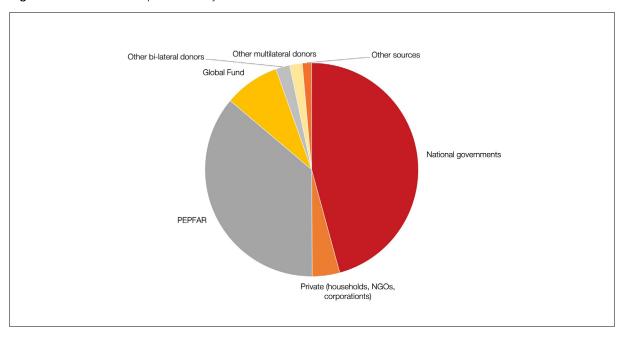
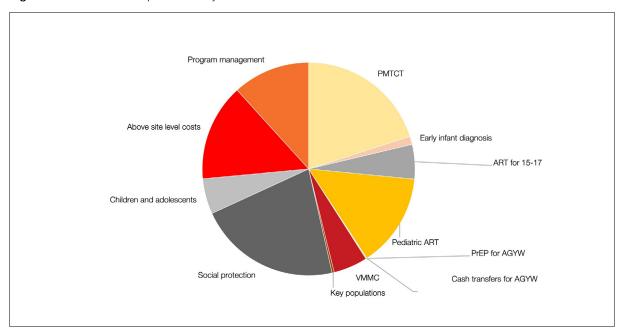


Figure 3. Distribution of expenditures by use of funds



PMTCT = prevention of mother-to-child transmission; ART = antiretroviral therapy; PrEP = pre-exposure prophylaxis; AGYW = adolescent girls and young women; VMMC = voluntary medical male circumcision

Figure 4. Distribution of expenditures by country

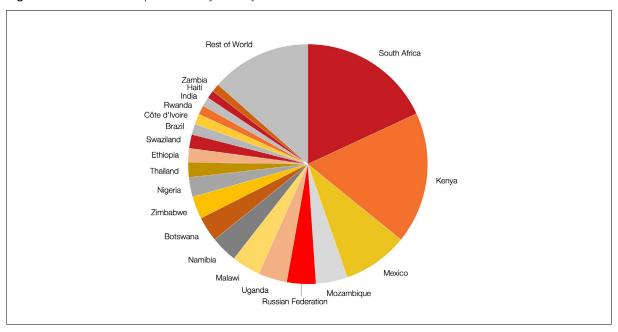
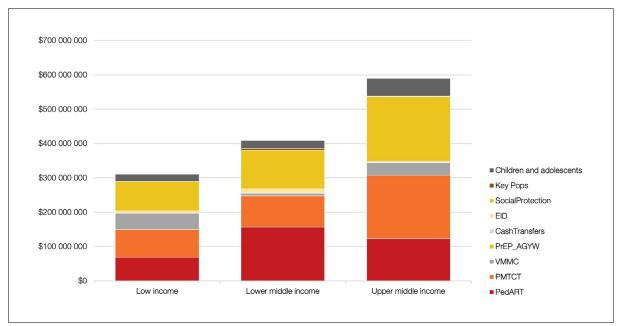


Figure 5. Distribution of spending by income group



Key pops = key populations; EID = early infant diagnosis; PMTCT = prevention of mother-to-child transmission; PedART = pediatric antiretroviral therapy; PrEP = pre-exposure prophylaxis; AGYW = adolescent girls and young women; VMMC = voluntary medical male circumcision



PEPFAR AND THE GLOBAL FUND

PEPFAR expenditure and budget data are available on the PEPFAR Panorama Spotlight website (https://data.pepfar.gov/library). PEPFAR expenditure and budget data allow for disaggregation specifically to children; however, funding can also be allocated to a "non-targeted, non-disaggregated" beneficiary group that includes funding allocated to children/adolescents and adults. PEPFAR estimated the portion of funding in the non-targeted, non-disaggregated beneficiary group allocated to children by applying a proportion of targets allocated to <15 and 15–24-year-old children of total targets to the corresponding program area of interest (e.g.: care and treatment; testing). A detailed description of the estimation methods is available on the PEPFAR Panorama Spotlight website.

The results are shown in Table 4. The total for fiscal 2022 comes to just over \$1.2 billion for children 0–24 (shown on the website) and just under \$820 million for children 0–17. This figure is higher than the estimate reported in Table 2 based on the UNAIDS/NASA studies because it is more recent and uses a different allocation method than what is available in UNAIDS/NASA. The total represents 29% of all PEPFAR budgets, 29% of all estimated needs for children and adolescents, and 46% of estimated current spending from all sources. Note that Table 4 covers direct PEPFAR budgets. About another \$50 million could be added as PEPFAR support to the Global Fund that is spent on children.

Table 4. PEPFAR Support for Children and Adolescents, 2021

Program Area	COP 2021 Program Budget (millions of US\$)
Care and treatment	\$224
Testing	\$34.8
Prevention	\$55.9
Socioeconomic	\$32.6
Orphans and vulnerable children	\$204
Prevention of mother-to-child transmission	\$170
Program management	\$66.4
Above-site programming	\$30.6
Total	\$818

Note: Above-site programming refers to expenditures that support activities at the district, regional, or national level as opposed to programs directly serving beneficiaries. COP = country operational plan.

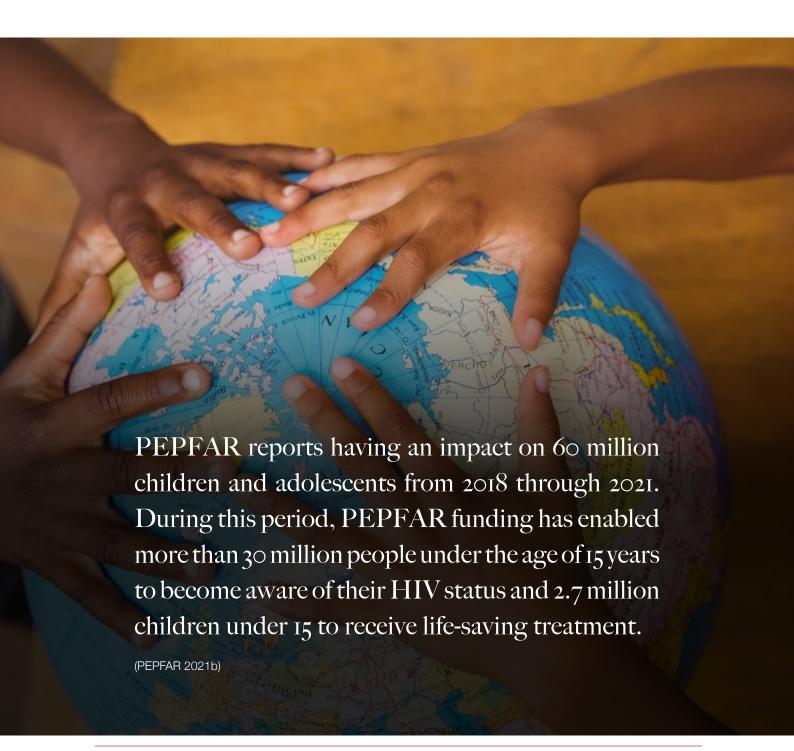
PEPFAR reports having an impact on 60 million children and adolescents from 2018 through 2021. During this period, PEPFAR funding has enabled more than 30 million people under the age of 15 years to become aware of their HIV status and 2.7 million children under 15 to receive life-saving treatment (PEPFAR 2021b).

In its 2021 Annual Report to Congress, PEPFAR says, "As of the end of September 2020, PEPFAR was supporting nearly 700,000 children and young adolescents (0–14 years of age) on lifesaving ART. PEPFAR has also enabled more than 2.8 million babies to be born HIV-free to mothers living with HIV. The program has provided critical care and support for 6.7 million OVC and their caregivers so they can survive and thrive" (PEPFAR 2021c, page 53).

Similar detailed figures are not available from the Global Fund. The Global Fund has recently modified its "modular framework" used to allocate Global Fund grants. The new framework does separate pediatric and adult programs, so more detailed information will be available in the future.

Total Global Fund disbursements for HIV in 2021 were \$1.5 billion. If the UNAIDS/NASA estimate of \$149 million dedicated to children is correct, it would represent 10% of Global Fund disbursements, 5% of needs, and 8% of total current expenditures for children and adolescents.

It is of note that both PEPFAR and the Global Fund feature children and adolescents among their strategic priorities. For example, PEPFAR's DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe) program supports adolescent girls in 15 countries; its OVC program focuses on prevention and treatment among children; and its MenStar Coalition prevents new infections in young men through voluntary medical male circumcision (VMMC). The Global Fund invests in combination prevention programs for AGYW, linking HIV testing and treatment services with programs that keep girls in school, prevent gender-based violence, build girls' leadership, increase employment opportunities for adolescent girls and young women and provide comprehensive sexuality education (UNAIDS, 2021b, p17).



WHAT ARE THE GAPS?

We examined the funding gaps for three program categories: biomedical interventions (ART, PMTCT, EID, and VMMC), key population programs, and social protection and social enablers.

Figure 6 shows the current and target coverage for the biomedical programs. PMTCT and VMMC programs have made good progress in recent years and coverage is close to the UNAIDS 2025 targets. However, EID and ART (children 0–14) programs are far from target values. At today's unit costs, an additional \$160 million would be required to reach these targets. However, funding is not the only barrier. Finding all children living with HIV, especially older children who have no regular contact with the health system, and linking them to treatment can be hard and is a major challenge in many countries.

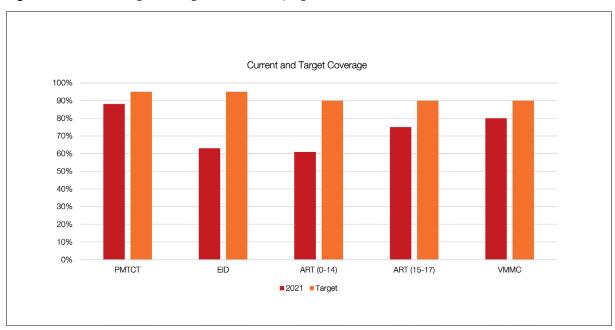


Figure 6. Current and target coverage for biomedical programs

PMTCT = prevention of mother-to-child transmission; EID = early infant diagnosis ART = antiretroviral therapy; VMMC = voluntary medical male circumcision.

Figure 7 shows current and target coverage programs for key populations. Information on the 15-to-17-year-old population is limited, so this figure assumes that coverage in this age group is similar to that for all ages. It may actually be even lower. Even so, current coverage reaches only about half of the target. Clearly there is a large gap in services. An additional \$410 million per year would be needed to reach the targets for these key populations. And, again, funding is only one constraint. A lack of political will, legal barriers, and persistent stigma and discrimination all restrict access and utilization. Additional funding would have little impact unless such barriers can be addressed.

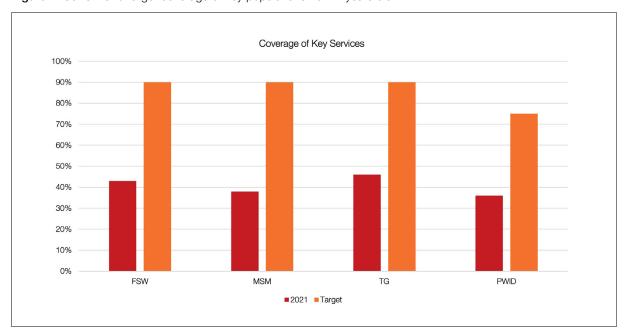


Figure 7. Current and target coverage of key populations 15–17 years old

FSW = Female sex workers MSM = men who have sex with men; TG = Transgender people PWID = People who inject drugs.

For some services, estimating a funding gap is difficult because there is no consensus on the target. Support for OVC is a key component of most national HIV programs. But whereas UNAIDS publishes estimates of the number of AIDS orphans and all-cause orphans, not all of them are in need of support. Some children are vulnerable due to HIV-related causes, such as parents who are living with HIV. The actual number of children in these categories depends on how vulnerability is defined. In addition, whereas some children need the full range of support services (food, shelter, bedding, clothes, psychosocial support, education, etc.), others need support for only some of these services. Programs that support OVC usually rely on local community leaders to identify the children most in need. As a result, it is difficult to specify need at a global level.

The situation is similar with regard to support for AGYW through programs such as the PEPFAR DREAMS initiative. Some girls and young women need the full range of services, while others may need only selected services or none at all. Some programs, such as those designed to keep girls in school, have benefits beyond those related to HIV. In this situation, it is difficult to identify how much funding is "needed."

In the Global AIDS Strategy, UNAIDS calls for efforts on three areas of societal enablers: access to justice, prevention of stigma and discrimination, and prevention of gender-based violence. We can track spending in these areas but defining need is difficult, especially as these societal enablers benefit all areas of social and economic development and, therefore, should be funded by many sectors, not just HIV or health.



COUNTRY PERSPECTIVES

The challenges and barriers countries face as they try to meet the critical and growing needs of children and adolescents, in addition to the limits of overall funding for programs, often involve internal structural, economic, political, and social dimensions. Calls to increase funding for children and adolescents should be located within the context of country-specific dynamics, which should be addressed concurrently to promote the equitable and effective use of funds. We offer some insights from three countries.



Haiti

Haiti has had to contend with many crises over the past year. Political instability, devastating natural disasters including earthquakes and tropical storms, and socioeconomic decline marked by fuel shortages and organized crime have taken a toll on the Haitian people (UNAIDS 2022b).

Despite the current hardships, however, Haiti has made progress in its response to HIV over the last decade. According to UNAIDS, new infections have declined by 43% and AIDS mortality

has gone down by 63% (UNAIDS 2021d). Also, while not achieving the 95-95-95 targets, Haiti has seen encouraging increases in the total number of people on HIV treatment. These gains, however, are not consistent across all age groups or genders. Less than half of children ages 0–14 years living with HIV know their status, and less than half of those are on treatment (UNAIDS 2021d). Similarly, while the PMTCT program has improved over the last decade with more than 70% of pregnant women living with HIV receiving ART, less than 45% of infants receive an early diagnosis of HIV.

Poverty and social dislocation have an enormous impact on programs for children, adolescents, and pregnant women. Women often lack the money to go to the hospital for routine antenatal care check-ups or to stay in the hospital for delivery. A number of women are lost to follow-up, having their babies at home and not getting their infants tested for HIV. Children born at home are not generally known to the health system and cannot be traced or provided with ART should they be HIV-positive.

A mixture of structural and environmental factors limits the ability of prevention, care, and treatment programs to reach and adequately service the needs of children and adolescents in Haiti. Government agencies find it difficult to scale up coverage levels and regulate service provision. With appropriate coordination, civil society could play an increasingly important role in expanding the response to children and adolescents affected by HIV.



South Africa

South Africa has the largest HIV epidemic in the world: nearly 8 million South Africans are living with HIV, and 4% of that number are children 0 to 14 years old (UNAIDS 2021d). Total new HIV infections have fallen by 45% since 2010, and AIDS-related deaths have fallen by half over the same period. New infections in populations 15+ years old have consistently declined between 22% and 30% (for the first five years and last five years of the decade, respectively). However, HIV infections of children ages 0–14 years experienced a sharp 62% decline from 2010 to 2015

but dropped less than 30% between 2015 and 2020. Similarly, there is a significant gap in children on treatment—only 75% of children living with HIV know their HIV status, and only 47% of them are on treatment, far below the number of adults (UNAIDS 2021d).

This situation reflects what some see as a decline in funding and relevant HIV programming, especially for children. Organizations advocating for, and working to address the needs of, children and adolescents appear to be dwindling. The coordinating bodies for the children's sector of the South African National AIDS Council have closed, as has the Child's Rights Center, and the Yezingane Network of 110 organizations focused on children has gone through internal challenges that have left it less effective.

Additionally, the COVID-19 pandemic hit South Africa hard and was a major disrupting factor for delivery of child-focused services. Well over 100,000 children were orphaned during the pandemic, and the number of adolescent girls

becoming pregnant has increased. COVID-19 has made the challenges of delivering HIV services to the population, especially children, much more difficult (Freer and Mudaly 2022). These two public health problems need to be addressed in a holistic manner, with a focus on the multiple structural and environmental factors that affect children and adolescents. Local organizations need to be strengthened. So that they can implement and sustain child and adolescent-focused programs, and address their many and varies needs.



Tanzania

Over the past decade, Tanzania has made some progress in responding to HIV. The incidence rate has fallen by more than half, new infections have declined by 35%, and AIDS-related mortality has dropped by nearly half (Freer and Mudaly 2022). In terms of the epidemic transition metrics, children and adolescents appear to be reflected in general trends. However, some areas are seen as being a cause for concern.

In the testing and treatment cascade, children and adolescents are far below their adult counterparts. Of those 0 to 14 years old who are HIV-positive, just over half know their status, compared with around 82% to 89% for the adult population. Similarly, just about half of those who know their status are on treatment as opposed to 74% and 90% of (male and female, respectively) adults. Also troubling is that, while the country has had some success over the decade in PMTCT, vertical transmission remains at greater than 11% and EID is only 55% (Freer and Mudaly 2022).

The structures in Tanzania may have limited capacity to identify such children. The health systems staff are stretched thinly and, as the country is moving to a more decentralized model of service delivery, it is unclear how its human resource capacity can be strengthened sufficiently to address the need. Furthermore, few of the country's non-governmental organizations focus on children and adolescents. Given performance-based monitoring and the focus on results, many organizations tend to shy away from children and adolescents.

Clear guidelines exist to define need among children and adolescents, but they have not been applied to estimate the size of populations; nor are there effective strategies in place to find children in need. The packages of services are defined, but little information on unit costs is available. Children ages 0–4 and 5–9 years seem to be easier to identify, likely due to more interaction with the health system. However, as they get older, they can more easily be lost to follow-up. Given the new Strategic Plan V and the focus on decentralization of services, it is hoped that there will be an increase in the identification of HIV-positive children.

Pediatric and adolescent programs are regarded as underfunded compared with adult programs. One reason may be that it is harder to show results; in addition, budget cuts generally affect programming for children and adolescents more than adults. It has been observed that while funding for commodities and other inputs (e.g., ARVs) are well covered, coverage for the operations or implementation side of programming appears to be declining, especially for children and adolescents. Perhaps because there are no size estimates of children and adolescents, the funding provided seems to match the need.



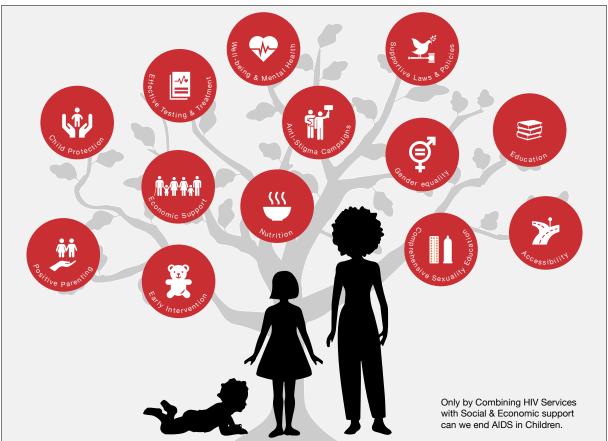
MOVING FORWARD, WHAT WOULD BE MOST **COST-EFFECTIVE?**

In an era when resources are constrained and needs are exacerbated by COVID-19, identifying what would be most cost-effective is more important than ever. We must prioritize investments that address the common and intersecting risks to children and adolescents created by HIV, COVID-19, weak health systems, and challenges to universal health coverage. The same children and adolescents are at heightened risk of multiple health challenges and their impacts. Strengthening their resilience would improve multiple health outcomes concurrently.

This means refocusing on children and adolescents who have been left behind such as adolescent parents affected by HIV and their children (Csaky and Ameyan 2020), the children of key populations (Csaky, et al., CCABA 2017), the increasing number of children who have lost parents/caregivers due to COVID-19 (Hillis et al. 2021), and other populations affected by poverty and broader social and structural exclusion. They must be first in line for service provision; enabled by laws, policies, and social norms; and supported to take leadership roles in the design and delivery of services and to challenge stigma and discrimination against them. This also means channeling funds to communities. COVID-19 has highlighted, yet again, how local community-based organizations are best placed to reach excluded populations.

Vulnerable children and adolescents need a combination of biomedical, social, and economic supports to survive and thrive. This is well articulated in the Global AIDS Strategy. And much work has been done to set out the full package required, including the Framework for Country Programming for Infants, Children, and Adolescents (UNICEF 2020), as well as to demonstrate what combination of services are most cost-effective (Cluver 2019). In particular, combining biomedical HIV support with social protection, support for mental health and education, addressing violence and abuse, building gender equality, and nurturing care is a proven game changer.

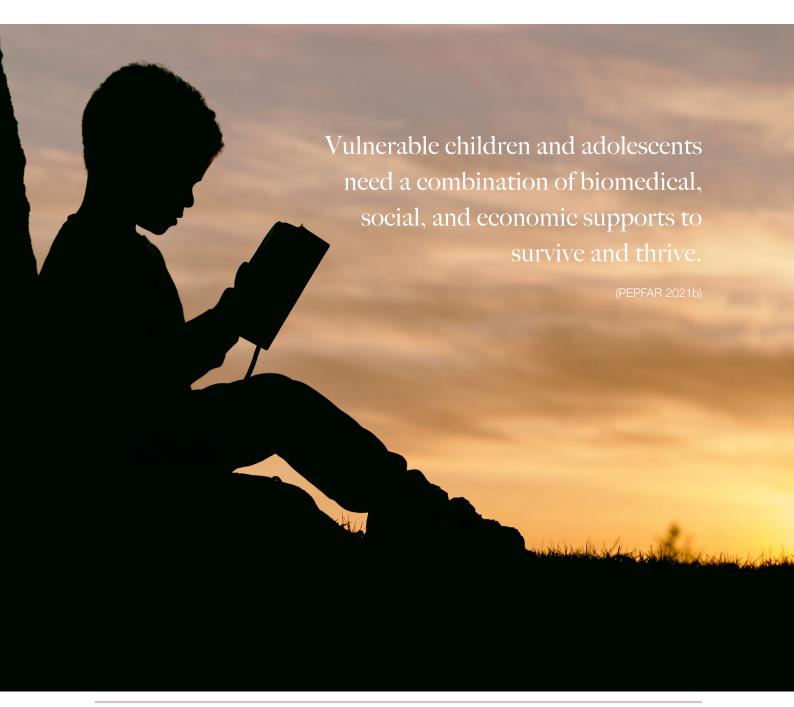
Figure 8. With tailored packages of biomedical, social and economic support we can end AIDS in children



Investing in and incentivizing different sectors and stakeholders to work together is a critical part of delivering holistic support. Any point of service—from the school to the clinic—should be a window into a cross-cutting system. Facilities, communities, and different ministries and sectors must be supported to plan and deliver together.

More information is needed on the age, sex, and socioeconomic status of children and adolescents affected by HIV; what precise package of support works best for different populations; and the extent to which donors are investing in distinct populations or service areas.

Addressing the biomedical needs of children and adolescents also requires far greater attention. Alongside efforts to address wider social and economic factors, we must invest in developing new approaches and products and in scaling up existing biomedical innovations for children and adolescents. Dolutegravir, long-acting PrEP, EID, point-of-care testing, family-based index testing, and administering PrEP among pregnant HIV-negative women are all proven innovations that need to be scaled up.



HOW CAN FINANCIAL DATA BE IMPROVED?

Disaggregating financial reporting data is a critical step toward better serving children and adolescents affected by HIV. Unless we know more about which children and adolescents donors are supporting, we cannot know whether they are achieving their best impact. For example, tracking the ages of populations served by the 0–5 years, 6–11 years, and 12–17 years categories, their gender, their association with especially vulnerable populations, and their location would help target investment to those who need services most. Collecting highly disaggregated data routinely can be time-consuming and difficult, but special analysis such as that conducted by PEPFAR for this report can help to provide a fuller picture of spending in support of children.

Similarly, more detail regarding which categories of programming are being supported would also shed light on whether investments are being made in optimum solutions. At the very least, data ought to be broken down into social, economic, and biomedical categories. Ideally, tracking would go further to highlight mental health support, early childhood development, social protection, EID, point-of-care testing, gender-based violence, and other programming areas.

Although the PEPFAR data provide quite a bit of detail, they do not contain enough granularity to fully match estimates of need with expenditures. Information from other donors is far more aggregated. It is not realistic to expect monitoring systems to provide all the detail we would like as that would place an unreasonable reporting burden on those delivering these vital services. PEPFAR, the Global Fund, UNAIDS, and the Bill & Melinda Gates Foundation have been working for the past several years to harmonize the categories of financial reporting across organizations. This will help to provide greater clarity in the future. Nonetheless, it would be a step forward if other donors were to conduct additional analyses along the lines published by PEPFAR.

The UNAIDS NASA system could also be of benefit; however, UNAIDS has not had sufficient resources to implement it regularly in all countries. Additional support for more regular NASA reports could go a long way to providing the necessary data. That would probably require annual support of \$3 million to \$4 million to conduct NASAs in all key counties every other year.

The World Health Organization has implemented a global monitoring system relying on the national health accounts approach to report on health expenditures annually. To date the system is active in only about 30 countries. Maintaining high quality has been difficult, and HIV expenditures are not always included in detail. However, this may become a valuable source at some future time, although it will not capture the important non-health expenditures.





CONCLUSIONS AND RECOMMENDATIONS

As this report shows, what has been done to date for children and adolescents affected by HIV and AIDS has been extraordinary. The careful design of programs to address their specific needs and the increasing amounts of targeted funding to support such programs are crucial advances in the global response to HIV/AIDS that should be lauded and commended. However, more needs to be done.

We cannot control the AIDS epidemic without addressing the needs of children and adolescents. Their ability to start free and stay free of HIV is the cornerstone of ending AIDS by 2030. Preventing mother-to-child transmission, blocking pathways to HIV infection in adolescence and adulthood, increasing access to optimal treatment, and suppressing the viral load of children and adolescents living with HIV are critical for stopping this epidemic in its tracks. Without this, HIV will persist indefinitely. Start early. What happens to children and adolescents determines their path through life. A life-cycle approach is essential for delivering transformative change.

Ending inequality means meeting the needs of children and adolescents left behind. This includes adolescent parents affected by HIV and their children (Csaky and Ameyan 2020), the children of key populations (Csaky, et al., CCABA 2017), children with disabilities, and other groups facing social and structural exclusion. Children lag far behind adults in terms of HIV testing and treatment—and that gap is widening. Without refocusing on vulnerable children and adolescents, we are on track for a hollow victory in the fight against AIDS. The 95-95-95 targets are for all ages and population groups, so they cannot be met without achieving them for children and adolescents.

COVID-19 has exacerbated the inequalities children and adolescents affected by HIV face, and it has made it harder to address those inequalities (Csaky, et al., CCABA 2020). The stigma, comorbidities, and socioeconomic vulnerabilities associated with HIV leave children and adolescents affected by HIV especially vulnerable to COVID-19 and its impacts. Countries with the highest HIV burden are also those with fragile health systems and the least access to COVID-19 vaccines. Emerging evidence (Sherr and Cluver 2021) points to sharp increases in orphanhood (Hillis et al. 2021), early pregnancy, early marriage, sexual and gender-based violence, mental health concerns, and school dropout during the COVID-19 pandemic. We can continue to expect to see large numbers of children and adolescents missing out on their education and a surge in teenage pregnancies—both of which have a great impact on HIV epidemic control, now and in the long term.

While this analysis has focused on PEPFAR and the Global Fund, we fully acknowledge that other international donors, national governments, and private donors also provide resources in support of children and adolescents, and not just those concerned with HIV targets. Those focused on education, gender, tackling inequalities, violence, health, poverty reduction, growth, and child and human rights—to name but a few—all have a key role to play. We need to work with these stakeholders to better understand their contribution to children and adolescents affected by HIV.

Data on targets, effects, and funding must be improved so that we can more carefully track investments in and results for children and adolescents. A report such as this should ideally build on a firm foundation of previous work—other consolidated and comprehensive analyses that reflect the programmatic and financial space focused on children and adolescents affected by HIV and AIDS in order to advance understanding. However, at the present juncture, this report raises more questions than it answers. It highlights existing weaknesses and faults in the present system of data collection, synthesis, and reporting. These systemic issues are not new to those involved in funding and managing programs for children and adolescents. They have been recognized, and addressing them remains a priority for organizations so that they can have a firmer basis for making programmatic and funding decisions and can show the results that we all want to see.

FINAL REFLECTIONS

by the Members of the Coalition for Children Affected by AIDS

We cannot end AIDS without addressing the needs of children and adolescents. Their ability to start free and stay free of HIV is the cornerstone of ending AIDS by 2030. Without that, HIV will persist indefinitely.

This report answers several critical questions that have until now hampered our efforts to support children and adolescents: How much is being spent on them, on what, and where? As we all deliver the *Global AIDS Strategy 2021–2026*, the strategies of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund, the *Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030*, and the Global Alliance to End AIDS in Children by 2030, we can use these data to shape our work.

The Coalition will continue to explore how to improve funding for children and adolescents. Over time, we seek to build a fuller picture, analyzing, for example, financing from private trusts and foundations and domestic sources, and taking a deep dive into particular countries. We warmly invite collaboration in the next phases of this endeavor.

In the meantime, we offer the Coalition's reflections in response to this report. We acknowledge that information is evolving, and we will continue work with partners to develop solutions we can all advocate for and deliver together:

 Political leadership is critical. Governments and donor leadership must prioritize children and adolescents affected by HIV. This includes adolescent parents affected by HIV and their children, the children of key populations, and those affected by poverty and broader social and structural exclusion. These are the populations being left behind. Reaching them will enable us to achieve global HIV targets and the UN's Sustainable Development Goals. Political leadership is vital to unlock funding and technical and social support for them.

- 2. Increase investments in children and adolescents affected by HIV. We underscore the importance of ring-fencing funds for children and adolescents in national and international budgets. Funds for children and adolescents should be a core component of budget requests to international donors. We also advocate the use of donor-led reallocation processes—such as the Global Fund's budget optimization process—to redirect funds toward children and adolescents.
- 3. Prioritize investments in cost-effective solutions that target populations left behind. Among such solutions we highlight communitydriven interventions delivered by frontline health workers, communities, and peers; integrated interventions that combine biomedical support with mental health, social protection, and early childhood development interventions; and support for advocacy and campaigns that tackle stigma and discrimination against adolescent mothers, the children of key populations, and other children, adolescents, and caregivers experiencing exclusion. Whereas the virtual services kickstarted by the COVID-19 pandemic have a role to play, they must not replace face-to-face provision since those most in need lack access to devices. Wi-Fi, data packages, electricity, books, and other required equipment.

- 4. Plug the financial gaps in the HIV programming portfolio. Early infant diagnosis, self-testing, and family-based testing to find the many children living with HIV who go undiagnosed, antiretroviral therapy for older children, and prevention for adolescent girls and boys all stand out in the report as underfunded areas. Moreover, dolutegravir, administering long-acting pre-exposure prophylaxis among pregnant HIV-negative women, maternal retesting, longitudinal tracking of mother-baby pairs, and early linkage to treatment or prevention services are all proven innovations that need to be scaled up.
- 5. Share costs with those seeking health system strengthening, pandemic preparedness, universal health coverage, education, economic growth, and other sectors that directly affect children and adolescents affected by HIV. Ensuring the existence of high-functioning clinics and community-health services, schools, social protection, support for gender equality, protection from violence, early childhood development, and employment opportunities—to name but a few—are goals that could and should be shared with other sectors. This means working together to align strategies and to target excluded children, adolescents, and caregivers with a joined-up package of support.
- 6. Increase the visibility of funding for children and adolescents affected by HIV and the impact it is having. This is vital for sustaining commitment, maintaining accountability, and ensuring value

- for money. Governments and donors must report annually on both spending on and results for children and adolescents. Such data should also be reflected in the UNAIDS annual *Global AIDS Update*. This requires support for those in receipt of donor funding to track and feed in results, as well as a straightforward unified framework that applies to all countries and donors. The more detail the better. Knowing the age group, sex, and intervention type helps ensure that money is reaching those who need it most and that it is having results.
- 7. Strengthen the voices of children, adolescents, caregivers, and those who work alongside them in monitoring and decision making regarding funds. We must support the Global Fund country coordinating mechanisms, the PEPFAR country operational planning processes, thematic working groups under national ministries of health, and other subnational planning and evaluation and accountability processes and other platforms that shape and report on how funding is used. This includes building their capacity more broadly so that they, and the constituents they represent, can participate meaningfully.
- 8. Research what is happening to children and adolescents and act on it. Data on this population must be incorporated into data collection and decision-making processes, including in the population-based HIV impact assessment surveys that guide much of the global HIV response.





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ANNEX. ESTIMATING CURRENT EXPENDITURES

An estimate of current spending on HIV programs for children and adolescents is necessary to understand how well current spending meets needs and, if there is a gap, which interventions have the largest deficit.

Estimates of current expenditures on HIV programs for children and adolescents

Data from major donors, including PEPFAR and the Global Fund, describe AIDS financing in toto but do not provide enough detail about interventions and beneficiaries to extract just those components that affect children and adolescents. Therefore, we have used estimates prepared by UNAIDS of spending by detailed intervention. Those estimates are based on National AIDS Spending Assessments, or NASAs, that apply a health accounts framework to estimate sources and uses of funds. Estimates have been produced for more than 100 countries, but not all countries have conducted NASAs in all years. On average, estimates are available for three years per country during the period 2012 to 2020. The entire database can be downloaded from the UNAIDS HIV Financial Dashboard at https://hivfinancial.unaids.org/hivfinancialdashboards.html.

We have extracted expenditure estimates for 14 interventions, shown below. These use the same wording as that of the NASA databse:

- 1.2.2. Paediatric antiretroviral treatment
- 2. Prevention of vertical transmission of HIV
- 3. Prevention of mother to child transmission
- 3.4. Voluntary medical male circumcision (VMMC) in high-prevalence countries
- 3.3.6. PrEP for young women and adolescent girls in high-prevalence countries
- 3.11. Cash transfers to girls (high-prevalence countries)
- 2.2. Early infant diagnosis
- 6. Social protection
- 1.5. Programs for men who have sex with men
- 1.6. Programs for sex workers and their clients
- 3.7. Prevention, promotion of testing and linkage to care programs for persons who inject drugs (sub-total)
- 3.8. Prevention, promotion of testing and linkage to care programs for transgender persons
- 5. Programs for children and adolescents
- TOTAL GRAND (including other essential programs not listed above)

Two of the categories pertain to PMTCT ("2. Prevention of vertical transmission of HIV" and "3. Prevention of mother to child transmission"). Early NASAs used the category "3. Prevention of mother to child transmission," but that was later changed to "2. Prevention of vertical transmission" with more subcategories. We have extracted both since they are used in different years.

Some countries used the catchall category "5. Programs for children and adolescents" rather than the more detailed components. We have included this category as there should be no overlap with the more detailed categories.

Some categories, such as programs for key populations, refer to all adults (1.5 programs for men who have sex with men; and 1.6 programs for sex workers and their clients). We have extracted the spending in these categories and estimated the proportion benefiting children and adolescents as follows:

- Key populations: 7%. The entire category refers to adults 15 years and older. According to World Population Prospects 2019 (https://population.un.org/wpp/publications/files/wpp2019_highlights.pdf), the population 15–17 in 2020 in less developed regions (326 million) is 7% of the population 15+ (4.75 billion).
- VMMC: 55%. Data reported to UNAIDS on the number of VMMCs conducted in 2019 indicate that 1.66 million VMMCs were provided to boys under age 18 out of a total of 3.05 million VMMCs with the age of the recipient reported.

• Pre-exposure prophylaxis (PrEP) and cash transfers for adolescent girls and young women (AGYW): 30%. Estimates from World Population Prospects 2019 for less developed regions in 2020 are 157 million females 15–17 and 516 million females 15–24, so 30% of AGYW are 15–17.

There may well be expenditures for children and adolescents hidden within other categories. For example, some countries may have reported child treatment only in the overall treatment category. We have no way of identifying and extracting those amounts, so these results are probably a low estimate of actual spending.

Because estimates are available for multiple years for some countries and the amounts often vary quite a bit from year to year, we tested three different approaches to estimating current expenditures:

- 1. The average expenditure for all available years for each country
- 2. Expenditures in the most recent year available for each country
- 3. The maximum expenditures across all available years for each country

The total expenditure on children and adolescents across all countries was \$1.2 billion for the most recent year, \$1.3 billion for the average, and 41.8 billion for the maximum. We select the average as best approach to avoid some of the large year-to-year fluctuations.

Resource needs in 2025 from UNAIDS' Global AIDS Strategy 2021-2026

UNAIDS has estimated the resources needed to achieve HIV targets by 2025 (see End Inequalities. End AIDS. Global AIDS Strategy 2021–2026, https://www.unaids.org/en/Global-AIDS-Strategy-2021-2026). The strategy includes 40 interventions and population combinations. We have extracted those relating to children and adolescents under the age of 18. For some categories, all benefit children under 18, such as pediatric treatment and PMTCT. For the other categories, we have estimated the percentage of the population that is under 18 as shown in Table A1.

Note that this estimate is for 2025.

Table A1. Estimation of Resource Needs for Children and Adolescents 0-17 Years Old in 2025

Intervention	Resource Needs in 2025 (Millions of US\$)	Percent to 0-17 year olds	Needs for CABA	Notes			
Adolescent girls and young women (15-17)							
PrEP	\$70	30%	\$21	1			
STI treatment	\$101	30%	\$30	1			
Comprehensive sexuality education	\$53	100%	\$53	2			
Economic empowerment	\$232	100%	\$232	3			
Adolescent boys and young men (15-17)	Adolescent boys and young men (15-17)						
STI treatment	\$52	30%	\$15	1			
Comprehensive sexuality education	\$57	100%	\$57	2			
Voluntary medical male circumcision	\$108	55%	\$60	4			
РМТСТ							
PMTCT	\$200	100%	\$200	5			
Treatment							
Ages 0-14	\$361	100%	\$361	6			
Ages 15-17	\$8 696	3%	\$252	7			
Testing	\$1 051	6%	\$61	8			
Key populations (15-17)							
Sex workers	\$752	7%	\$53	9			
MSM	\$1 782	7%	\$125	9			
Transgender	\$706	7%	\$49	9			
PWID	\$2 674	7%	\$187	9			
Prisoners	\$338	7%	\$24	9			
Other							
Socioeconomic support (mostly OVC)	\$263	100%	\$263	10			
Above site level costs	\$3 150		\$368	11			
Program management	\$2 450		\$286	12			
Total	\$23 097		\$2 698				

- According to World Population Prospects 2019, 30% of all 15-24 year olds in less developed regions in 2020 are 15-17
- 2. Most students will be 15-17
- 3. The goal of these interventions is to keep girls in school, so the target will be 15-17 year olds
- 4. Based on reporting to WHO/UNAIDS Global AIDS Monitoring (GAM) 55% of VMMC occurred to boys under 18
- 5. Benefits new borns so 100% of resources are counted

- 6. All are under 18
- In 2020 UNAIDS estimates for LMIC are that 2.5% of PLHIV 15+ (32.9M) are 15-17 (0.938M)
- 8. 5.8% of all PLHIV are 0-17
- 9. 7% of the population 15+ in less developed countries in 2020 is 15-17
- 10. Orphans are 0-17 by definition
- 11. 18% of direct costs
- 12. 14% of direct costs

CABA = children affected by AIDS; PrEP = pre-exposure prophylaxis; STI = sexually transmitted infection; PMTCT = prevention of mother-to-child transmission; MSM = men who have sex with men; PWID = people who inject drugs; OVC = orphans and vulnerable children; VMMC = voluntary medical male circumcision; LMIC = low- and middle-income countries; PLHIV = people living with HIV

Resource needs in 2021 required to achieve the targets today

An alternative approach to estimating resource needs is to calculate the percentage increase in current spending required to achieve the target coverage level. This approach is illustrated in Table A2. The estimated current spending (in the second column) is increased by the ratio of the target coverage to the current coverage (columns 3 and 4) to estimate needs. This approach assumes that the target coverage could be achieved if more resources were available. Estimates of current coverage are not available for some interventions, so we use the UNAIDS estimated resource needs for those interventions.

The estimate of resource needs shown in Table A2 of \$2.7 billion is close to the estimate shown in Table 1 of \$2.9 billion.

Table A2. Resource Needs and Gap to Meet Coverage Targets

Intervention	Current Spending	Coverage	Target	Needs	Gap
PMTCT	\$357 000 000	88%	95%	\$385 397 727	\$28 397 727
Early infant diagnosis	\$22 000 000	63%	95%	\$33 174 603	\$11 174 603
Pediatric ART	\$254 000 000	68%	90%	\$336 176 471	\$82 176 471
ART for 15-17	\$93 000 000	73%	90%	\$114 657 534	\$21 657 534
Cash transfers for AGYW	\$1 000 000			\$69 566 223	\$68 566 223
PrEP for AGYW	\$2 000 000			\$20 999 181	\$18 999 181
VMMC	\$92 000 000	80%	90%	\$109 324 793	\$17 324 793
Key populations	\$6 000 000		95%	\$414 005 570	\$408 005 570
Social protection	\$386 000 000			\$386 000 000	\$-
Children and adolescents	\$96 000 000			\$96 000 000	\$-
Sub-total	\$1 309 000 000			\$1 965 302 101	\$656 302 101
Above-site level costs	\$262 000 000			\$393 000 000	\$131 000 000
Program management	\$209 000 000			\$314 000 000	\$105 000 000
Total	\$1 780 000 000			\$2 672 302 101	\$892 302 101

PMTCT = prevention of mother-to-child transmission; ART = antiretroviral therapy; AGYW = adolescent girls and young women; PrEP = pre-exposure prophylaxis; VMMC = voluntary medical male circumcision



