# HIV/AIDS Intervention Packages in Five Countries: A Review of Budget Data

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## Abstract

More than ever, global health funding agencies must get better value for money from their investment portfolios; to do so, each agency must know the interventions it supports and the sub-populations targeted by those interventions in each country.

In this study we examine the interventions supported by two major international AIDS funders: the Global Fund to Fight AIDS, Tuberculosis, and Malaria ('Global Fund') and the President's Emergency Plan for AIDS Relief (PEPFAR).

The Global Fund typically posts PDF copies of its program grant agreements (PGA) to its public-facing website; some of these documents provide limited information on the portfolio of interventions supported by grant monies. Consequently, we first construct a sampling frame over 2002-12 of 20 of the Global Fund's 'high-impact countries'. From this frame, five countries – Ethiopia, Nigeria, South Africa, India, the Philippines – are purposively selected for data extraction from the PGAs, as these countries represent significant funding levels and diverse regions and epidemics.

In these five countries, we use extracted Global Fund data and publicly available PEPFAR data to compare the financed intervention package.

We find that only 35% of publicly posted Global Fund PGAs in 20 high-impact countries provide any budget information on intervention package. In Ethiopia, Nigeria and South Africa, a significant proportion of Global Fund spending goes to care and treatment, whereas in India and the Philippines the Global Fund spends a higher proportion on prevention than treatment. PEPFAR consistently spends a higher share on prevention than the Global Fund in every country examined. Neither the Global Fund nor PEPFAR report enough data to analyze intervention package by target population.

The absence of information on intervention package and service delivery areas in the Global Fund's PGAs raises a troubling concern: many publicly available grant documents are not clear on what interventions, sub-populations, or disease-control objectives are being funded in their budgets, data which are essential for informing national and international policymakers seeking value for money.

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# 1. Introduction

To achieve an "AIDS-free generation," each country must "optimize the returns from AIDS investments, particularly by ensuring greater efficiency".[1] Each country must determine its optimal strategy – the package of interventions, populations targeted, and the delivery or implementation strategy – to control its AIDS epidemic. In recent years, UNAIDS has emphasized the importance of tailoring a mix or package of interventions to a country's epidemiology through the UNAIDS Investment Framework[2] and other work on "Know Your Epidemic"[3], "Modes of Transmission"[4], and 'most at-risk populations' (MARPs)[5,6,7].

These analyses have shown likely mismatches between aggregate investments in HIV prevention and the modes of disease transmission. For example, men who have sex with men (MSM) in Latin America tend to receive scant resources for HIV prevention, relative to their central role in the region's epidemic; at one extreme in Costa Rica, MSM received only 1% of the country's overall expenditure on HIV prevention, despite representing an estimated 60% of all infections.[8] An analogous mismatch was observed in Ghana, where 99.2% of AIDS funding failed to specifically reach high-risk populations, despite evidence that 76% of HIV transmission in Accra were driven by the commercial sex industry.[9] While these crude comparisons are not conclusive, they are highly likely to represent suboptimal allocations, even as some interventions for prevention are generally cheaper than treatment.

These forms of international guidance have mainly focused on understanding country epidemiologic contexts through enhanced surveillance and measurement, with lesser emphasis on determining the optimal package or mix[10] of interventions given a budget constraint. The optimal strategy requires, at a minimum, information on the current set of interventions used in country, the relative unit costs of those interventions, and the country's epidemiologic context.

Global-health funding agencies in the fight against AIDS – including the Global Fund to Fights AIDS, Tuberculosis, and Malaria (henceforth 'the Global Fund') – have increasingly recognized the importance of optimizing their mix of interventions. For example, the Global Fund has published its intention to achieve greater impact with its portfolio of HIV/AIDS interventions and to support tailored responses to epidemics.[11] Specifically, the Global Fund seeks to define "highest-impact interventions" and to "[align] interventions with changing epidemiology and country context, new technological advances, changes in donor funding, and performance to date" in cooperation with its technical partners. [12] If done well, these policies could help the Global Fund to generate greater value for money and improved allocative efficiency, i.e. putting the right interventions in the right places for the right populations.

But for each country, even if each individual agency determines and implements an optimal investment strategy, the cumulative country investment portfolio – including all agency, NGO, and government investments – may still be suboptimal. Thus, in choosing the optimal strategy for a country, a key challenge lies in the fact that the 'country' is not a

unitary decision maker. Even if a coherent, optimal strategy could be determined through a technocratic process, in practice there are many different actors, both domestic and foreign, who would need to effectively coordinate their efforts. Foreign assistance accounts for a large proportion of total AIDS funding in most sub-Saharan countries. Given the large number of actors working on AIDS in a country, determining and implementing the optimal strategy to achieve an AIDS-free generation will therefore require sharing information on each actor's investments and activities, which in turn would lead to greater coordination. Knowing the distribution of each donor's investments between interventions, target populations, and delivery channels is thus a critical first step to achieving an optimal disease-control strategy.

However, there are substantial gaps in the information sharing between donors and country governments. For example, in the Institute of Medicine's recent evaluation of the President's Emergency Plan for AIDS Relief (PEPFAR), several country representatives noted how the lack of transparency hindered their ability to choose the optimal strategy to fight AIDS[13]:

> They want to know more than what's been planned in the Country Operational Plans—they want to know where (geographically) the money is going and what services are being supported so that they can identify unmet needs.

Choosing an optimal intervention mix for a country – and specifying each donor's contribution – presumes knowing current spending by intervention and targeted population, in addition to country epidemiology. In this paper we explore the current intervention package in five countries supported by the Global Fund and PEPFAR, the two largest international HIV/AIDS financiers. We also report on the public availability and usability of information on the Global Fund's expenditures by country, intervention category, and target population, available in Global Fund's program grant agreements (PGAs). While we are not able to assess the extent of misallocation through our analysis, we contend that the lack of publicly available data on intervention package is itself an indication of suboptimal allocations.

## 2. Data and Methodology

In this study, we consider three main sources of data. The first source of data is from the Global Fund and its PGAs, which are legal documents that outline the Fund's relationship to its grantees, i.e. the principal recipients. The second source of data is on the distribution of PEPFAR investments by intervention and by country, extracted from PEPFAR's FY2011 operational plan. The third and final data source is the UNAIDS AIDSinfo database.

### 2.1. The Global Fund's program and intervention budget

In general, the Global Fund is relatively transparent with respect to its grant disbursement information. For example, the Global Fund has a public Price and Quality Reporting (PQR) database, which provides "an indicative picture of the range of prices paid by reporting grant

recipients as estimated at the time of delivery of the products in the recipient country." [14] The PQR database, however, is limited to product and commodity expenditures, and while an important global public good, the PQR has limited scope and completeness of reporting.[15] The Global Fund also provides extensive public data on its grants and disbursements.[16]

However, despite the Global Fund's general embrace of open data, the Global Fund does not publicly release disaggregated data on its total expenditures (either planned or disbursed) by intervention for *each* country. Our past requests for data from the Global Fund's internal databases (such as the Enhanced Financial Reporting System[17], the Cost Per Service (CPS) database, and other databases which contain expenditure information) have been unsuccessful; the Global Fund has communicated that the datasets require considerable cleaning and contextual understanding to be useful. The extent of detail contained within those databases is unclear, and others have criticized the Global Fund for its fragmentation of internal databases.[18]

Nevertheless, in *some* of its 'program grant agreement' (PGA) documents[19], the Global Fund provides summary information on the country-level planned expenditures by intervention. In other Global Fund document types that we reviewed, we were not able to find any information on spending by service delivery area (i.e. general categories of interventions and budget lines), or by target population. One exception is that the original proposal (submitted before the PGA document) sometimes contains SDA data. However, this information is not standardized and is ultimately substituted by the PGA. Therefore, to compile planned expenditures on intervention package in Global Fund countries (and without access to internal Global Fund databases), one must manually and individually extract information from each PGA document for each country and round, and then arrange the data for analysis.

Given these constraints, we limit our sample to a small number of countries. We first consider the Global Fund's 20 'High Impact Countries', a new designation in part because these countries account for "70% of the Fund's current portfolio as well as 70% of the world's disease burden" (see appendix 1 for list of high-impact countries).[20] We construct a sampling frame by country and round to see how many PGAs contained information on service delivery area. In the sample of 20 countries and 132 PGA documents, only 46 (35%) PGA documents reported service delivery areas (see appendix 2). This low level of public documentation may suggest that service delivery areas are not generally emphasized at the time of grant signature (even though the Principal Recipient of the grant is responsible at the end of each year for inputting grant expenditures by category into the Enhanced Financial Reporting System, and the Local Fund Agent is responsible for reviewing the reporting[21]).

Next, from the 20 high-impact countries, we selected 5 countries – Ethiopia, South Africa, Nigeria, India, and the Philippines – reflecting a mix of country epidemic types (generalized, concentrated, low)[22], geographic regions, a relatively high volume of historical funding, and with a large percentage of PGA documents with service delivery area (SDA) information

reported. Table 1 presents a summary of the countries chosen for this analysis. We found that, of these 5 countries, 38% (16 of 42) of PGAs had SDA information, though these grants reflected 58% of the total grant volume of their countries. This suggests that grants which account for a larger volume of funding are more likely to have SDA information than grants with a smaller volume of funding. For these 5 countries over 10 rounds, SDA information was extracted manually into a spreadsheet accompanying this note.

**Table 1. Selected Global Fund 'High-Impact Countries'**

| Country | Epidemic | % of grants with SDA | Number of grants with SDA | Total HIV grants | % of total volume of grants with SDA | Volume of grants with SDA ($) | Total volume of grants ($) |
|---|---|---|---|---|---|---|---|
| Ethiopia | *G* | 60.0 | 3 | 5 | 54.5 | 412,373,092 | 757,030,743 |
| Nigeria | *G* | 16.7 | 2 | 12 | 85.9 | 196,605,690 | 228,884,171 |
| South Africa | *G* | 37.5 | 3 | 8 | 75.9 | 140,166,133 | 184,559,390 |
| India | *C* | 38.5 | 5 | 13 | 44.3 | 237,125,413 | 535,003,744 |
| Philippines | *L* | 75.0 | 3 | 4 | 76.0 | 16,529,269 | 21,762,194 |
| Total | .. | 38.1 | 16 | 42 | 58.1 | 1,002,799,597 | 1,727,240,242 |

*Notes:* 'Epidemic' column refers to HIV epidemic type: G refers to generalized; C to concentrated; L to low; and '..' means not applicable. SDA refers to service delivery areas. Grants refer period 2002-12.

Raw SDA information from each PGA included four main columns: the country, the round, the expenditure, an "objective" (sometimes an explicit objective such as "To improve behavior change communication and STI management among vulnerable groups," and at other times a general category such as "Health Products and Health Equipment") and a "service delivery area" (e.g. "Prevention PMTCT," but was not often available). Of the PGAs with SDA information, most included a stated objective, but few had filled in an SDA category. Based on the latter two columns, we generated aggregate categories of 'Interventions' (14 possible values) and 'Population' (8 possible values). In addition, for these 5 countries, we further analyzed available data from PEPFAR's most recent operational plan (2011)[23] and from the UNAIDS AIDSinfo database[24].

## 2.2. PEPFAR expenditure data

Since 2011, PEPFAR's annual operational plans have provided machine-readable data on approved funding *by country* (or operating unit/region) and *by budget code* (similar to a Global Fund 'service delivery area') for prevention, care and treatment, and other funding categories.[25] More detailed information on service delivery areas are available within country-specific operational reports but are not machine-readable, much like the Global Fund's PGAs. For example, a South African PEPFAR Operational Plan reports expenditures by each partner and area in 581 pages.[26]

### 2.3. UNAIDS AIDSinfo database

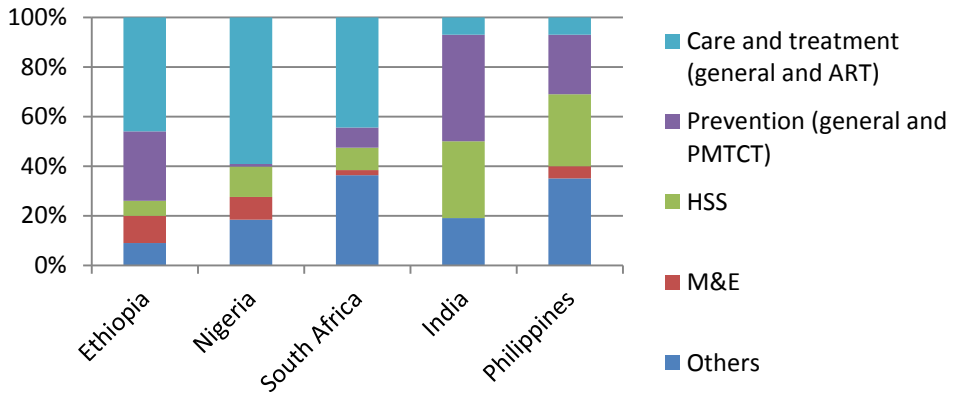
The UNAIDS AIDSinfo database[27] aggregates all the data reported by countries and development partners regarding epidemiology, most at-risk populations, institutions and expenditures. The expenditure data contained within this database comes from National AIDS Spending Assessments (NASAs), while data for other indicators are provided by UNGASS (United Nations General Assembly Special Session on HIV/AIDS). While the database includes a plethora of indicators, data is often incomplete and inconsistent, as we discuss in the next section (see appendix 3 for a list of indicators). Nevertheless, we use this database to supplement our comparison of data for the purposively selected countries.

## 3. Results

### 3.1. Results from Global Fund PGAs

Figure 1 presents the percentage of Global Fund investment by aggregated intervention category in the five selected countries, and table 2 presents a country's investments by finer intervention categories. In countries with a generalized epidemic (Ethiopia, Nigeria, and South Africa), funding for care and treatment appears to account for a major share of expenditure relative to prevention. In Nigeria and South Africa, prevention accounted for 1% and 8%, respectively, of total budgets. Funding for monitoring and evaluation varied across countries. The 'others' category includes a variety of cost elements which were not clearly prevention or treatment (i.e. 'administration', 'communication', and 'supportive environment'). This 'others' category also contains SDAs which may include both prevention and treatment aspects (i.e. 'drugs, products, and procurement' and 'TB and HIV'). Figure 1 reveals considerable country heterogeneity that is masked when examining aggregate global spending by service delivery area (see appendix 4).

**Figure 1. Percentage of Global Fund investment by aggregated intervention category**




*Notes:* PMTCT refers to 'prevention of mother-to-child transmission'; HSS to 'health systems strengthening'; and M&E to 'monitoring and evaluation'. Because of rounding, categories do not sum exactly to 100%.

**Table 2. Global Fund investments (US$) by finer intervention categories**

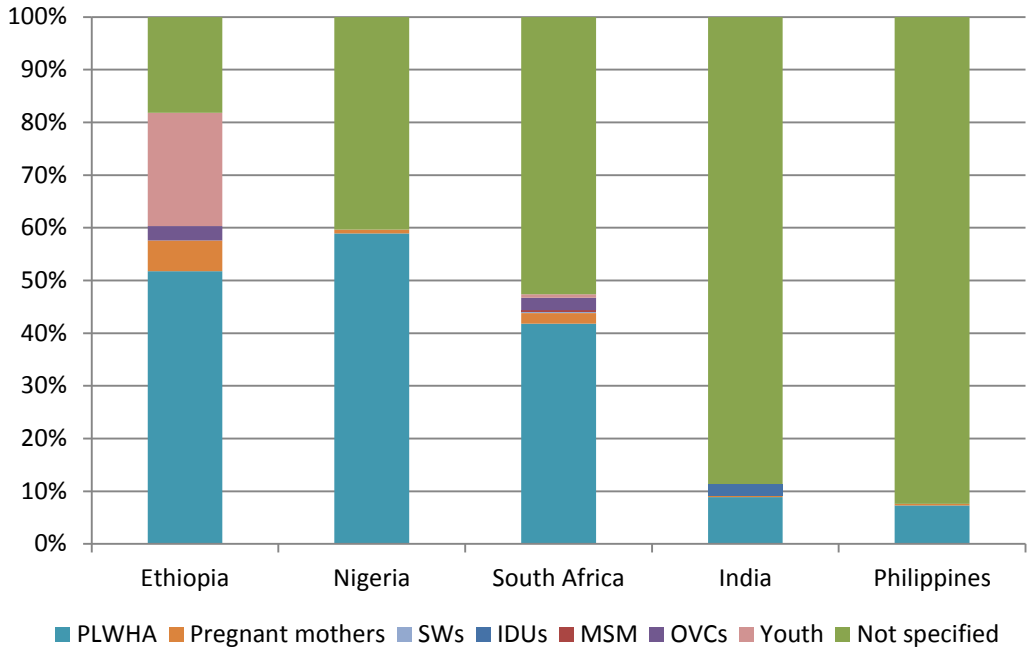
| Intervention category | Ethiopia | Nigeria | South Africa | India | Philippines | Total |
|---|---|---|---|---|---|---|
| Care and treatment - general | 188 | 66 | 14 | 16 | 1 | 285 |
| Care and treatment - ART | 3 | 50 | 48 | 0 | 0 | 102 |
| Drugs, products, and procurement | 1 | 17 | 1 | 18 | 1 | 38 |
| Testing and counseling | 0 | 0 | 2 | 10 | 1 | 12 |
| Prevention - general | 90 | 1 | 9 | 102 | 4 | 206 |
| Prevention of mother-to-child transmission | 24 | 1 | 3 | 1 | 0 | 29 |
| Tuberculosis and HIV | 0 | 0 | 0 | 1 | 0 | 1 |
| Health systems strengthening | 24 | 23 | 12 | 73 | 5 | 138 |
| Monitoring and evaluation | 45 | 19 | 3 | 1 | 1 | 68 |
| Research | 0 | 0 | 0 | 0 | 0 | 0 |
| Administration | 0 | 18 | 21 | 10 | 3 | 51 |
| Communication | 0 | 0 | 9 | 0 | 0 | 9 |
| Supportive environment | 35 | 0 | 8 | 5 | 2 | 51 |
| Not specified | 1 | 1 | 11 | 1 | 0 | 13 |
| Total | 412 | 197 | 140 | 237 | 17 | 1,003 |

*Notes:* Dollars are in current terms for grants over 2002-12. PMTCT refers to 'prevention of mother-to-child transmission'; HSS to 'health systems strengthening'; and M&E to 'monitoring and evaluation'.

Next, we considered how Global Fund investments are tailored to different target populations, such as specific high-risk groups, based on narrative descriptions within the PGA documents. Figure 2 presents the same Global Fund investments categorized by 'target population'. Among PGA documents which included service delivery information, target populations were rarely described or recorded.

In countries with a generalized epidemic, a large majority of investments are directed toward 'people living with HIV/AIDS' (PLWHA), a relatively broad population category. Ethiopia was unique for specifying targeting to pregnant mothers, youth, and 'orphans and vulnerable children' (OVCs), with a small percentage of investments targeting a 'not specified' population (a label we assigned when there was no clear target population for the intervention). Surprisingly, for India and the Philippines, where the epidemic is 'concentrated' or 'low' respectively – and where the epidemic is presumably concentrated in specific high-risk populations or sub-populations with certain socioeconomic characteristics – the largest proportion of investments did not explicitly specify a target population.

**Figure 2. Global Fund investments by target population category in 5 countries, 2002-12**

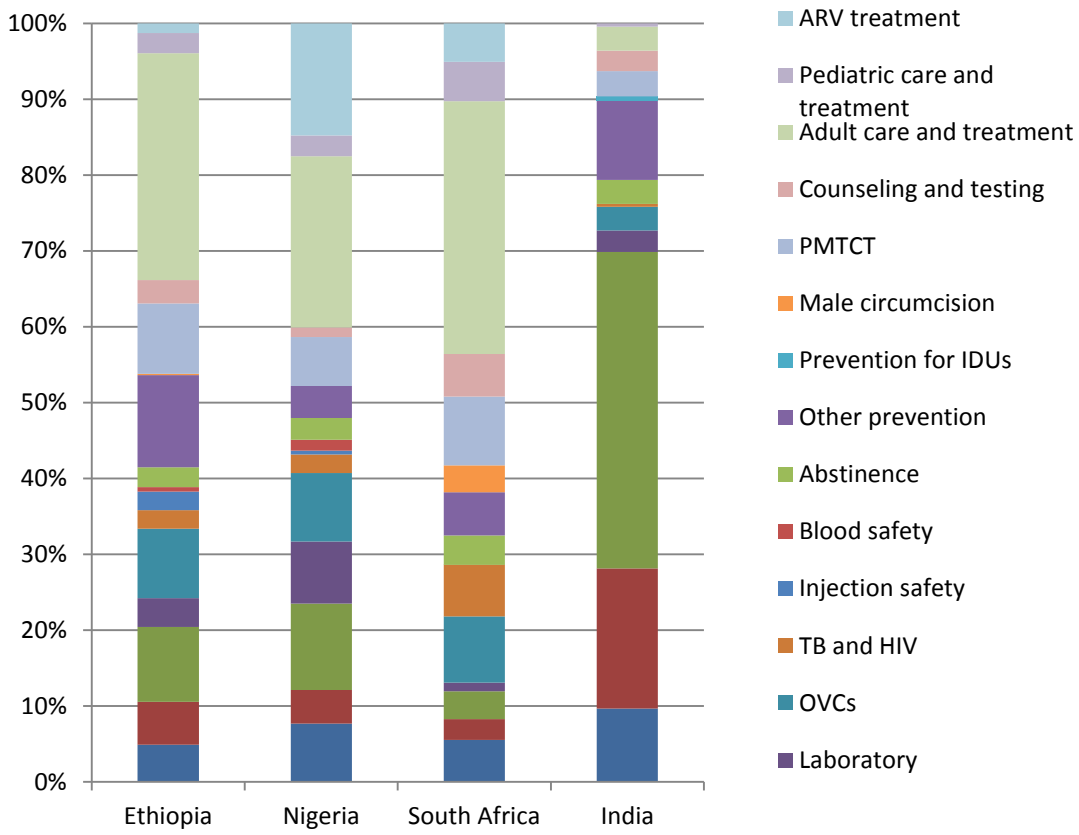



*Notes:* PLWHA refers to 'people living with HIV/AIDS'; SWs to 'sex workers'; IDUs to 'injecting drug users'; MSM to 'men who have sex with men'; and OVCs refers to 'orphans and vulnerable children'.

### 3.2. Results from PEPFAR

Figure 3 presents PEPFAR's investments by intervention category (referred to as 'budget codes') from the most recent operational plan for FY2011. Although treatment accounts for a sizeable share of PEPFAR's investments in countries with a generalized epidemic (34% in Ethiopia, 40% in Nigeria, and 44% in South Africa), the prevention share of the portfolio is significant (27%, 16%, and 22%, respectively). This consistent emphasis by PEPFAR on prevention stands in contrast to the Global Fund PGAs sample analyzed above. A large share of PEPFAR investment is devoted to several other categories including blood safety, injection safety, laboratory strengthening, etc. In India, unlike other countries in our sample, a sizeable share is devoted to 'strategic information,' which presumably includes monitoring and evaluation and ongoing surveillance.

**Figure 3. PEPFAR investments by intervention category in 4 countries, 2011**




*Notes:* The Philippines is not a PEPFAR focus country. ARV refers to 'anti-retroviral treatment'; PMTCT to 'prevention of mother-to-child transmission'; IDUs to 'injecting drug users'; TB to 'tuberculosis'; OVCs to 'orphans and vulnerable children'; and HSS to 'health systems strengthening'. Appendix 5 presents the numbers used in this figure.

### 3.3. Results from UNAIDS AIDSinfo

The UNAIDS AIDSinfo database for AIDS expenditures is largely incomplete, e.g., the database does not have any information for Ethiopia – the top recipient of Global Fund disbursements for HIV/AIDS. Out of the 5 countries in our sample, it only has expenditure data for South Africa, and it only reports aggregate domestic spending on HIV – not divided by service delivery areas or target populations. The incompleteness in this database would suggest that UNAIDS does not incentivize PEPFAR or Global Fund to report their disbursements by intervention category for this public good.

## 4. Discussion and Conclusion

In our study, we attempt to understand the investment packages by the Global Fund and PEPFAR in a set of five countries. We found that only 38% of grants included any information on budgets for service delivery areas or interventions. Of grants which had

some information, the available information was often not sufficiently disaggregated or detailed. For example, a major percentage of investments in India and the Philippines, both countries with concentrated epidemics, made no mention of the target population of its prevention and treatment efforts. Only limited public information is available on Global Fund HIV/AIDS budgets or spending by intervention category, and even less information is available on associated target populations and specific high-risk categories (e.g. by age, sex, occupation, or transmission-related behaviors). With little information available to the public, an analysis of optimal spending in Global Fund and PEPFAR recipient countries was not possible. The absence of this kind of information in PGAs raises the troubling concern that many grants may not be clear on the interventions, sub-populations, or disease-control objectives being funded in their budgets.

Even if the Global Fund itself has more extensive information on general intervention categories and sub-population categories at the country level, it does not publicly share this data through its PGAs nor does it place significant emphasis on it in its PGAs. This opacity prevents other donors, such as PEPFAR, from effectively coordinating their investments to form a coherent, optimal intervention package at the country level.

In the Global Fund's New Funding Model (yet to be fully implemented), if a country's application ('Concept Note') followed by PGAs are supposed to be based on National Strategic Plans (NSPs), these NSPs themselves must contain such information on intervention packages, which is not necessarily the case. Thus it holds that there are good reasons for the Global Fund and PEPFAR to support the collection of such data to improve the quality of the NSPs, which in turn should better inform a country's grant application process.

If the Global Fund is already collecting detailed budget information, then the cost to release it (at least to other funders such as PEPFAR) should be zero for countries and marginal for the Global Fund secretariat. If the Global Fund and recipient countries are not already collecting detailed budget information as part of an application (now called 'Concept Note'), the greater transaction costs needed should be offset by reducing other parts of the application. The Global Fund could enforce an 'opt-out' policy, whereby all countries must report by key population unless a country applicant fears governmental reprisal, e.g. releasing spending by key population.

Recently, PEPFAR made its spending by intervention category somewhat more transparent by making investments by intervention categories and by country machine-readable. The Global Fund should consider seriously engaging with PEPFAR to share best practices on improve such data while also sharing important country-level information on intervention categories and target populations to work towards optimizing investments within a country. At a minimum, there should be harmonization on agreed-upon categories of interventions used in budgeting, expenditure and costing analysis between PEPFAR and Global Fund.[28]

Further, UNAIDS does not take advantage of publicly available data such as through PEPFAR and the Global Fund to improve its AIDSinfo database, which is highly incomplete. Incentives to stimulate complete and accurate reporting by countries or by the Global Fund and PEPFAR to UNAIDS are needed.

In order to meet the objectives of its newly adopted Strategy Investment Framework[29], the Global Fund will need to improve its collection, cleaning, and ideally publication of information on current budgets and spending by intervention category and by sub-population. This data is a necessary pre-requisite for determining whether current allocations are appropriate for a country's epidemiologic context, both crudely (by 'epidemic type') and specifically (by sub-population and intervention).

A number of tools for planning, budgeting and costing are available to support such data collection. These tools – of which at least 13 are currently available – often cater to different diseases or donors, or serve different purposes and functions. [30] Given the large number of actors working on AIDS in a country, countries relying on foreign assistance have the formidable challenge of planning and budgeting for different actors with different timetables and requirements. The recent development of the OneHealth Tool[31] by the UN Interagency Group through the International Health Partnership and the World Health Organization's National Health Account Production Tool may be one positive step towards harmonizing budgeting requirements. The OneHealth Tool is promising because it can permit budgeting of investments by population targeted and/or reached in addition by disease category and intervention. A new memorandum of understanding between the Global Fund and the World Health Organization to use these tools to support applicants is promising – but focus is needed such that they permit identification of the source of the funding, e.g. the Global Fund, recipient (i.e. population at risk), and detailed intervention categories. These tools may help to reduce duplication in program budgeting for different donor audiences, although it would require that different donors are willing to accept a common budgeting platform. It is yet to be seen, however, whether these tools will increase budget transparency needed for better value for money.

In addition to ex ante budgeting and planning tools, there have also been a number of attempts to measure expenditures of unit costs in delivering HIV/AIDS services, e.g. through PEPFAR's expenditure analysis as well as new work by CHAI for a selected set of countries[32]. There is also work to use the National AIDS Spending Assessment (NASAs) to record ex post expenditures, but such exercises are not conducted regularly.[33] These ex post assessments and surveys are important complements to planning and budgeting tools. Further work is needed to better link the information obtained on service delivery unit costs with the planned budgets e.g. using the OneHealth Tool. This *tatonnement* and iterative process of linking budgets to expenditures is crucial and still underdeveloped. In particular, if a country can improve the quality of its NSP by budgeting intervention packages, the NSP could in turn feed into the Global Fund Concept Note, which in turn supports the collection of expenditure data by intervention and performance and thereby drives greater efficiencies and savings.[34]

A third encouraging area of work involves translating the UNAIDS Investment Framework into specific national strategies through modeling. UNAIDS and the World Bank appear to have begun such work for a selected number of countries for HIV/AIDS, a major step forward. But this data and modeling results – and particularly the assumptions used – need to be made transparent. As noted in the *More Health for the Money* report, the data requirements needed to make crude adjustments or to optimize impact through modeling are not onerous, though greater effort and greater actions are required.[35] These data include information on the available and expected budget over time, the set of interventions for prevention and treatment, and the epidemiologic profile of the population (including by at-risk population) – for which its availability and transparency are all the subject of this paper. In the long run, the country capacity to conduct these kinds of interrelated analyses – from budgeting, expenditure analysis, costing, and modeling – needs to be developed and institutionalized.

As the Global Fund pursues an ambitious Fourth Replenishment[36], one key question for donors and other Global Fund board members to ask and push the Global Fund secretariat will be an agenda for more health for the money. [37] As this paper has argued, one major area of this value-for-money agenda lies in the collection, availability, and transparency of information on investments by intervention category and key population at risk, in particular to better optimize investments among multiple funding agents, domestic and international. While this data is not onerous, it requires support from the Global Fund and PEPFAR, and, as this paper shows, much work remains.

## Appendix

**Appendix 1. List of High-Impact Countries**

| Africa 1 | Africa 2 | Asia |
|---|---|---|
| DR Congo | Ethiopia | India |
| Nigeria | Zambia | China |
| Cote d'Ivoire | Kenya | Indonesia |
| South Africa | Tanzania | Myanmar |
| North Sudan | Uganda | Pakistan |
| Ghana | Mozambique | Bangladesh |
| | Zimbabwe | Philippines |

**Appendix 2. High-Impact Countries and Number of Program Grant Agreements (PGAs) with Information on Service Delivery Area**

| | By Round: Number of Grants with SDA | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *10* | % Grants with SDA | Grants with SDA | Total Grants | Total HIV/AIDS Disbursements (2002-12) | HIV adult cases (2009) | Epidemic status |
| Ethiopia¶ | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0.60 | 3 | 5 | 1,027,027,392 | 2,156,528 | G |
| India¶ | 0 | 1 | 0.5 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0.35 | 4.5 | 13 | 535,003,744 | 2,300,000 | C |
| Nigeria¶ | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0.17 | 2 | 12 | 366,441,152 | 2,900,000 | G |
| China | 0 | 0 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0.38 | 1.5 | 4 | 288,605,920 | 730,000 | C |
| South Africa¶ | 0 | 0 | 1 | 0 | 0 | 0.5 | 0 | 0 | 1 | 0 | 0.31 | 2.5 | 8 | 286,270,816 | 5,300,000 | G |
| Zambia | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0.13 | 2 | 15 | 279,018,848 | 860,000 | G |
| Congo, Dem. Rep. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0.40 | 2 | 5 | 270,134,592 | 169,500 | G |
| Sudan | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1.00 | 3 | 3 | 176,295,920 | 250,000 | G |
| Zimbabwe | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.17 | 1 | 6 | 174,532,768 | 1,000,000 | G |
| Mozambique | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0.50 | 3 | 6 | 161,123,616 | 1,200,000 | G |
| Tanzania | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 1 | 1 | 0 | 0.31 | 2.5 | 8 | 147,872,608 | 1,200,000 | G |
| Kenya | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0.43 | 3 | 7 | 139,106,320 | 1,300,000 | G |
| Uganda | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0.40 | 2 | 5 | 118,000,000 | 1,000,000 | G |
| Ghana | 0.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0.42 | 2.5 | 6 | 67,742,720 | 240,000 | G |
| Bangladesh | 0 | 1 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0.30 | 1.5 | 5 | 56,676,104 | 6,200 | L |
| Indonesia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0.38 | 3 | 8 | 56,249,964 | 300,000 | C |
| Philippines¶ | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0.75 | 3 | 4 | 42,481,652 | 8,600 | L |
| Côte d'Ivoire | 0 | 0.5 | 0.5 | 0 | 0.5 | 0 | 0 | 0 | 1 | 0 | 0.42 | 2.5 | 6 | 42,228,560 | 380,000 | G |
| Myanmar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.33 | 1 | 3 | 33,362,420 | 230,000 | C |
| Pakistan | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.17 | 0.5 | 3 | 8,520,689 | 95,000 | L |
| Total | 1.5 | 4.5 | 4 | 3 | 5.5 | 4.5 | 5 | 6 | 7 | 5 | 0.35 | 46 | 132 | 4,276,695,805 | 21,625,828 | .. |

*Notes:* Compiled by authors. ¶ refers to country selected for extraction of service delivery area (SDA) information from program grant agreements (PGA). Round refers to Global Fund rounds. Countries assigned '1' if the program grant agreement (PGA) in that round had finer categories of service delivery area (SDA) information (e.g. indicating targeted sub-populations such as MARPs, OVCs, or PMTCT), and '0.5' if the PGA in that round had coarser SDA information (e.g. general categories of 'prevention', 'treatment', and 'supportive environment'). In general it was the case that if in a given round for a country, there were more than one PGA document, those PGA documents were generally consistent in the kind of SDA information available (e.g. all PGA documents for a given round in a country had either SDA information or did not; if SDA information was available, the PGA documents had categories which were all fine or all coarse.

**Appendix 3. Latest UNGASS and NASA Indicators[38]**

- UNGASS #1: Domestic and international AIDS spending by categories and financing sources.
- UNGASS #2: National Composite Policy Index (areas covered: prevention, treatment, care and support, human rights, civil society involvement, gender, workplace programmes, stigma and discrimination and monitoring and evaluation).
- UNGASS #3: Percentage of donated blood units screened for HIV in a quality quality-assured manner.
- UNGASS #4: Percentage of adults and children with advanced HIV infection receiving antiretroviral therapy.
- UNGASS #5: Percentage of HIV-positive pregnant women who receive antiretroviral medicines to reduce the risk of mother-to-child transmission.
- UNGASS #6: Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV.
- UNGASS #7: Percentage of women and men aged 15–49 who received an HIV test in the last 12 months and who know the results.
- UNGASS #8: Percentage of most-at-risk populations that have received an HIV test in the last 12 months and who know the results. UNGASS #9: Percentage of most-at-risk populations reached with HIV prevention programs.
- UNGASS #10: Percentage of orphans and vulnerable children whose households received free basic external support in caring for the child.
- UNGASS #11: Percentage of schools that provided life skills-based HIV education within the last academic year.
- UNGASS #12: Current school attendance among orphans and among non-orphans aged 10–14.
- UNGASS #13: Percentage of young women and men aged 15–24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.
- UNGASS #14: Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.
- UNGASS #15: Percentage of young women and men who have had sexual intercourse before the age of 15.
- UNGASS #16: Percentage of adults aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months.
- UNGASS #17: Percentage of adults aged 15–49 who had more than one sexual partner in the past 12 months who report the use of a condom during their last intercourse.
- UNGASS #18: Percentage of female and male sex workers reporting the use of a condom with their most recent client.

- UNGASS #19: Percentage of men reporting the use of a condom the last time they had anal sex with a male partner.
- UNGASS #20: Percentage of injecting drug users who reported using sterile injecting equipment the last time they injected.
- UNGASS #21: Percentage of injecting drug users who report the use of a condom at last sexual intercourse.
- UNGASS #22: Percentage of young women and men aged 15–24 who are HIV infected.
- UNGASS #23: Percentage of most-at-risk populations who are HIV infected.
- UNGASS #24: Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy.
- UNGASS #25: Percentage of infants born to HIV-infected mothers who are infected.

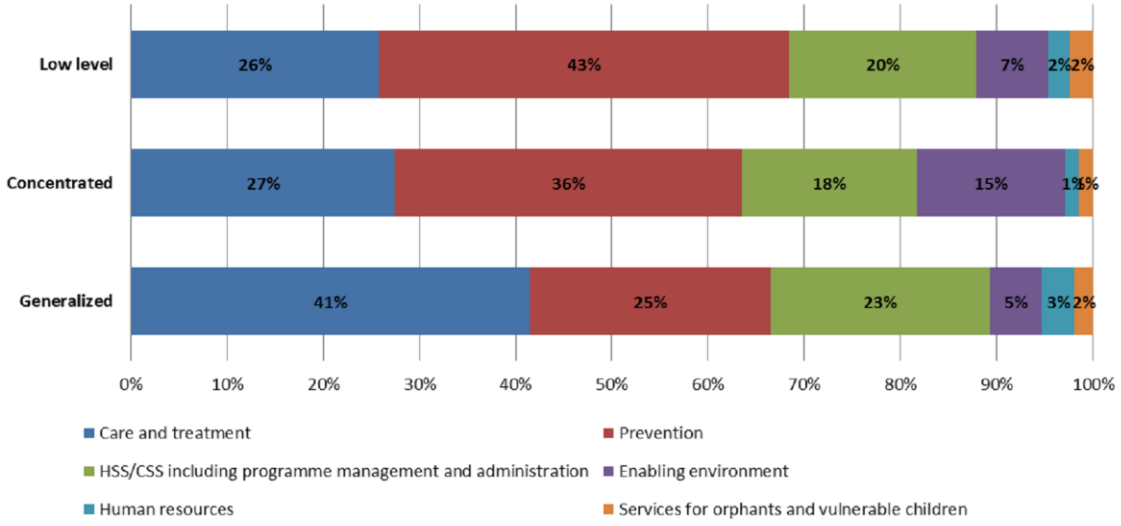
**Additional Recommended indicators**: "*Where they fit the needs of a country, national AIDS programmes are encouraged to use the set of core national indicators to ensure standardization of information over time and across countries.*"

- Additional Recommended #1: Percentage of health facilities with post-exposure prophylaxis available [disaggregated by exposure (occupational, non-occupational) and sector (public, private)].
- Additional Recommended #2: Percentage of health facilities that offer ART (i.e. prescribe and/or provide clinical follow-up) [disaggregated by sector (public, private)].
- Additional Recommended #3: Percentage of health facilities dispensing ARV that experienced a stock-out of at least one required ARV in the last 12 months [disaggregated by sector (public, private)]
- Additional Recommended #4: Percentage of health facilities providing ART using CD4 monitoring in line with national guidelines or policies, either on site or through referral [disaggregated by sector (public, private)].
- Additional Recommended #5: Percentage of sexually active young women and men aged 15-24 who received an HIV test in the last 12 months and who know their results [disaggregated by sex (female, male) and age (15-19, 20-24)].
- Additional Recommended #6: Percentage of TB patients who had an HIV test result recorded in the TB register [disaggregated by sex (female, male), age (0-4, 5-14, 15 and above), and HIV status (HIV positive, HIV negative)].
- Additional Recommended #7: Percentage of pregnant women who were tested for HIV and who know their results [disaggregated by service type (Antenatal Care, labour & Delivery, Postpartum)].
- Additional Recommended #8: Percentage of infants born to HIV infected women who received an HIV test within12 months [disaggregated by type/timing of testing

(virological testing within 2 months, virological testing between 2 and 12 months or antibody testing between 9 and 12 months)].

- Additional Recommended #9: Percentage of infants born to HIV infected women who are started on cotrimoxazole prophylaxis within two months of birth.
- Additional Recommended #10: Total number of male and female condoms available for distribution nationwide during the last 12 months per person aged 15-49 [disaggregated by condom type (male, female)]
- Additional Recommended #11: Percentage of young women and men aged 15-24 who report they could get condoms on their own [disaggregated by sex (female, male), age (15-19, 20-24)].
- Additional Recommended #12: Percentage of never married young women and men aged 15-24 who have never had sex [disaggregated by sex (female, male) and age (15-19, 20-24)].
- Additional Recommended #13: Percentage of men aged 15-49 reporting sex with a sex worker in the last 12 months who used a condom during last paid sexual intercourse [disaggregated by age (15-19, 20-24, 25-49), and population group (migrant workers, military,
- truck drivers, other)].
- Additional Recommended #14: Percentage of women and men aged 15-49 expressing accepting attitudes towards people living with HIV [disaggregated by sex (female, male), age (15-19, 20-24, 25-49), and education level (none, primary, secondary or higher)].
- Additional Recommended #15: Percentage of children under the age of 18 who are orphans [disaggregated by sex (female, male), age (<5, 5-9, 10-14, 15-17), and type of orphan (maternal, paternal, double)]

**Appendix 4. Global Fund AIDS spending by service delivery area and epidemic type[39]**



**Appendix 5. PEPFAR investments in 4 countries, 2011**

| Country | Ethiopia | Nigeria | South Africa | India |
|---|---|---|---|---|
| Admin | 14337558 | 37622738 | 30441139 | 3192000 |
| Strategic Information | 16597218 | 21592343 | 15132854 | 6099774 |
| HSS | 28948444 | 55650161 | 20018108 | 13763159 |
| Laboratory | 11062100 | 39957633 | 6368967 | 939400 |
| OVCs | 26800399 | 44150764 | 47764561 | 1030000 |
| HIV/TB | 7240871 | 11878943 | 37424589 | 120000 |
| Injection Safety | 7145552 | 2460039 | | |
| Blood Safety | 1672100 | 7142720 | 10000 | |
| Abstinence | 7712610 | 14028918 | 21165513 | 1040667 |
| Other Prevention | 35618999 | 20560241 | 31369480 | 3440000 |
| Prevention for IDU | | | | 200000 |
| Male circumcision | 506500 | | 19322253 | |
| PMTCT | 27134076 | 31579984 | 49872350 | 1100000 |
| Counseling and testing | 8980603 | 6036965 | 30877309 | 880000 |
| Adult care and treatment | 87612257 | 110292400 | 182988391 | 1055000 |
| Pediatric care and treatment | 7808284 | 13500790 | 28428781 | 140000 |
| ARV Treatment | 3774817 | 72159642 | 27906556 | |
| Total | 292952388 | 488614281 | 549090851 | 33000000 |

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