



# WHAT HAPPENS TO HIV/AIDS FUNDS AT THE COUNTRY LEVEL?

## A COMPARATIVE ANALYSIS OF EXPENDITURES BEFORE AND AFTER THE DONOR INFLUX IN KENYA, MALAWI, RWANDA, TANZANIA, AND ZAMBIA

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## Mission

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## **DISCLAIMER**

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# ACRONYMS

<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>ART</b>	Antiretroviral Therapy
<b>ARV</b>	Antiretroviral
<b>CRS</b>	Creditor Reporting System
<b>DAC</b>	Development Assistance Committee
<b>FY</b>	Fiscal Year
<b>GDP</b>	Gross Domestic Product
<b>GFATM</b>	Global Fund to Fight AIDS, Tuberculosis and Malaria
<b>HIV</b>	Human Immunodeficiency Virus
<b>KAIS</b>	Kenya AIDS Indicator Survey
<b>MAP</b>	Multi-country HIV/AIDS Program
<b>MOF</b>	Ministry of Finance
<b>MOH</b>	Ministry of Health
<b>NHA</b>	National Health Accounts
<b>NGO</b>	Nongovernmental Organization
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>PEPFAR</b>	President's Emergency Plan for AIDS Relief
<b>PLWHA</b>	People Living with HIV
<b>PMTCT</b>	Preventing Mother-to-Child Transmission
<b>PPP</b>	Purchasing-power Parity
<b>STD</b>	Sexually Transmitted Disease
<b>UNAIDS</b>	Joint United Nations Program on HIV/AIDS
<b>UNGASS</b>	United Nations General Assembly Special Session
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization



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# ABSTRACT

**Background:** Since 2002, there have been unprecedented increases in external assistance for HIV/AIDS from mechanisms like the US President's Emergency Plan for AIDS Relief, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the World Bank's Multi-country HIV/AIDS Program. While this surge in funding is a welcome development, perhaps more critical than the amount invested is how those funds are spent and whether or not they are meeting intended targets. Without this information, stakeholders of recipient countries are poorly equipped to make resource allocation decisions and track the impact of received funds. Recognizing this need, many countries are using a standard resource tracking tool called National Health Accounts to produce focused expenditure reviews, or "subaccounts," on HIV/AIDS. Most of the literature on this subject compares commitments and disbursements due to the availability of that data. Building on those analyses, this paper incorporates country-derived data that go one step beyond disbursements to reveal actual health expenditures on HIV/AIDS. With valuable trend data now available, this analysis looks at shifts in financing patterns from before the major donor surge of HIV/AIDS resources, to years after that surge began.

**Methodology:** Drawing from country subaccount data, this paper aims to describe changes in national HIV financing patterns for Kenya, Malawi, Rwanda, Tanzania, and Zambia before and after the influx of external financing for HIV/AIDS. With the influx of funds arriving in countries approximately in 2004, the "pre-influx period" occurs before 2004 and the "post-influx period" after 2004. Each country subaccount describes the flow of HIV/AIDS resources from their sources (public, private, and donor) to their end uses.

**Findings:** The total resource envelope for HIV/AIDS has increased universally among the study countries, largely due to the influx of donor funding. Donors contributed at least two-thirds of all spending on HIV/AIDS post influx. Spending per person living with HIV has decreased in all countries except Malawi. While people living with HIV (PLWHA) spend more for health care than the general population, this gap has narrowed substantially since the donor influx. For example in Zambia in the year 2002, the average expenditure by a person living with HIV was 485 percent higher than that incurred by someone in the general population and just 23 percent higher in the post-influx year of 2006. By adopting a more rigorous methodology, the Kenya AIDS Indicator Survey 2007 showed that PLWHA spent 56 percent more out-of-pocket on health care, on average, than the HIV-negative population.

One observes a shift from spending in the informal sector to increased resource consumption at hospitals, health centers, and clinics. There has been a spending increase in private for-profit hospitals in all countries and an increase in public hospitals in four of the five studied countries. Spending at traditional healers dropped by 23 percent (on average) compared to pre-influx levels.

The donor HIV influx was designed to be largely supplemental to local investment; however, in three of the five countries, government HIV contributions decreased in absolute terms compared to pre-influx levels. Domestic private company investments in HIV/AIDS also decreased in four of the five countries, in some cases by over 60 percent of pre-influx levels (Kenya, Rwanda, and Zambia).

Since the influx of donor funding began, the relative shares of HIV/AIDS funding controlled by government and donors have increased in general; however, shares controlled by private firms have decreased in all countries except Tanzania.

Finally, while the donor funds have increased substantially, a considerable proportion of these funds went to public health and prevention programs rather than curative care. In Kenya, less than 1 percent of donor funding was spent on health administration in 2002, but the share increased to about 21 percent in 2006. Similarly, government investments spent on public health programs and health administration have largely increased since the influx.

**Significance:** Positive consequences of the surge in HIV/AIDS resources include reduction of spending on health by PLWHA and decreased spending in the informal sector likely due to increased awareness and physical access of subsidized HIV treatment and care from the formal sector. However, the findings suggest that increases in external resource investment and management have implications for sustainability of HIV/AIDS programs, possibly displacing government investment in the response and prompting crowding-out of the private sector. It is critical to continue monitoring countries' health sectors through shifts in health financing. Regular data collection on country-level expenditure on health is critical for identifying strengths and weaknesses within the health system.

# I. INTRODUCTION

## I.1 BACKGROUND AND RATIONALE

Successful advocacy efforts of global health leaders and civil society have led to unprecedented increases in development assistance to combat HIV/AIDS. For just 2007 alone, over \$10 billion (US) was committed to fight the pandemic – a sizeable, 20-fold increase over 1998 levels of only \$485 million (Cohen 2008). The funding surge is largely attributed to external grant mechanisms by the “big three” – namely the World Bank Multi-country HIV/AIDS program (MAP), the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF), and the US President’s Emergency Plan for AIDS Relief (PEPFAR). Taken together these initiatives account for \$24 billion to date. Additionally, contributions from national governments and households should not be overlooked.

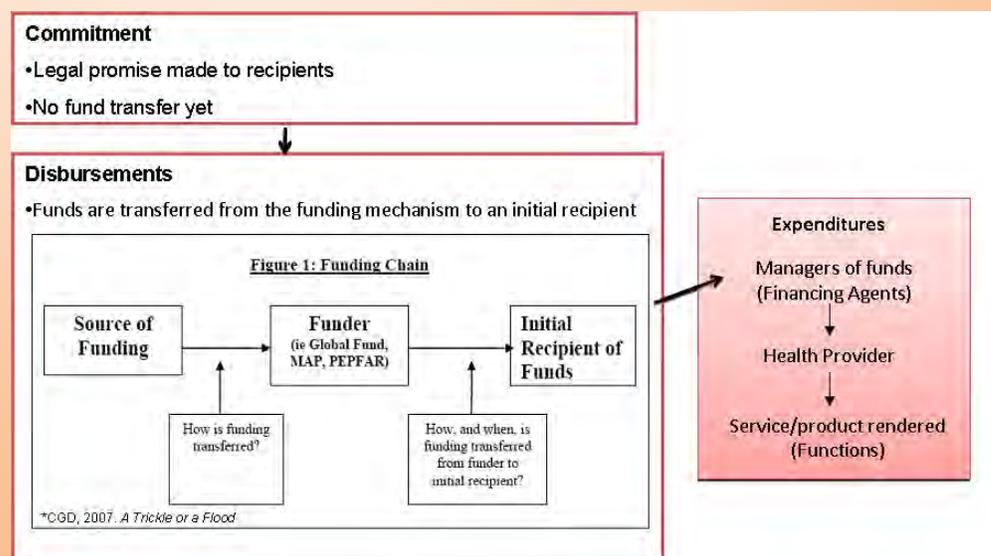
While the surge in donor funding is welcome and needed, what is perhaps as critical as the amount invested is *how* those funds are spent and whether or not they are meeting intended targets. Without this information, stakeholders at the global level and in impacted countries are poorly equipped to decide how to optimally invest resources.

Resource tracking is a fundamental first step to assess the impact of resource allocation decisions. Tracking may be done at three different levels: commitments, disbursements, and expenditures. *Commitments* refer to the point at which funding that is readily available to the funder is legally promised to recipients (Bernstein and Sessions 2007). *Disbursements* refer to the point at which funds are transferred from

the funding mechanism to a recipient (Bernstein and Sessions 2007). *Expenditures* represent the monetary value of consumption of goods and services of interest, implying that a service or product has

### Box 1: Need To Go Beyond Commitments and Disbursements

Most analyses follow the money from the commitment to disbursement level – largely due to the relative ease with accessing data at these levels. While this is immensely important, this paper argues that it is also critical to go one step further to see what actual services/products have been purchased with those funds, i.e., actual expenditures. The flow of funds can be illustrated as follows:



been rendered (World Health Organization [WHO], World Bank, and United States Agency for International Development [USAID] 2003). As can be anticipated, what is committed in a given year may not necessarily be the same as what is ultimately disbursed, and what is disbursed may not be what is actually spent on a rendered service/product. The reasons for discrepancies between levels may be legitimate and expected. For example, disbursements to a country may be larger than annual expenditures because the disbursements are intended to cover a multiple year timeframe. Alternatively, grant issuance may take a performance-based approach in which, despite financial commitments, disbursements are not made until evidence of progress has been seen<sup>1</sup> – resulting in an expected time lag. However, discrepancies between commitments, disbursements, and expenditures may also point to other issues, such as administrative delays, limited absorptive capacity in recipient countries, and poor reporting. Regardless, all three levels of resource tracking are important to help inform issues relating to donor efficiency and aid effectiveness. The global health community constantly debates the extent to which donor aid, or individual donor interventions, are effectively addressing the challenges presented by the AIDS pandemic.

Despite the need for publicly available data on resource flows for HIV/AIDS, data collected have not been robust, consistent, or comprehensive of all stakeholder investments (Levine and Blumer 2007; Eiseman and Fossum 2005). Resource tracking initiatives on HIV/AIDS are typically conducted for a particular grant mechanism or carried out as special studies rather than systematically and routinely tracking all HIV/AIDS expenditures as part of the country information system. Most cross-country assessments of HIV resource flows are limited to tracking commitments and disbursements by donors to recipient countries (Shiffman 2008; Kates, Lief, and Pearson 2008; Easterly and Pfitze 2008; Bernstein and Sessions 2007; Piot 2008) using online databases such as the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) Creditor Reporting System (CRS); however, not much information is readily available on HIV spending once in country and by national stakeholders, including the government, households, companies, and donors. Given the published discrepancies between donor commitments and disbursements, there is a critical need to understand if and how the disbursed funds are being spent (expenditures) once they are received by focus countries to answer questions that lie at the heart of the aid effectiveness debate: What are we getting for our money? Are funds reaching their intended recipients?

Recognizing the need for comprehensive reporting, members of the global health community have developed frameworks for reporting countries' progress in addressing their national epidemics. The Joint United Nations Program on HIV/AIDS (UNAIDS) encourages its member countries to report every two years on core indicators for implementation of the United Nations General Assembly Special Session (UNGASS) Declaration of Commitment<sup>2</sup> – including data on the flow of funds from financing sources to their end uses (or AIDS spending activities). To help countries with such requests, UNAIDS has supported the development of National AIDS Spending Assessments.<sup>3</sup> In addition, to inform the national policy discussion on HIV/AIDS as well as other priority areas (such as malaria, tuberculosis), many countries have begun to use a common resource tracking tool for health called National Health Accounts (NHA) (conducted in over 100 countries) to produce focused expenditure reviews, or 'subaccounts,' on priority areas like HIV/AIDS. NHA offers a country-comparable review of health expenditures, including public, private, and donor contributions.<sup>4</sup> Financial resources are tracked from

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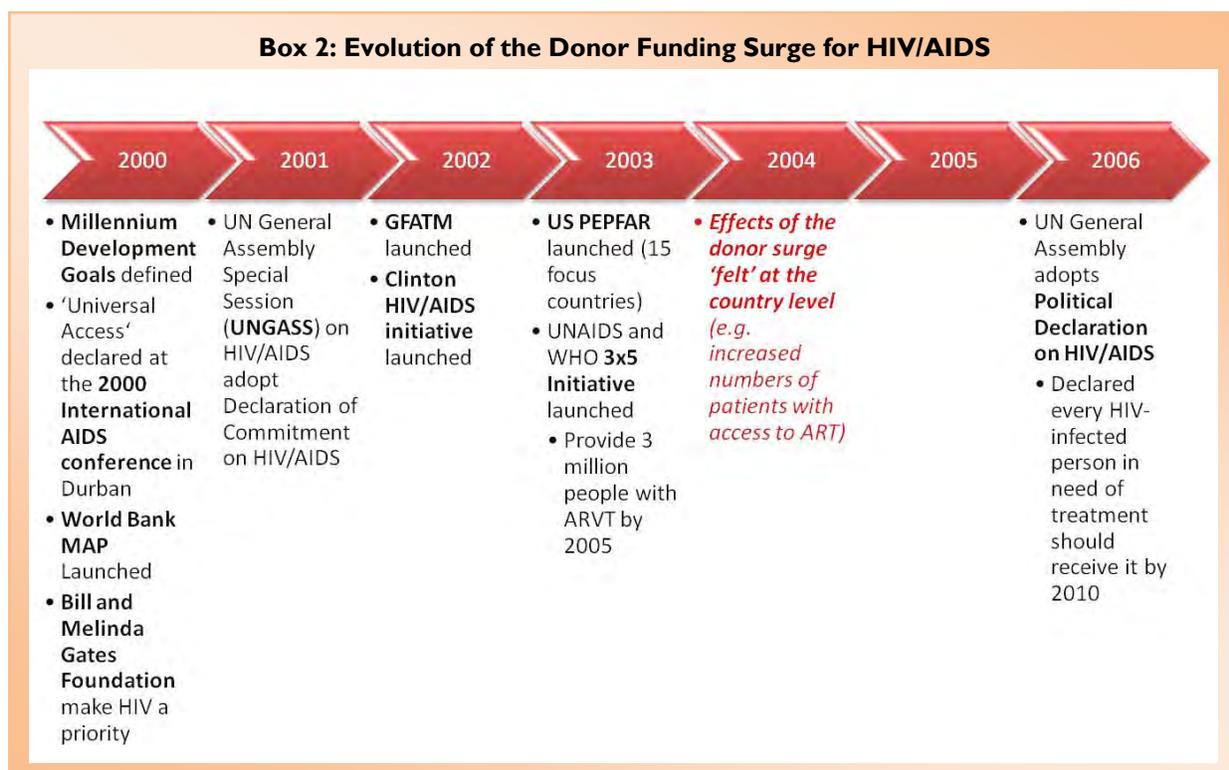
<sup>1</sup> As in the case of the GF ([www.theglobalfund.org](http://www.theglobalfund.org))

<sup>2</sup> The latest edition of the indicators, financial and otherwise, is *Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators –2008 reporting*. Available at [http://www.unaids.org/en/Goals/UNGASS/2008\\_UNGASS\\_Reporting\\_FAQ.asp](http://www.unaids.org/en/Goals/UNGASS/2008_UNGASS_Reporting_FAQ.asp)

<sup>3</sup> See UNAIDS Web site for further information on National AIDS Spending Assessments: <http://www.unaids.org/en/KnowledgeCentre/HIVData/Tracking/Nasa.asp>

<sup>4</sup> For more information on the NHA methodology, please see WHO, World Bank, USAID (2003).

their sources, to their managers (financing agents), health providers, and ultimate uses (health functions). Because NHA is implemented with the intention of being institutionalized as part of a routine function of government within a nation's health information system, the framework provides a valuable opportunity to also routinely track the use of HIV/AIDS resources at the country level thus providing information on the last mentioned level of resource tracking – expenditures.



Note: ART-antiretroviral therapy/treatment

## 1.2 HIV/AIDS CONTEXT IN STUDIED COUNTRIES

The sub-Saharan region has suffered from some of the world's highest HIV prevalence rates. UNAIDS reports that two-thirds of the world's PLWHA live in this region and three-quarters of all AIDS deaths in 2007 occurred there (UNAIDS, 2008). The countries featured in this paper – Kenya, Malawi, Rwanda, Tanzania, and Zambia – hold similar socioeconomic status and, like much of the region, face generalized epidemics where the disease is firmly established in the general population and spread principally through heterosexual contact. In East and Southern Africa the regional average stands at 10 percent<sup>5</sup>; but within the region the nature of the epidemic is highly varied. For example, among the countries targeted in this paper, Kenya, Rwanda, and Tanzania exhibit rates (7.4 percent, 3.0 percent, and 6.5 percent, respectively) lower than the regional average. This is in contrast to Malawi and Zambia, which are enduring high rates of 12.0 and 16.5 percent, respectively.

Table 1 offers background statistics on the five studied countries.

<sup>5</sup> <http://www.unaidsrstes.org/regional-adult-hiv-prevalence>

**TABLE I: BACKGROUND STATISTICS ON HIV/AIDS IN KENYA, MALAWI, RWANDA, TANZANIA, AND ZAMBIA**

Indicators	Kenya	Malawi	Rwanda	Tanzania	Zambia
GDP per capita (2006) in US \$ 2006*	\$581	\$157	\$317	\$319	\$974
Total population (2006)*	35,638,694	11,937,934	9,058,392	37,500,000	11,502,010
Life expectancy (2006)**	53.4	47.6	45.6	51.9	41.7
Adult HIV prevalence rate*	7.4%	12.0%	3.0%	6.5%	17.0%
Number of adults with HIV* (2006)	1,091,000	897,853	160,000	1,300,000	1,100,000
Adult PLWHA as a percentage of overall country population (to date)*	3.1%	7.5%	1.8%	3.5%	9.6%
ART coverage among people with advanced HIV infections (%)***(2006)	27%	21%	52%	14%	26%
ART coverage among HIV-infected pregnant women for PMTCT (2006)***	48%	14%	55%	15%	35%

Sources: \*As published in respective country NHA HIV/AIDS subaccounts., \*\*World Bank (2008), \*\*\* WHO Statistical Information System. <http://www.who.int/whosis/en/>  
 Note: The table of statistics reports the most recent data available, with the exception of total population for all countries (2006 data), GDP per capita for all countries (2006 data), and adult HIV prevalence rate for Malawi (2005 data). These exceptions are included in the table because the numbers were used in the NHA reports to calculate indicators for the FY 2005 or 2006 data from each country.  
 GDP-gross domestic product, PMTCT-prevention of mother-to-child transmission

All the study countries have experienced a substantial influx of funds for HIV/AIDS and all are GF, PEPFAR, and MAP recipients. Prior to the donor surge, treatment services were very limited and PLWHA in the advanced stages of the disease focused their efforts on managing opportunistic infections – consequently resulting in even higher death rates due to AIDS. The emphasis of the scaled-up response to HIV/AIDS has been to increase accessibility to treatment (facilitated by steep and successful pressure to reduce prices for AIDS drugs in Africa and other poor regions), to build necessary infrastructure and capacity to support this effort, and increasingly to support prevention programs. This effort has been credited with helping to stabilize prevalence rates in the region, and increase condom use and responsible sexual behavior practices; nevertheless, as seen from Table I, coverage of ART among those in need is still not comprehensive and AIDS continues to be the leading cause of death in the region.

The worldwide response to HIV/AIDS is now shifting from emergency relief to a sustained and long-term response – in recognition of the chronic nature of the disease (Phumaphi 2008; UNAIDS 2007; UNAIDS 2008). As this shift progresses, health care stakeholders are increasingly inquiring about domestic solutions in addition to external ones. Understanding the effects of the donor surge on other domestic players in the health system is critical for identifying potential solutions to sustainably finance, manage, and deliver HIV/AIDS prevention, care, and treatment.

With the intent of minimizing adverse consequences, many large funding mechanisms like PEPFAR and GF incorporated certain guiding principles into their design and mandate, such as the principle of “additionality.”<sup>6</sup> Often, this intention is mandated in the contract agreement with the recipient country. Another popular principle is involving the private sector and strengthening public-private partnerships in the national response to HIV/AIDS (GF 2005; PEPFAR 2009).

<sup>6</sup> The additionality clause stipulates that new influxes of funds should complement existing resources and not be used as opportunities to shift domestic resources to other sectors. Failure to comply with this clause could result in cancellation of a grant.

### I.3 OBJECTIVES OF THIS PAPER

Drawing from country-produced data, this paper seeks to describe changes in national HIV/AIDS financing patterns in the generalized epidemic settings of Kenya, Malawi, Rwanda, Tanzania, and Zambia before and after the influx of external financing for HIV/AIDS began (circa 2004).<sup>7</sup>

In doing so, this paper aims to expand the evidence base of cross-country analyses to the third level of resource tracking – that of expenditures, i.e., How are funds used in country? How do expenditures differ from disbursements and commitments?

Moreover, by accessing trend data, the paper endeavours to shed light on the impact of the influx of donor funds – helping to answer questions such as the following: Has the burden on people living with HIV (PLWHA) to finance health care changed since the influx? Are they spending more or less out-of-pocket for critical health services? Are country governments continuing to invest to the same extent if not more on the HIV response despite the donor surge? Are donor funds additional to local investment? Has the role of the private delivery sector changed since the donor surge? To address these and other critical policy questions, the report examines resource use at three major levels: 1) the national financing landscape for HIV/AIDS, 2) the financiers and managers of HIV funds, and 3) the users and recipients of these funds.

### I.4 RESEARCH QUESTIONS

Specifically, this analysis seeks to answer the following questions:

- Financing landscape:
  - *How has the financing landscape changed since the influx of donor funding began? Who are the new players – both in terms of financiers, managers, and users of the funds? How large are the new resources compared to locally generated funds? How much of health resources are being used for HIV/AIDS?*
  - *How do expenditures compare to reported commitments, and disbursements? Are there differences? If so, to what extent do they exist? What are some of the factors that may contribute to these differences?*
  - *What are the dependency/sustainability implications of the donor surge? Can we discern any patterns of resource allocation that are associated with progress toward sustainability?*
- Financiers and managers of HIV funds:
  - *How much of donor health funds are spent on HIV/AIDS and how much remains for other health priorities? Similarly, what is the proportion of other financiers' health contributions used for HIV/AIDS?*
  - *Has government financing for HIV/AIDS changed since the influx of donor funding began? Are donor monies “additional” to local investments to control HIV/AIDS (as mandated by*

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<sup>7</sup> This analysis builds upon an earlier comparative paper, by the USAID-funded Partners for Health Reform<sup>plus</sup> project, that assessed “baseline” financial patterns before the donor surge in Kenya, Rwanda, and Zambia (De, Dmytraczenko 2006).

many donor grant mechanisms through the additionality clause)? What shifts in HIV/AIDS financing can be observed following the influx of donor funds?

- *How has the surge affected government stewardship and engagement of nongovernment actors? Who has programmatic control over resource allocation to providers? How much of resources are being managed or coordinated by the government versus direct implementation by donors through implementing agencies/ providers?*
- Users and recipients of HIV funds:
  - *How much do PLWHA spend out-of-pocket on health care before and after the donor financing surge? How does this compare to the general population in a country? How large is the financing burden between PLWHA and that of the general population?*
  - *What is the role of the private delivery sector – formal and informal – since the surge? Is the influx of funds through government and nongovernment organizations (NGO) mechanisms “crowding out” the private sector?*

## **I.5 ORGANIZATION OF PAPER**

Following the introduction, this paper describes, in Chapter 2, the methodology used for country comparison as well as how individual country subaccounts were produced. Chapter 3 presents the comparative findings according to the described research questions. Concluding remarks are offered in Chapter 4.

## 2. METHODOLOGY

This report presents a comparative analysis of data that were collected, analyzed, and presented over several years in five sub-Saharan African countries: Kenya, Malawi, Rwanda, Tanzania, and Zambia. These five countries were selected for analysis because of their similar socioeconomic contexts, the similar nature of their HIV epidemics, and the availability of expenditure data on HIV/AIDS for two time periods. Each country has expenditure data on HIV/AIDS health care and prevention from around 2002, shortly before the international community greatly scaled up its available resources to fight the pandemic in African countries, as well as data from around 2006, which reflects the post-influx period.

The data analyzed come from the NHA and HIV/AIDS subaccounts estimations from each of the five countries. NHA present a comprehensive review of health expenditures for all health (including HIV/AIDS); HIV/AIDS subaccounts follow the same methodology and present a review of health expenditures related to HIV/AIDS. This methodology, summarized below, is detailed in two reports, *Guide to Producing National Health Accounts with special applications for low-income and middle-income countries* (WHO, World Bank, and USAID 2003) and *Methodological Guidelines for Conducting a National Health Accounts Subanalysis for HIV/AIDS* (De, Dmytraczenko, Chanfreau, Tien, and Kombe 2004).

NHA is a useful tool because the findings are comparable across countries and years. It was designed to be institutionalized in a national health information system as a routine function of government.

### 2.1 METHODOLOGY OF HEALTH ACCOUNTS

NHA is an internationally accepted framework, conducted in over 100 countries worldwide, that is used to comprehensively track resources flows for health care, including public, private, and donor contributions. It specifically aims to track expenditures through the health system (see Section 2.2.3 for definition of expenditure):

- From their **financing sources**, such as the ministry of finance, donors, and households,
- Through their **financial agents**, which are the principal managers of health funds that directly pay (payers) providers and may include entities like the ministry of health and NGOs,
- To **providers**, such as hospitals, clinics, dispensaries, pharmacies, and traditional healers, and
- To **functions**, the types of service or products produced, including curative, preventive, and rehabilitative care, and administration.

Health accounts attempt to provide a complete accounting of all spending for overall health (NHA), or specifically for HIV/AIDS health services (HIV/AIDS subaccounts), regardless of origin, destination, or type of expenditure, as well as a structure intended for ongoing analysis (WHO, World Bank, and USAID 2003). The methodology of HIV/AIDS subaccounts calls for the NHA team (generally spearheaded by the country's government) to collect and analyze primary and secondary expenditure data from numerous data sources to produce a comprehensive expenditure review that follows the flow of funding through the health system. NHA estimations generally answer questions such as the following:

1) How much money is spent by public, private, and donor financing sources (referred to as financing sources)? 2) Who programs and spends this money (referred to as financing agents)? 3) Who provides the health services with the funding (referred to as providers)? 4) What services and/or products are rendered (referred to as health functions)?

To the extent possible, the NHA team collects information from existing data sources. If additional data are required to complete the estimation, primary data collection is undertaken. Generally, this has meant that specific NHA surveys were used for donors, NGOs (international and local), firms, insurance schemes, and in some cases for PLWHA.

Annex A provides details on the data sources for the NHA and HIV subaccounts analysis. More detail may be found in the country NHA reports when publicly available.

## **2.2 HEALTH EXPENDITURE BOUNDARIES AND DEFINITIONS**

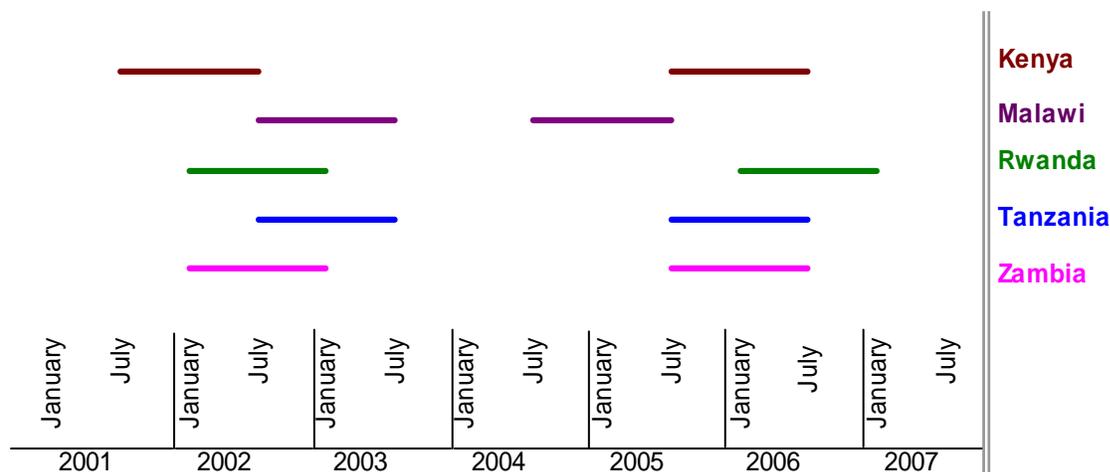
### **2.2.1 GEOGRAPHIC BOUNDARY**

A boundary defines the limits of what is included in NHA and HIV/AIDS subaccounts. Geographically, the framework includes all expenses on rendered services in the country as well as expenses incurred to provide health services to that country's citizens who are sent for treatment abroad. To the extent possible, NHA and HIV/AIDS subaccounts do not include expenditures on services rendered for foreigners temporarily in the country.

### **2.2.2 TIME BOUNDARY**

The NHA and subaccounts estimate all expenditures on health functions (respectively overall or HIV/AIDS) rendered in the country or on behalf of that country's citizens in a specified 12-month period. In all five countries analyzed in this report, the time boundaries follow the government's fiscal year (FY). In Kenya, Malawi, and Tanzania, the FY is July 1 through June 30. In Rwanda and Zambia, the FY corresponds to the calendar year. Figure 1 shows a visual of the time boundaries from each country NHA and HIV/AIDS subaccount.

**FIGURE 1: TIME BOUNDARIES OF NHA AND HIV/AIDS SUBACCOUNTS IN STUDIED COUNTRIES**



### 2.2.3 HEALTH EXPENDITURE

The NHA estimates total spending on all health activities in the country. Health expenditures are expenditures on “activities whose primary purpose is to restore, improve and maintain health for the nation and for individuals during a defined period of time” (WHO, World Bank, and USAID 2003). Similarly, HIV/AIDS subaccounts estimate total spending on HIV/AIDS health care. HIV/AIDS health expenditures are defined as expenditure on those activities that are 1) primarily intended to have impact on the health status of PLWHA in a given period of time, and 2) intended to prevent the spread of HIV, which may target the population at large (De, Dmytraczenko, Chanfreau, Tien, and Kombe 2004). This paper compares country expenditures that fall within total health expenditure on HIV/AIDS. This includes spending on core health activities, such as medical care, prevention and public health programs, and administration, as well as capital formation (a health-related item). It should be noted that depending on the country, additional health-related and non-health-related activities may be covered in the subaccount reports. <sup>8</sup> Because at a minimum, all subaccounts produce total health expenditure estimates, for the purposes of this comparison analysis only HIV/AIDS health expenditure is considered. Table 2 lists the HIV/AIDS services included or excluded in this analysis.

<sup>8</sup> The HIV/AIDS subaccounts methodology has been recently harmonized with the National AIDS Spending Assessment methodology at the international level and so far implemented in two countries. National AIDS Spending Assessments differ from HIV/AIDS subaccounts in that they provide total spending on all HIV/AIDS services, including health-related and non-health spending on HIV/AIDS (see Table 2). HIV/AIDS subaccounts provide total spending on HIV/AIDS health spending at a minimum, and are useful as a tool for health stakeholders wishing to compare the public health effects of HIV/AIDS (USAID and UNAIDS 2008).

**TABLE 2: HIV/AIDS SERVICES INCLUDED IN AND EXCLUDED FROM ANALYSIS**

<b>HIV/AIDS expenditures included in analysis</b>	<b>HIV/AIDS expenditures excluded from analysis</b>
Curative care (inpatient, outpatient, home care, etc) Rehabilitative care services Long-term nursing care services Ancillary services to medical care Medical goods (pharmaceuticals and other nondurables) Prevention and public health services related to HIV/AIDS Health administration and health insurance Capital formation for provider institutions (proportion going for HIV/AIDS services)	Health-related HIV/AIDS functions, such as: <ol style="list-style-type: none"> <li>Formal education and training of health personnel</li> <li>HIV/AIDS health research and development</li> <li>Food, hygiene and drinking water control</li> <li>Environmental health</li> </ol> Non-health HIV/AIDS functions, such as: <ol style="list-style-type: none"> <li>School fees for orphans and vulnerable children</li> <li>Psychosocial support to PLWHA or affected families</li> </ol>

## 2.3 COMPARING EXPENDITURE DATA

### 2.3.1 ANALYSIS PROCESS

The authors of this report, through their affiliation with the USAID-funded Partners for Health Reform<sup>plus</sup> and Health Systems 20/20 projects, have supported numerous government-led NHA and HIV/AIDS subaccounts efforts. To commence this comparative analysis, the authors identified a list of financing indicators that existed in the data of all countries' HIV/AIDS subaccounts and general NHAs.<sup>9</sup> They assembled the indicators in database format in Microsoft Excel and then analyzed the database from four vantage points:

- Comparison of relative (percentage) and absolute spending changes over time in a given country.
- Comparison of spending trends between countries with respect to relative share changes among stakeholders.
- Comparison of HIV/AIDS relative spending patterns with those for overall health spending in a given country. For example, this may examine the financing source distribution for HIV/AIDS against the financing source distribution for general health care within a given country to see if there are any marked differences and to determine what is specific to HIV/AIDS and what is not (i.e., more reflective of overall health financing patterns). Any distinctions between the two (HIV and general health) would also be compared with that exhibited in other countries.
- Comparison between countries of indicators that place HIV/AIDS expenditures within the context of overall health expenditures, e.g., comparison across countries of HIV/AIDS health spending as a percentage of total health expenditure.

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<sup>9</sup> The countries with available data are the five countries studied in this paper (with third years of data for Rwanda and Malawi) and Ukraine, Vietnam, and Zimbabwe. Ukraine and Vietnam were excluded from this analysis because they have concentrated HIV epidemics. Zimbabwe was excluded because it only had pre-influx data.

### 2.3.2 INFLATION AND CURRENCY CONVERSION

To compare absolute spending figures across years in each country, all absolute spending numbers are adjusted for inflation, using the most recent year of data for that country as the base year. For example, Rwanda has expenditure data from FY 2002 and FY 2006. The FY 2002 data were therefore inflated to 2006 currency to allow for comparison. In countries with FYs split across two calendar years, the base year is the second calendar year. Therefore, Tanzania FY 2003 data, which run from July 2002 to June 2003, are inflated as 2003 currency to 2006 currency to allow for comparison with the FY 2006 data. The inflation rate average is based on the International Monetary Fund World Economic Outlook Database (International Monetary Fund 2008). The inflation rates are applied to the original currency.

HIVAIDS subaccounts data are ultimately recorded in local currency after data analysis. For the purposes of this report, all expenditure figures are converted to US dollars based on the official average exchange rate of the most recent data year, obtained from the central banks of countries analyzed. For example, the report uses the Rwanda 2006 average exchange rate with the US dollars, which was obtained through the National Bank of Rwanda.

The data were not adjusted for purchasing-power parity (PPP) due to varying time boundaries that challenged the consistency of PPP values (see Section 2.5), thus the reader should note that cross-country comparison with absolute spending is limited. Rather, cross-country comparisons are made between relative amounts.

### 2.3.3 COMPARING HOUSEHOLD DATA

This report compares household spending data from one year to another year within the same country. It should be noted that estimations of PLWHA household spending were extracted from different data sources as the general population expenditure data (see Section 2.5).

The HIV/AIDS subaccounts include out-of-pocket spending for PLWHA. These estimates are created using the best available data and statistical methods to address potential biases. These estimations using high-quality data can be compared; however, it is important to acknowledge the methodological differences that exist.

To estimate out-of-pocket spending on HIV/AIDS, data were collected directly from a representative sample of PLWHA (except the survey used for Kenya FY 2006, see Section 3.3.2) and then weighted to the national level. These surveys targeted PLWHA through entry points in the health system: voluntary counseling and testing clinics, facility records, PLWHA support groups, etc. (See Section 2.5 for the limitations of the methodology.) Different weight factors were determined to estimate national-level spending based on the sampled population. In earlier surveys, cases were classified based on WHO AIDS biomarkers – considered a best practice at the time of data analysis. In later surveys (Rwanda 2006, Malawi 2005), cases were weighted by coding the respondent as one of three categories: 1) not needing and not receiving ART, 2) needing but not receiving ART, or 3) needing and receiving ART. This alternate method of classifying HIV-positive individuals was adopted by the international community in 2005 to improve classification of respondents by expected levels of spending.

## 2.4 ESTIMATING COMMITMENTS AND DISBURSEMENTS

Donor commitments and disbursements were derived based on a query of the OECD DAC-CRS, which provides statistics on official development assistance provided by the 22 DAC member governments

(OECD 2008). All figures are presented in constant 2005 US dollars. The following CRS codes were used: STD (sexually transmitted disease) control including HIV/AIDS and Social mitigation of HIV/AIDS. CRS data may not include certain funding streams provided by donors, such as mixed grants to NGOs (Kates, Izazola, and Lief 2008). CRS data also do not include spending by foundations that have more recently emerged as large international donors for HIV/AIDS.

The OECD DAC-CRS presents commitments and disbursements in calendar years. In years with HIV subaccounts data from FYs that overlap calendar years, the average over the two years was taken.

The definitions of commitments, disbursements, and expenditure can be vague and are often misinterpreted. Some donor agencies, for example, consider the transfer of funding to an NGO recipient as an expenditure. However, that money may not actually be spent by the NGO for months or years. For this reason, the term disbursement was created to label this type of money transfer. As mentioned in Section 2.2.3, the available NHA data allow one to track expenditure on services actually rendered. This analysis adheres to the following definitions:

- *Commitments* – the point at which funding that is readily available to the funder is legally promised to recipients (Bernstein and Sessions 2007) in a calendar year.
- *Disbursements* – the point at which funds are transferred from the funding mechanism to a recipient (Bernstein and Sessions 2007) in a calendar year.
- *Expenditures* – the monetary value of consumption of goods and services of interest; implies that a service or product has been rendered (WHO, World Bank, and USAID 2003) in a calendar/fiscal year.

For more information on this subject, please see Section 3.2.

## 2.5 LIMITATIONS

There are several limitations associated with the underlying country-level data.

1. NHA and HIV/AIDS subaccounts are not audits – expenditure estimates of the country-level data are dependent upon self-reporting by the institutions or households surveyed. While every attempt is made to verify each expenditure transaction from at least two data sources, the underlying data are only as accurate as the self-reported information.
2. While all country subaccounts follow the same definitions and boundaries in accordance with international norms, each country understandably obtains its estimates from different sources and possibly different survey instruments. This may result in varying rigor and varying use of estimation techniques for individual country subaccount estimations. For example, in one country, hospital expenditure data may be readily obtained for curative care and broken down between outpatient and inpatient care; another country may only have expenditure information at the curative care level and so to disaggregate it further, allocation factors may be applied (i.e., an estimation technique) and developed based on what is known about cost and use of these services. This is in essence “best guess” as to the split between inpatient and outpatient care. As the NHA infrastructure is institutionalized, the accuracy of these estimates will be improved and facilitate more extensive analysis.

3. Within a country, there is an evolution in the quality of data sources when comparing the earlier estimates to the later ones. The later estimates here tend to be more robust and rely on better data sources than the 2002 estimates, which for many countries was the first time that subaccounts were implemented. For example, many of the earlier subaccount estimations of out-of-pocket spending by PLWHA were estimated from data collected through a “targeted” survey, i.e., one in which confirmed HIV-positive individuals were first identified and then interviewed. These targeted surveys relied on accessing PLWHA through key entry points, namely at health care facilities and associations for PLWHA. While this offered a cost-effective way to obtain data from PLWHA, the limitation to this type of survey is that it is only representative of the subpopulations that frequent the key entry points, and thus the survey only captured information on those PLWHA who:
- Seek care in the formal and largely public health care system, perhaps underestimating expenditures incurred in the informal sector, including traditional healers,
  - Tend to have greater access to care and education, and
  - May have been more sick than the rest of the PLWHA population because at that time there was a tendency for PLWHA to seek HIV testing after the onset of symptoms or emergence of opportunistic infections, and thus the survey respondents were typically sicker than the overall population. This has implications for PLWHA expenditure estimates because it has been found in other studies that the more advanced the stage of illness the greater the associated treatment costs (Bautista et al. 2003).<sup>10</sup>

Consequently, when determining national-level out-of-pocket expenditures, survey data were adjusted based on assumptions of the PLWHA population’s stage of disease profile in each country.<sup>11</sup> In the later subaccounts, efforts were made to circumvent targeted surveys. For examples, in Kenya, the NHA team added expenditure questions to a nationwide representatives survey that included biomarker testing for HIV, namely the Kenya AIDS Indicator Survey (KAIS). Through this method, better data can be obtained and estimated about the entire population of PLWHA avoiding many of the mentioned biases inherent with the targeted PLWHA surveys. This survey is described further in Section 3.3.2.

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<sup>10</sup> The HIV/AIDS treatment costing study in Mexico (Bautista et al. 2003) found that the average cost of treating patients with CD4 counts below 200 cells/mm<sup>3</sup> is approximately 30 percent higher than treating other patients. “These higher costs are due to a near doubling of the number of days spent in a hospital as well as greater use of non-AIDS specific diagnostic tests. In addition, treatment costs are also higher during the last year of a patient’s life. Excluding ARVs, treatment costs are two to three times higher for patients near death than for the average patient.”

<sup>11</sup> Although best assessed through CD4 counts, stage of disease profiles can be inferred from WHO performance scales: Stage 1-Asymptomatic, normal activity; Stage 2-Symptomatic but normal activity; Stage 3-Bedridden for less than 50% of the day during the last month; Stage 4-Bedridden for more than 50% of the day during the last month. In Kenya, it was estimated that 12% of the HIV population is at Stage 1, 49% at Stage 2, 25% at Stage 3, and 14% at Stage 4. In Rwanda, it was estimated that 10% are in Stage 1, 55% in Stage 2, 25% in Stage 3, and 10% in Stage 4. In Zambia, it was estimated that 65-70% are in Stages 1 and 2, 10-20% in Stage 3, and 10-15% in Stage 4.



## 3. FINDINGS

This chapter is organized according to the research questions proposed in Chapter 1, beginning with an assessment of total investments in HIV/AIDS. The chapter then presents the patterns of funding flows observed in the studied countries' health systems. Most graphs include two data points for each country: one point for the pre-influx funding levels and one for the post-influx funding levels. To facilitate cross-country comparison, graphs that present absolute spending are followed by tables displaying the magnitude and percent changes in each country between the two data points.

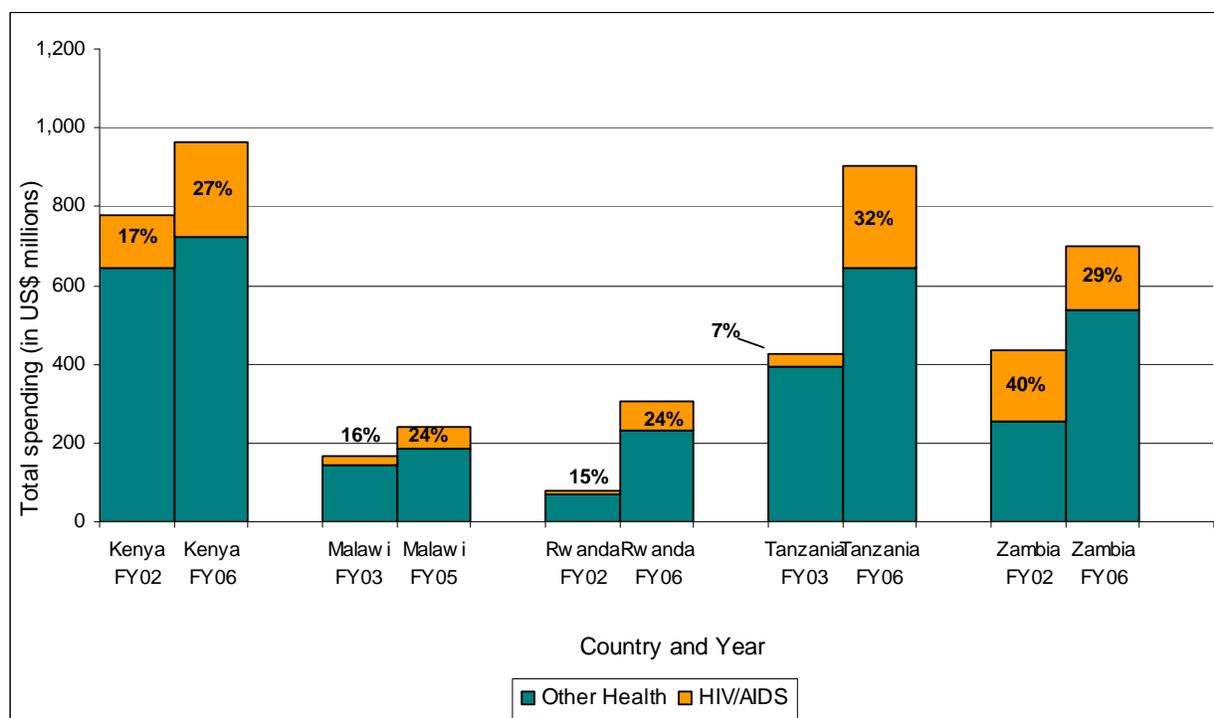
All US dollar amounts presented in this chapter are adjusted for inflation to the latest year of estimation for the studied country to facilitate comparisons over time. Relative shares can also be compared across countries to observe trends in financing across the five sub-Saharan African countries. This chapter presents data in both relative shares and absolute amounts. It is important for the reader to note the distinction between these comparisons, as they may appear to show differing patterns. For example, if government investments as a *percentage* of total expenditure on HIV/AIDS decreased between the two years in a given country, even while in absolute terms, government investment increased in *total dollars*, the smaller relative share was due to the growth of the total resource envelope for HIV/AIDS. In this example government investment rose, but it did not rise as quickly as investment from other sources.

### 3.1 FINANCING LANDSCAPE AND SOURCES

#### 3.1.1 RESOURCE ENVELOPE FOR HIV/AIDS

Figure 2 shows absolute and relative total HIV/AIDS health spending in the context of the total health care expenditures in pre- and post-influx years. Total health expenditure for HIV/AIDS has increased in all five countries since the influx of donor funding began, on average by 3.9 fold or 291 percent over pre-influx levels (see range in Table 3). While spending for overall health care also increased during the same time period, it did not increase to the same extent but rather by 2.0 fold or 103 percent higher than pre-influx levels on average. In the context of overall health expenditures, post-influx spending on HIV/AIDS health care accounts for a quarter to a third of total health expenditure in all studied countries. Even in Rwanda, where HIV prevalence is the lowest among the five countries, HIV/AIDS health expenditure reached 24 percent of the total health expenditure in 2006.

**FIGURE 2: SPENDING ON HIV/AIDS AND AS A PERCENTAGE OF TOTAL HEALTH SPENDING**



**TABLE 3: MAGNITUDE AND PERCENT CHANGE OF TOTAL HEALTH AND HIV/AIDS SPENDING SINCE THE INFLUX OF DONOR FUNDS**

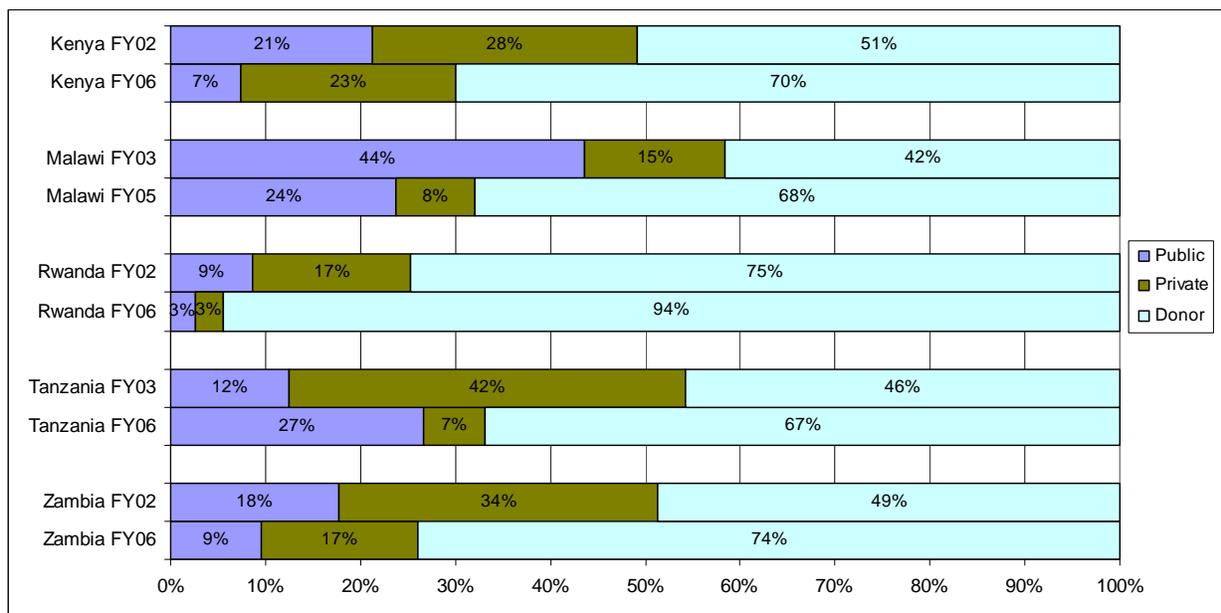
	General		HIV/AIDS	
	Magnitude change	Percent change	Magnitude change	Percent change
Kenya	1.2	24.0%	1.8	80.1%
Malawi	1.4	42.8%	2.1	112.4%
Rwanda	3.8	280.4%	6.2	517.4%
Tanzania	2.1	113.1%	8.5	753.2%
Zambia	1.6	56.9%	0.9	-8.9%
Average	2.0	103%	3.9	291%

### 3.1.2 FINANCIERS OF HIV/AIDS

HIV/AIDS financing sources are defined as financing contributors to HIV/AIDS, which include a country's ministry of finance, donors, households, private companies, etc.

Figure 3 shows the relative share of public, private, and donor financing of HIV/AIDS before and after the influx. Post influx, donors continue to be largest financial contributors and their share has increased following the surge, now averaging a sizable 75 percent. The relative share of the public contribution decreased to about half their pre-influx levels. The exception is in Tanzania where the public share has doubled due to the sizable investments from the government in 2006. The relative share of the private sector, including households and private companies, also decreased between pre- and post-influx years.

**FIGURE 3: RELATIVE SHARE OF FINANCING SOURCES OF HIV/AIDS HEALTH CARE**



In contrast to HIV/AIDS spending, the donor share for general health averages 46.2 percent (Figure 4). Thus, much of donor funding is targeted for HIV/AIDS as opposed to other priority areas. The public and private contribution shares for general health are generally larger than their shares of total HIV/AIDS spending, implying these domestic sectors play a smaller role in the HIV/AIDS response than the role they play financing overall health care (including other priority areas).

**FIGURE 4: RELATIVE SHARE OF FINANCING SOURCES FOR GENERAL HEALTH**

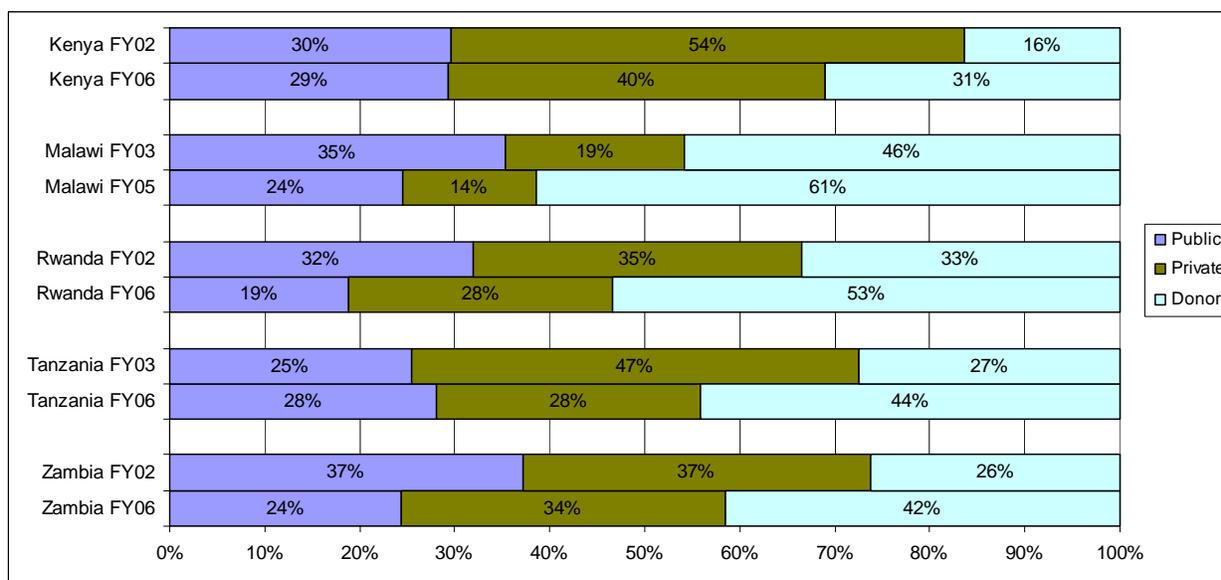
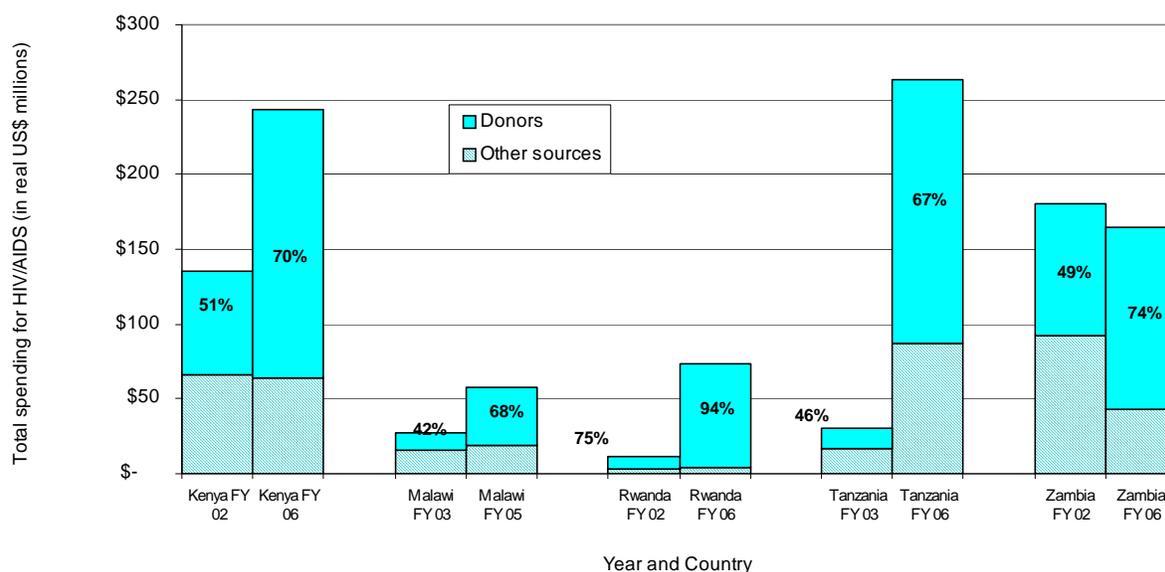


Figure 5 shows that the increase in donor funding is primarily responsible for the increase in total HIV/AIDS spending. In absolute terms, donor spending increased 5.5-fold or by 454 percent increase from pre-influx levels. Since the influx began, donor contributions to HIV/AIDS reached \$179 million in

Kenya, \$176 million in Tanzania, \$122 million in Zambia, \$69 million in Rwanda and \$39 million in Malawi.

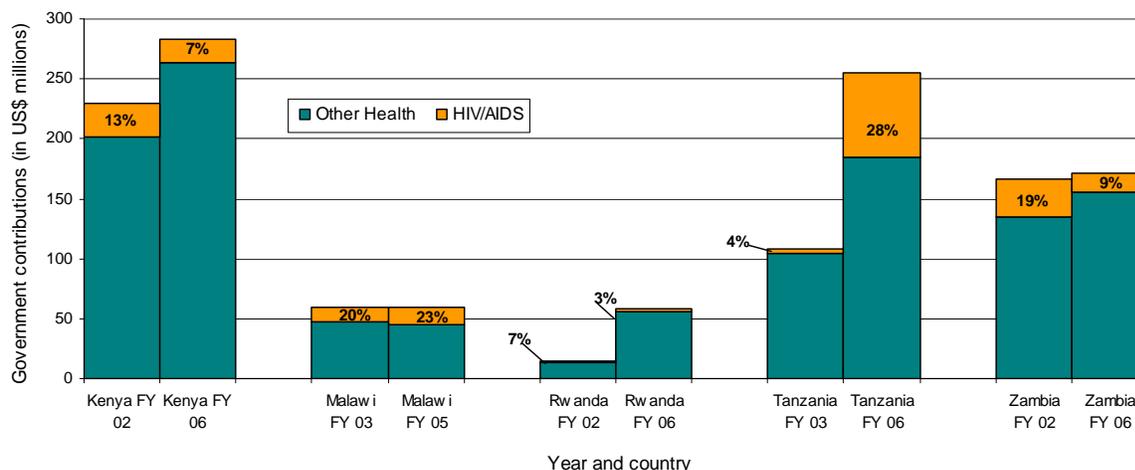
**FIGURE 5: ABSOLUTE DONOR CONTRIBUTION TO HIV/AIDS AND AS A PERCENTAGE OF TOTAL SPENDING ON HIV/AIDS**



Should donor contributions to HIV/AIDS care be withdrawn or dramatically reduced from 2006 levels, country governments – if there are no other local resources – would need to increase their shares by at least 13-fold in Kenya, 36-fold in Rwanda, 3-fold in Malawi and Tanzania, and 10-fold in Zambia to maintain current levels of financing for HIV/AIDS care and treatment. A decrease in donor financing may not be that far-fetched given the current weak global economic climate, which could affect overall levels of external aid assistance by donor countries and foundations (UNAIDS 2008).

While donor funding for HIV/AIDS has reached unprecedented levels, the influx might be crowding out the government and private sectors in some countries as these sources reallocate their funds to other priority areas. Figures 6 and 7 show that while the government and private sectors in Kenya, Rwanda, and Zambia are increasing their contributions to overall health, the percentage of their contributions allocated to HIV/AIDS is decreasing. Absolute government spending on HIV/AIDS decreased since the influx of donor funding began in Kenya and Zambia (see Table 4). Absolute private company spending on HIV/AIDS decreased between those years in all countries except in Tanzania where recently a few multinational companies stepped up their efforts to offer HIV workplace programs, care for opportunistic infections, and provision of ART in private for-profit hospitals and employer clinics since FY 2003 (see Table 5).

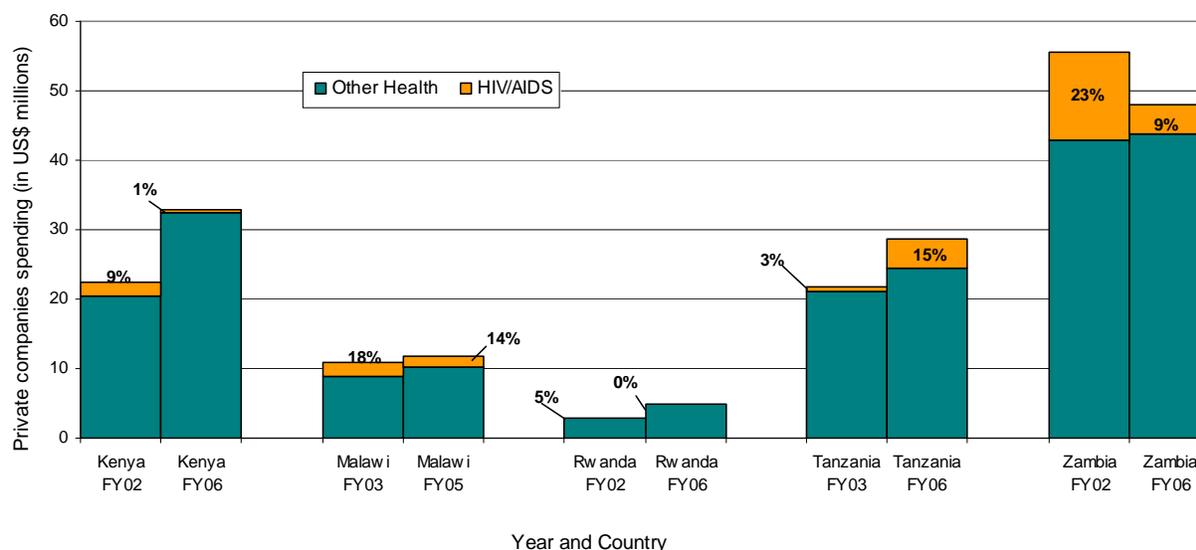
**FIGURE 6: ABSOLUTE GOVERNMENT CONTRIBUTION TO HIV/AIDS AND AS A PERCENTAGE OF TOTAL GOVERNMENT CONTRIBUTIONS TO HEALTH**



**TABLE 4: MAGNITUDE AND PERCENT CHANGE OF GOVERNMENT SPENDING ON GENERAL HEALTH AND HIV/AIDS SINCE THE INFLUX OF DONOR FUNDS**

	General		HIV/AIDS	
	Magnitude Change	Percent Change	Magnitude Change	Percent Change
Kenya	1.2	23.0%	0.7	-34.7%
Malawi	1.0	-1.3%	1.2	15.3%
Rwanda	4.0	297.4%	1.9	91.7%
Tanzania	2.4	135.4%	18.3	1729.7%
Zambia	1.0	2.8%	0.5	-51.3%

**FIGURE 7: ABSOLUTE PRIVATE COMPANY CONTRIBUTION TO HIV/AIDS AND AS A PERCENTAGE OF TOTAL PRIVATE COMPANY CONTRIBUTIONS TO HEALTH**



**TABLE 5: MAGNITUDE AND PERCENT CHANGE OF PRIVATE COMPANY SPENDING ON GENERAL HEALTH AND HIV/AIDS SINCE THE INFLUX OF DONOR FUNDS**

	General		HIV/AIDS	
	Magnitude Change	Percent Change	Magnitude Change	Percent Change
Kenya	1.5	46.2%	0.2	-83.0%
Malawi	1.1	7.7%	0.8	-17.9%
Rwanda	1.6	64.5%	0.2	-84.9%
Tanzania	1.3	31.2%	6.8	580.5%
Zambia	0.9	-13.7%	0.3	-66.1%

The displacement of local government and private investments away from HIV/AIDS raises concern about the long-term sustainability of financing for HIV/AIDS should donor investments decrease. This issue is particularly relevant considering the current global economic recession and its possible effect on the levels of financing contributed by donors. Moreover, the decrease in public investments in some of the countries may indicate that donor support for HIV/AIDS is not necessarily additional or supplemental to local government investment in the HIV/AIDS response; rather, increased donor support may be contributing to a shift away from investing in HIV/AIDS by domestic contributors. Indeed, research suggests that donor assistance in the form of debt relief does not generate additional funds for general health as expected. Instead, governments reallocate the money they would have spent on debt payments to other priorities (Kaddar and Furrer 2008). This reality may be the same for donor assistance for HIV/AIDS specifically. Although governmental spending on HIV/AIDS in Tanzania has increased, it should be noted that upon investigation much of this spending, while earmarked for HIV/AIDS, could not be classified into specific activities and that it may have been mostly used for workshops, per diems, fuel, etc.

In Kenya, one donor dollar displaced 9 cents of every government health dollar going to HIV/AIDS. Put another way, for every donor dollar spent, only 91 cents was actually additional to government investment. In Zambia, one donor dollar displaced 48 cents of every government health dollar, or only 52 cents of every donor dollar was actually additional to government investment.

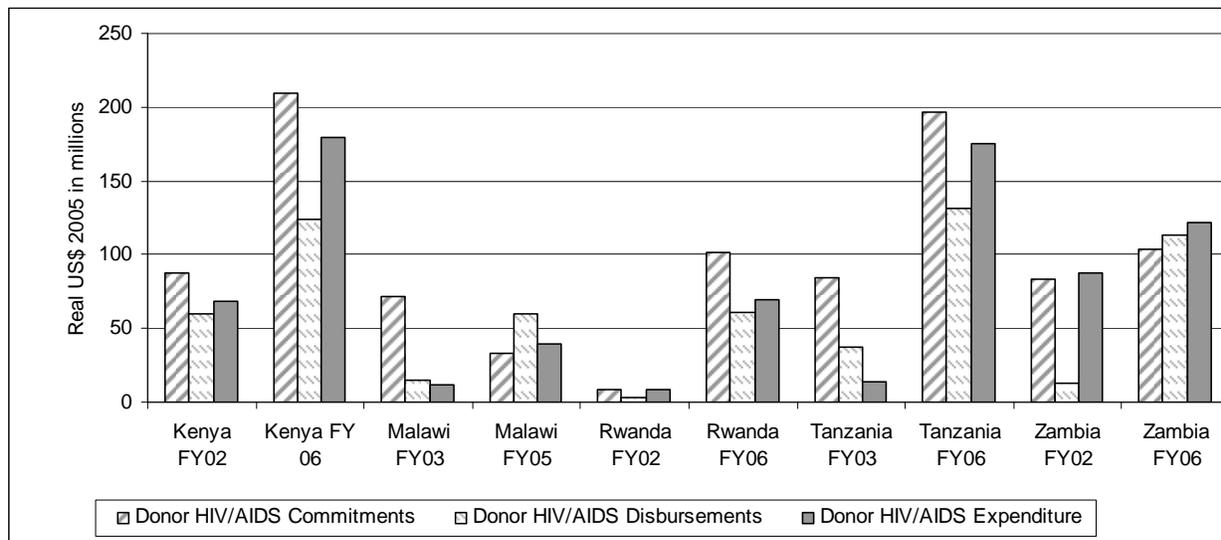
### **3.2 DONOR COMMITMENT, DISBURSEMENT TO AND EXPENDITURE ON HIV/AIDS FROM DONOR SOURCES**

While it is important to track the money at commitment and disbursement level, it is critical to go the further step to track the HIV/AIDS resources at expenditure level in countries and compare the time-series trends among three tracking mechanisms.

Resource tracking at the commitment and disbursement level follows a different methodology than the expenditure tracking methodology from the NHA framework. Acknowledging this limitation, the reader can observe general trends with HIV/AIDS resources at all levels. Figure 8 shows that in general, donor commitments, disbursements, and expenditures have increased relative to pre-influx levels as expected. For example, in Kenya, all three increased by over 100 percent. In the other studied countries, the pattern is different. In Malawi, Zambia, and Rwanda, donor expenditure on HIV/AIDS increased to a lesser degree than reported disbursements. In Tanzania, donor expenditure on HIV/AIDS was greater than reported disbursements. There are multiple reasons for these discrepancies: some are legitimate while others may warrant further investigation. For example, commitment and disbursement data are not comprehensive. The online OECD DAC-ORS database, the one most used by assessments, does

not include commitments and disbursements by private foundations. Additionally, disbursements refer to the funds that are transferred from the donor to a recipient; it is likely that total disbursed funds in a particular year are not fully spent until later years. Discrepancies between commitments, disbursements, and expenditures may also be associated with other issues such as poor reporting of commitments and disbursements, administrative delays, or limited absorptive capacity in recipient countries. More comprehensive commitments and disbursement tracking should be conducted on a regular basis. See Chapter 4 for further discussion on this topic.

**FIGURE 8: COMPARING COMMITMENTS, DISBURSEMENTS, AND EXPENDITURE**



### 3.3 FINANCING AGENTS

#### 3.3.1 WHO MANAGES THE RESOURCES?

Financing agents are entities that manage or control how resources are allocated to health providers and services. These agents, for example, may include insurance schemes that obtain funds from employers and subsequently pay providers the health care expenses of beneficiaries. Financing agents may also include entities that serve both as the financier and the manager of funds, such as households when the household makes out-of-pocket payments to providers. Analyzing trends of financing agents in a country's health system can indicate which entities have the largest programmatic control over how HIV/AIDS funds are used. Public financing agents include ministries of health and national AIDS commissions. Private entities include private insurance schemes, households, and private companies that provide onsite services for employees and/or contract with providers for employee health coverage. Other financing agents are NGOs, which generally manage donor funds.

Figure 9 shows the relative shares of HIV resources by each entity. Table 7 shows the percent increase of absolute dollar values controlled by each financial agent relative to pre-influx levels.

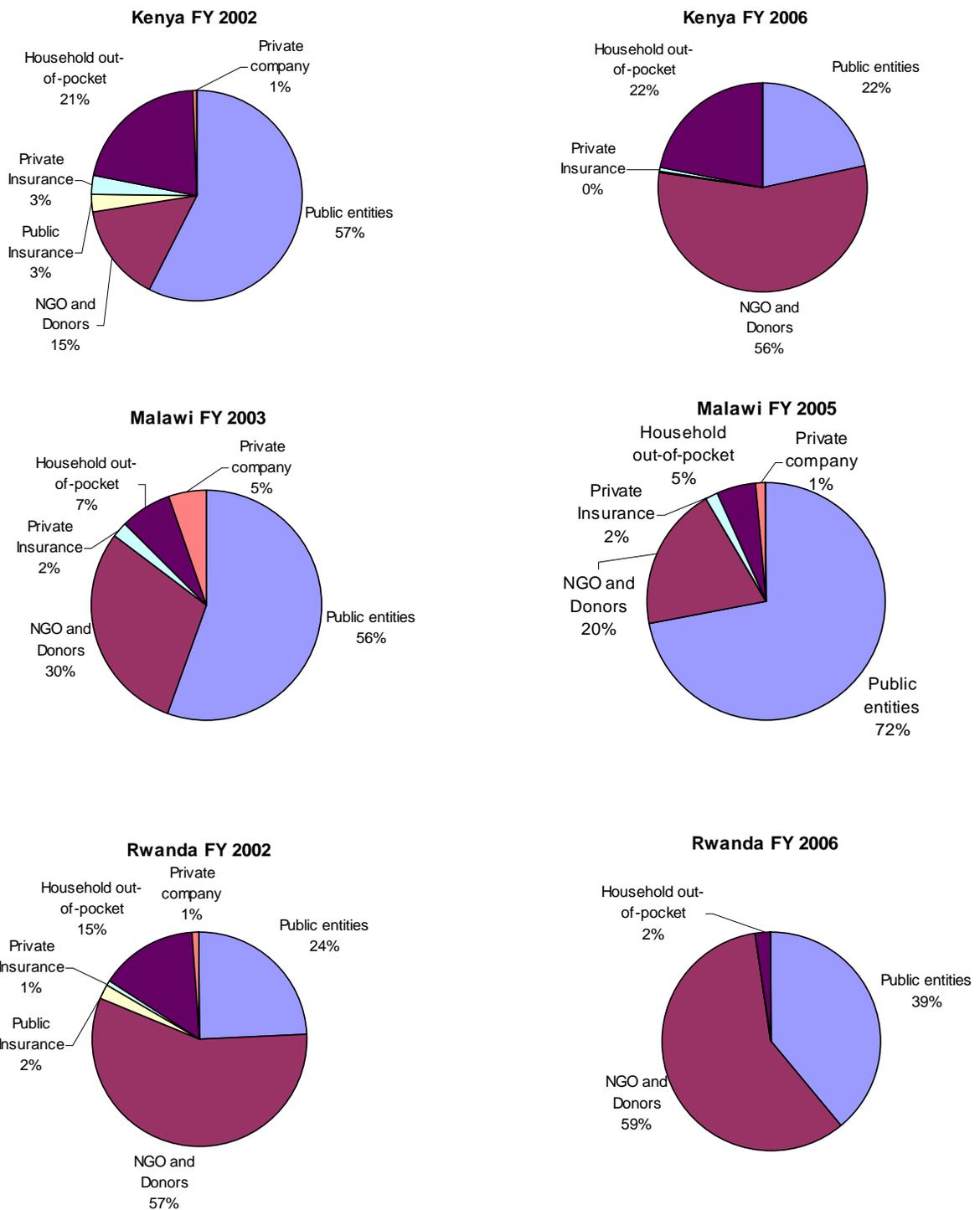
Since the influx of donor funds began, relative shares of resources managed by government, NGOs, and donors have generally increased; however, the private share (including private insurance, private company, and household out-of-pocket payments) has decreased in all countries except Tanzania.

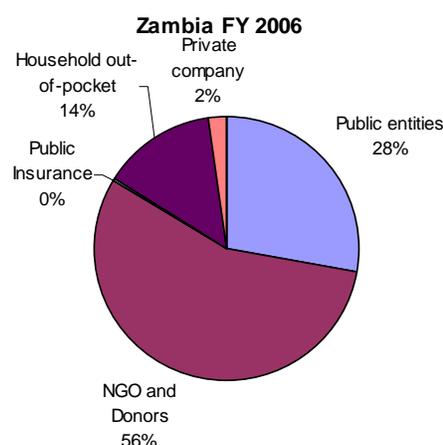
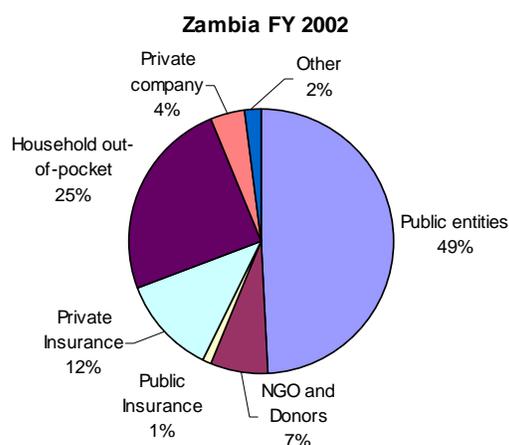
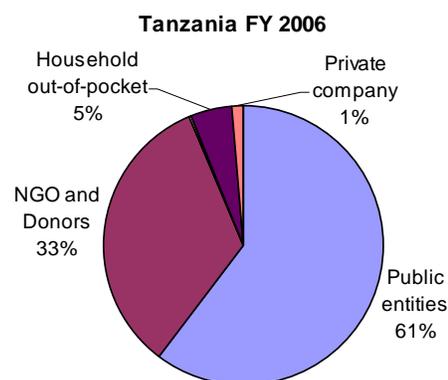
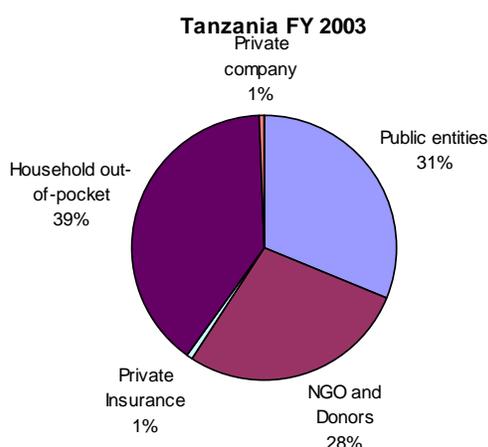
In Malawi, public agents consistently control the largest portion of HIV/AIDS resources, managing 56 percent of resources pre influx and 72 percent post influx. The relative private share decreased from 14 percent to 8 percent. In particular, the private company share decreased in absolute terms. In Tanzania, the public is increasingly managing HIV/AIDS resources, with the relative share doubling post influx. The private share has decreased from 41 percent to 6 percent, although the absolute amount of resource controlled by private companies greatly increased due to the involvement of major mining companies.

In Zambia, Rwanda, and Kenya, donors and NGOs manage the largest share of HIV/AIDS resources post influx. The NGOs' and donors' share increased from 7 percent pre influx to 56 percent post influx in Zambia and from 15 percent to 56 percent in Kenya. While the NGO and donors' share increased, private agents manage a smaller share. In absolute spending, private companies are controlling less HIV/AIDS resources, by 94 percent, 47 percent, 100 percent and 49 percent in Kenya, Malawi, Rwanda, and Zambia, respectively. In all five countries, either public agents or NGOs and donors control the largest shares of HIV/AIDS resources.

In all studied countries, private agents control a smaller share of HIV/AIDS resources. Private insurance and private company investments have decreased in all countries except Tanzania. This poses concern, as some studies have found that private company onsite services are helpful for increasing utilization and offering quality, tailored services to meet the need of a type of employees (Zellner and Ron 2008). Moreover, this trend is challenging established public-private partnerships, which are potential solutions to meeting an increasing demand for HIV/AIDS services.

**FIGURE 9: BREAKDOWN OF FINANCING AGENTS FOR HIV/AIDS RESOURCES**





**TABLE 7: PERCENT CHANGE IN ABSOLUTE CONTRIBUTION OF FINANCING AGENTS TO HIV/AIDS HEALTH CARE SINCE THE INFLUX OF DONOR FUNDS**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Public agents	-31.8%	174.8%	885.3%	1559.2%	-48.4%
Private insurance agents	-76.0%	50.7%	-97.3%	-5.0%	-96.7%
Private companies	-93.7%	-47.0%	-99.9%	1797.0%	-49.3%
NGOs and donors	558.3%	41.6%	540.0%	908.8%	638.3%

In examining whether similar patterns emerge for financing agents with general health, the authors found that although donor and NGO are also increasingly managing the overall health resources across the countries, private sector management is not decreasing as observed for HIV/AIDS (Table 8). Private sector management increased in all countries except Rwanda. This finding provides additional validation that private entity control of resources could be crowded out as a result of the donor influx on HIV/AIDS spending.

**TABLE 8: PERCENT CHANGE IN ABSOLUTE CONTRIBUTION OF FINANCING AGENTS TO GENERAL HEALTH SINCE THE INFLUX OF DONOR FUNDS**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Public agents	12.9%	45.4%	453%	157%	11%
Private insurance agents	74%	71%	-65%	146%	-56%
Private companies	123%	2%	-31%	27%	-3%
NGOs and donors	249%	60%	410%	305%	522%

### 3.3.2 OUT-OF-POCKET EXPENDITURES

Out-of-pocket spending are direct payments made by PLWHA to health providers. Given that PLWHA may have, on average, more illness episodes than the general population, it is anticipated that PLWHA spend more than the general population for health care. However, it is important to examine the extent to which this difference exists to gain an understanding of the burden of financing on PLWHA and whether or not there have been changes since the influx of donor spending began.

Table 9 shows the per capita spending by PLWHA obtained from the HIV/AIDS subaccounts data, and the per capita spending of the general population obtained from NHA data. Despite per capita spending by PLWHA remaining higher than that of the general population, out-of-pocket spending per capita by PLWHA has decreased since the donor influx in several of the study countries. In Zambia, each HIV-positive person spent on average about \$54 annually on health care in 2002, and more than half that in 2006. In Tanzania, average per capita out-of-pocket spending by PLWHA dropped from \$12 to \$10 before and after the donor influx began.

**TABLE 9: COMPARING OUT-OF-POCKET SPENDING FOR PLWHA TO OUT-OF-POCKET SPENDING BY THE GENERAL POPULATION**

	Malawi (FY03)	Malawi (FY05)	Rwanda (2002)	Rwanda (2006)	Tanzania (FY03)	Tanzania (FY06)	Zambia (2002)	Zambia (2006)
General population	\$1.82	\$1.81	\$2.85	\$7.66	\$5.05	\$5.57	\$9.19	\$16.74
PLWHA	\$2.14	\$3.42	\$10.16	\$9.78	\$11.92	\$9.75	\$53.78	\$20.67
% difference	18%	89%	257%	28%	136%	75%	485%	23%
Magnitude general pop	0.99		3.12		1.10		1.82	
Magnitude PLWHA	1.59		1.12		0.82		0.38	

Time-series comparison of differences between PLWHA and the general population spending shows how the spending gaps have narrowed over the years. In Zambia, HIV patients spent 485 percent more out-of-pocket than the general population in 2002, but only 23 percent more in 2006. Similarly, in Rwanda and Tanzania, the decreases were from 257 percent to 28 percent and 136 percent to 75 percent, respectively. The decrease in the health care spending gap between PLWHA and the general population may be due in part to increased subsidization and availability of care and treatment services for PLWHA. Further investigation is warranted to see if this is the only cause or if the prevalence of severe illnesses due to HIV/AIDS has decreased and if the actual cost of HIV/AIDS treatment has been reduced. However it should be noted that the positive impact is not universal. In Malawi, out-of-pocket spending by PLWHA increased and the percent difference from the general population grew. This raises the issue of priorities of donor funds as discussed in Section 3.5 – that a large proportion of donor funds were used on programmatic activities instead of on curative care.

With respect to Kenya, PLWHA out-of-pocket estimates are not presented in Table 9 due to the country's adoption in 2006 of a more rigorous methodology – a “gold standard” – for collecting PLWHA spending data that allows comparison between people of similar socioeconomic characteristics who were HIV positive and those who were HIV negative. KAIS was conducted by the Central Bureau of Statistics with support from the US Centers for Disease Control and Prevention. In the 2002 PLWHA survey, Kenya used a targeted survey approach; people who were HIV positive were sampled and surveyed on self-financing and utilization of health care. In contrast to this, as well as to the other countries selected for this analysis, in 2006, HIV-positive individuals were identified first through national registries, associations etc, though as discussed in Section 2.5, this tends to skew the sample population toward those who use formal health care. While efforts were made to adjust for such biases in the 2002 estimate, the approach to PLWHA estimation in 2006 is an improvement through its random sample household survey that included biomarker testing for HIV. The KAIS methodology is preferred for estimating PLWHA expenditure in low-resource settings, where a lack of available HIV testing centers or utilization of those centers may result in many people with unknown HIV status.

The survey collected blood samples from nearly 16,000 respondents to test for HIV antibodies. The tests identified 1,106 of them to be HIV positive. Most had been undiagnosed until the survey tested them. Both HIV-positive and HIV-negative people provided responses to their inpatient and outpatient visits and level of spending, as well as attitudes and risk behaviors. The data were used to match a group of HIV-negative respondents to HIV-positive respondents.

Table 10 shows the KAIS results. PLWHA spent 56 percent more out-of-pocket on health care than the HIV-negative population. Given the different methods used pre and post influx in Kenya (as described above), the authors did not make time-series comparisons for this country. In future NHA and HIV/AIDS subaccounts, the authors recommend adoption of KAIS methodology to measure and monitor the changes of financial burden of PLWHA.

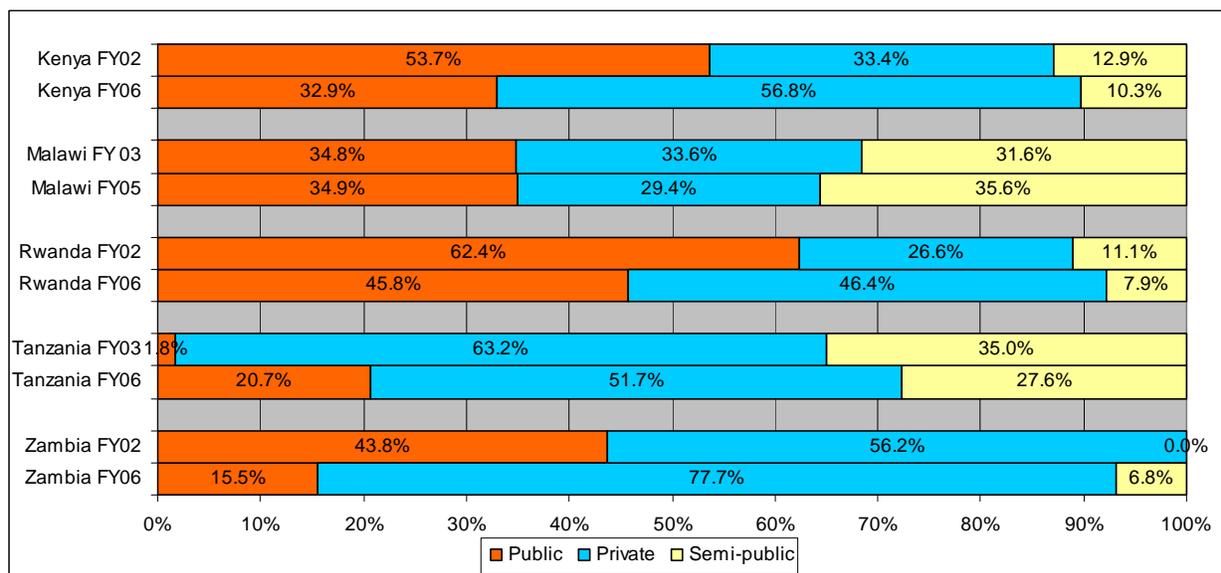
**TABLE 10: KAIS RESULTS OF PLWHA OUT-OF-POCKET SPENDING VERSUS OUT-OF-POCKET SPENDING BY THE GENERAL POPULATION**

KAIS	Annual Spending (KSh)
PLWHA	2,167
HIV negative	1,387
Percent increase of PLWHA expenditures compared to HIV negative	56%

### 3.3.3 WHERE PLWHA ALLOCATE OUT-OF-POCKET EXPENDITURES

While out-of-pocket spending has decreased in several of the studied countries, it is helpful to examine where PLWHA spend their money. Although there was a general preference for spending at public facilities before the donor influx, PLWHA seem to be shifting their out-of-pocket spending from the public sector to the private sector. Figure 10 shows that over the years, public providers received a decreased share of out-of-pocket expenditure (except Tanzania) relative to other providers. Private providers, particularly private for-profit hospitals, received an increased portion.

**FIGURE 10: OUT-OF-POCKET SPENDING BY PROVIDER**



In Kenya, the share of household out-of-pocket spending on public providers decreased, while the share spent at private providers increased between the pre- and post-influx data points. Households in Rwanda and Zambia followed similar patterns.

In Malawi, the shift to private provision is less than that seen in other three countries, which could be a result of the increasing spending at semi-public providers (NGO/church-based facilities and often behave like private providers). In Tanzania, public facilities now attract a greater out-of-pocket spending share, while private facilities attract a lower share; this may be due in part to the recent large public investment.

This shift of out-of-pocket payment from public to private providers could be explained by the increased service subsidization at most public facilities as a result of influx of donor funds (see Table II), thus costs at public providers stay lower for users than costs at private providers. Shifting utilization could also account for the change in spending patterns at providers. A combination of these factors is also plausible. In contrast, in Tanzania, there has been increased out-of-pocket spending in the public sector despite increased government investment in HIV/AIDS. Government funding may therefore go toward public health programs but not subsidization of services.

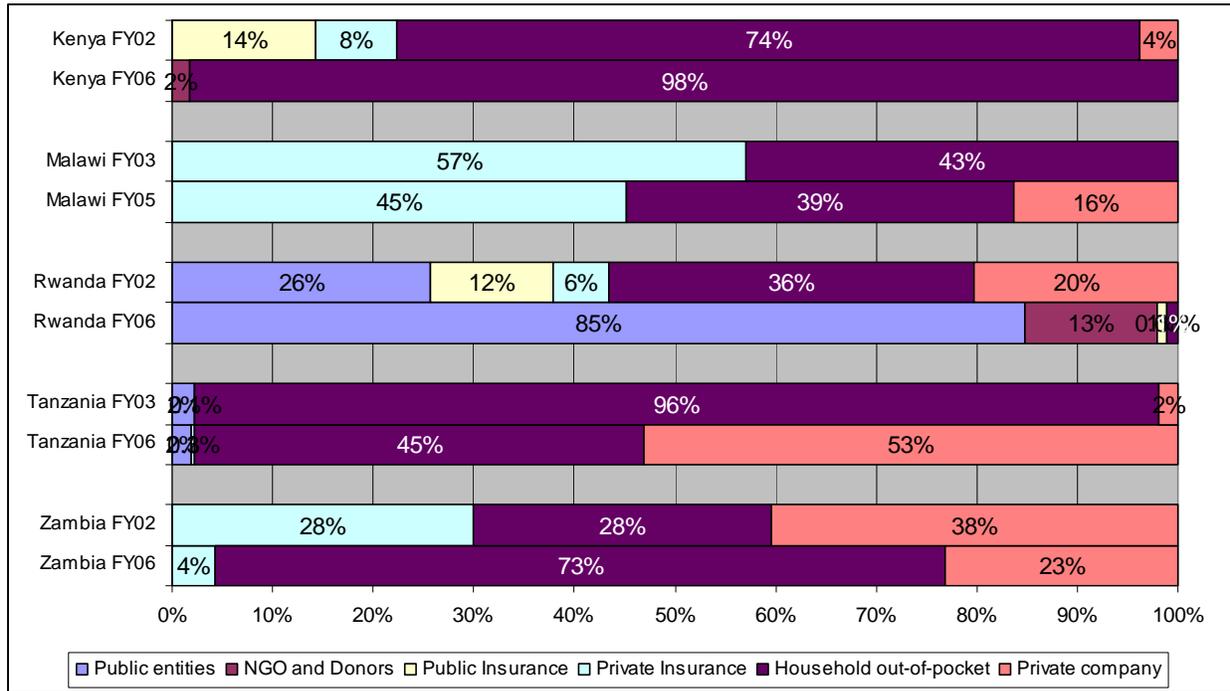
**TABLE II: PERCENT CHANGE IN HIV/AIDS FUNDS SUBSIDIZING PUBLIC PROVIDERS (EXCLUDES FUNDS FROM HOUSEHOLD OUT-OF-POCKET AND PRIVATE INSURANCE PAYMENTS)**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Public hospital	37%	29%	1478%	1191%	-84%
Public health center/clinic	365%	-22%	5307%	83%	-76%

The major recipients of the growing household out-of-pocket payments in the private sector are private for-profit hospitals. Figure 11 illustrates how household out-of-pocket payments tend to contribute the largest share to these hospitals. Across most countries, there is very little public financing for private facilities. This is expected but is also indicative of the low level of contracting with the private sector and

the lack of public-private partnerships. In Rwanda, in contrast, public and external funds are increasingly used at its one private hospital to the extent that this hospital is now considered essentially a public facility.

**FIGURE 11: PERCENT CONTRIBUTION OF FINANCING AGENTS CONTRIBUTING TO PRIVATE FOR-PROFIT HOSPITALS**



### 3.4 HEALTH PROVIDERS RECEIVING HIV/AIDS RESOURCES

In addition to the use of household out-of-pocket payments, examination of spending patterns reveal other trends.

The majority of funds spent on personal health care (medical care as opposed to public health programs and central-level administration) went to public facilities. For example, in Kenya, 74 percent of HIV/AIDS expenditure on personal health care was spent in public facilities before the donor influx, and 64 percent after the influx (Figure 12). Similar patterns were observed in Malawi and Rwanda. Of those facilities that provide curative care, public facilities receive the majority of resources for HIV/AIDS.

**FIGURE 12: HIV/AIDS HEALTH EXPENDITURE BY PROVIDER TYPE**

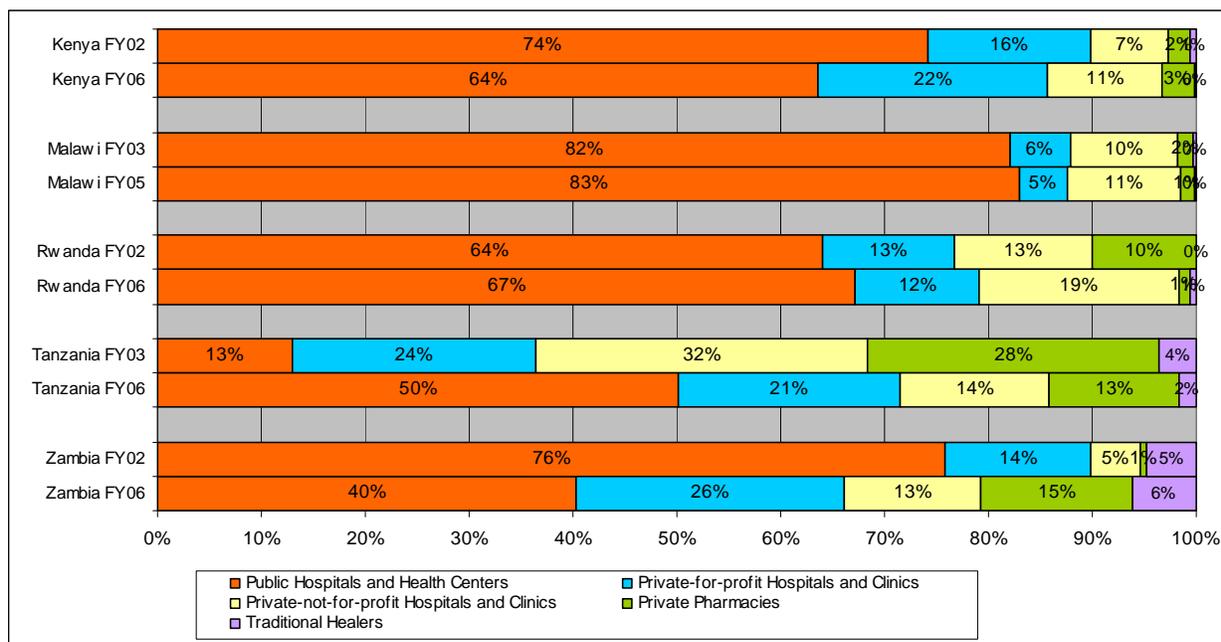


Table 12 shows the percentage changes in absolute expenditure post influx relative to pre-influx levels at various types of providers. Since the influx, there is less spending at traditional healers and pharmacies/shops and more at higher levels of providers – in particular, hospitals. Private hospitals consumption of HIV/AIDS resources is growing dramatically; consumption by public hospitals also is growing though overall to a lesser extent.

**TABLE 12: PERCENT CHANGE IN ABSOLUTE SPENDING AT VARIOUS PROVIDER TYPES SINCE THE INFLUX OF DONOR FUNDS**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Private hospital	375%	86%	1395%	73%	726%
Private clinic	-64%	33%	-42%	96%	-94%
Not-for-profit hospital	189%	43%	938%	-12%	-48%
Not-for-profit clinic	57%	NA	1526%	-4%	-15%
Private pharmacies/shops	155%	14%	-4%	-12%	554%
Traditional healer	-40%	3%	0%	-12%	-67%
Public hospital	20%	61%	869%	1247%	-87%
Public health center	400%	-2%	1029%	115%	-83%

In general, there is increased consumption by not-for-profit facilities that often receive funds from both government and external sources, reflecting a greater involvement of not-for-profit sectors in the national response to the epidemic.

Spending at private for-profit clinics increased in Malawi and Tanzania and decreased in the other countries. Spending at public health centers increased in Kenya, Rwanda, and Tanzania but decreased in Malawi and Zambia. While there is a decrease in resource consumption by public health centers in Malawi and Zambia, the scale-up HIV resources is generally observed in the not-for-profit clinics more so than public health centers.

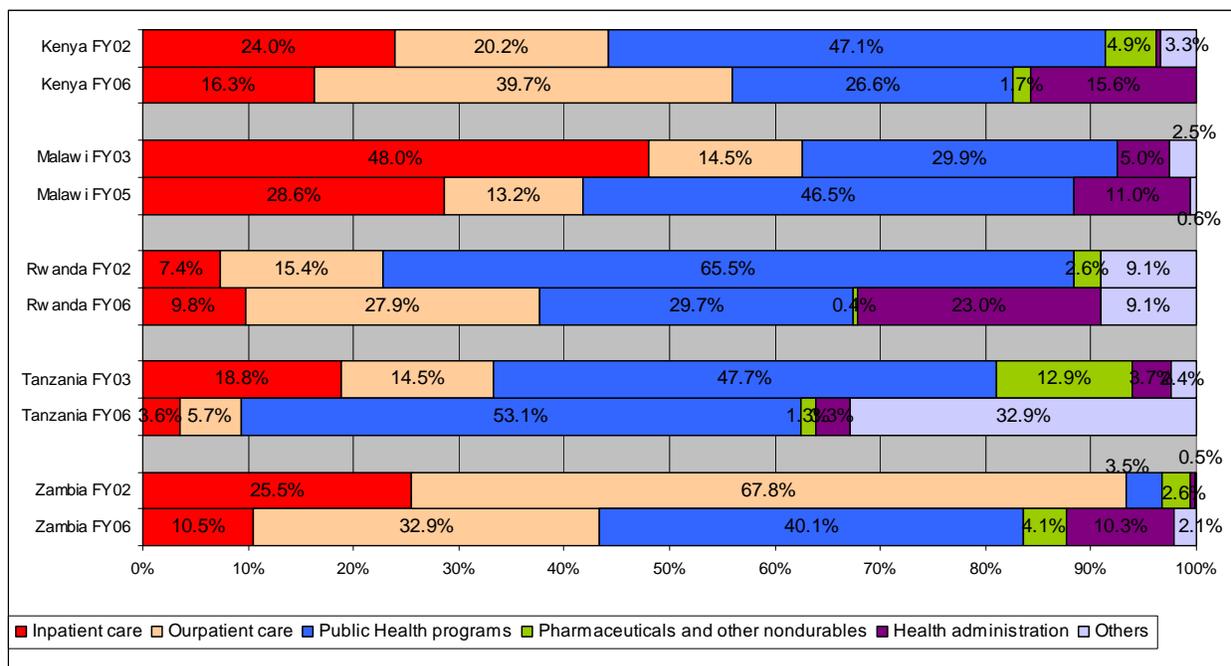
Private pharmacies/shops are consuming less HIV/AIDS resources in Rwanda (4 percent), and Tanzania (12 percent), suggesting a decrease in self-medication by PLWHA in those countries – post influx, ART is increasingly provided at health centers/hospitals. While Table 12 does not show a decrease for Kenya, the situation is unclear given its different methodology for measuring out-of-pocket spending by PLWHA in 2006.

Since the donor influx began, PLWHA are spending less at traditional healers: 67 percent less in Zambia, 40 percent less in Kenya, and 12 percent less in Tanzania. This may reflect a positive effect of the scale-up of funds, that is, PLWHA may be seeking care for treatment of opportunistic infections in the formal sector due to increased awareness of subsidized HIV treatment or from increased physical access to care.

### 3.5 HEALTH FUNCTIONS FINANCED BY HIV/AIDS FUNDS

Figure 13 illustrates the activities and services financed by HIV/AIDS funds pre and post influx in each country. In all countries, the share of total HIV/AIDS that went to inpatient care decreased. The share of total HIV/AIDS spending going to outpatient care increased in some countries and decreased in others. In Kenya and Rwanda, the share almost doubled; in Zambia and Tanzania, it fell to about half of pre-influx levels. Most dramatic in Zambia, it decreased from 68 percent of total health expenditure on HIV/AIDS in 2002 to 33 percent in 2006. Most dramatic in Zambia, it decreased from 68 percent of total health expenditure on HIV/AIDS in 2002 to 33 percent in 2006.

**FIGURE 13: HIV/AIDS HEALTH FUNCTIONS CONSUMED**



While the relative shares decreased, absolute spending on inpatient care expenditure increased in Kenya, Rwanda, and Tanzania (Table 13). Except for Zambia, overall absolute spending on outpatient care also increased, which may be due to the introduction of ART. Spending generally increased on public health and prevention programs and on health administration; a large proportion of HIV/AIDS spending by government and donors falls in these categories.

**TABLE 13: PERCENT CHANGE IN ABSOLUTE SPENDING ON HIV/AIDS HEALTH FUNCTIONS SINCE THE INFLUX OF DONOR FUNDS**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Inpatient care	22.6%	26.6%	720.2%	63.6%	-62.5%
Outpatient care	253.9%	92.9%	1016.7%	237.9%	-55.8%
Public health prevention	1.6%	230.2%	180.3%	850.9%	960.2%
Pharmaceutical	-37.0%	N/A	-1.8%	-11.8%	47.5%
Health administration	5708.8%	371.4%	N/A	660.1%	1791.2%
Others	-96.2%	-47.4%	516.1%	11535.9%	1257.1%

Now we turn to the end uses of funds from two major financiers, namely donors and the government (Ministry of Finance). Figure 14 shows how donor funds were used for of specific health functions. While donors finance a variety of HIV/AIDS-related services, since the influx, donor spending has largely shifted toward public health and prevention programs (prevention, awareness, and public health related to HIV/AIDS) and away from curative care.

**FIGURE 14: HIV/AIDS HEALTH FUNCTIONS FINANCED BY DONORS**

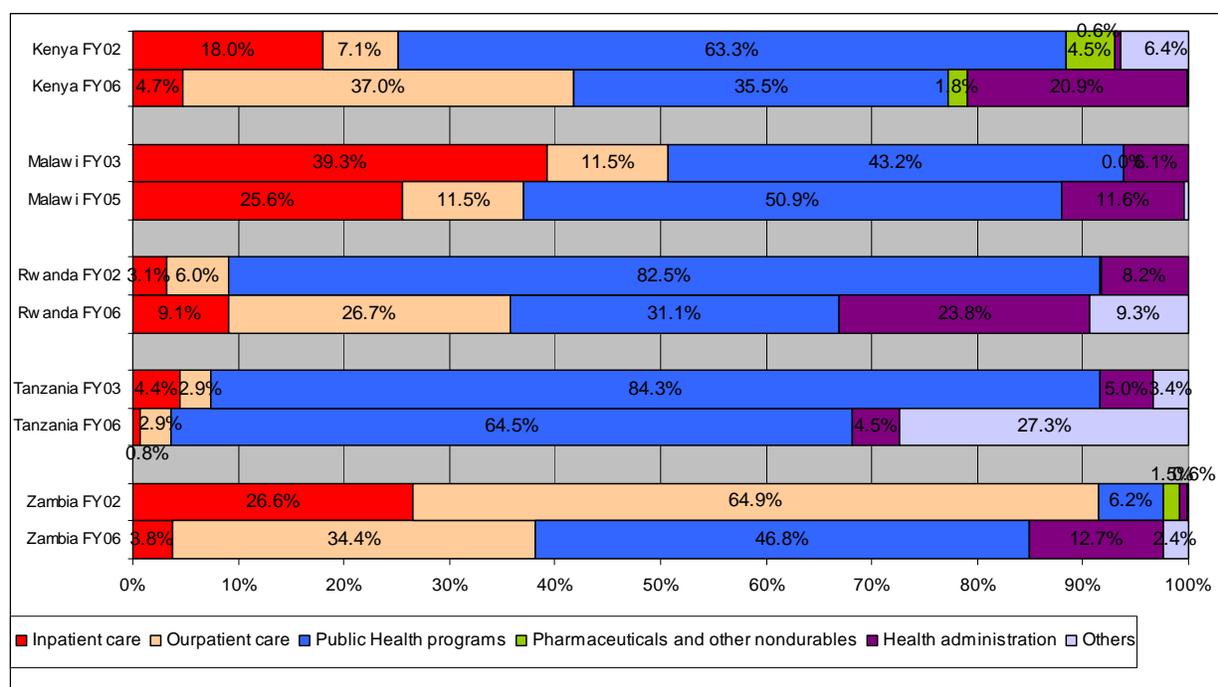


Table 14 shows the changes in absolute donor spending by health function. Like the relative share, absolute donor spending on prevention and public health programs and health administration increased. However, contrary to the decrease in the relative share for curative care, donor support for inpatient care increased in absolute terms in three of the studied countries. Donor spending on outpatient care also increased in all studied countries except Zambia, where it remained essentially constant. The financing burden for curative care shifted to donors due to the increase in external funds for ART, which is generally dispensed as part of an outpatient service and thus included under the outpatient care category. Donor spending on pharmaceuticals from independent pharmacies and shops has decreased in all studied countries.

**TABLE 14: PERCENT CHANGE IN ABSOLUTE SPENDING BY DONORS ON HIV/AIDS HEALTH FUNCTIONS SINCE THE INFLUX OF DONOR FUNDS**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Inpatient care	-31.4%	126.5%	2162.2%	114.5%	-80.4%
Outpatient care	1251.5%	247.5%	3386.2%	1152.2%	-26.7%
Pharmaceuticals	1.4%	N/A	-73.1%	N/A	-99.8%
Public health and prevention programs	46.3%	309.8%	194.2%	851.8%	940.4%
Health administration	9022.3%	565.7%	2172.9%	1024.4%	2649.0%
Others	-96.0%	N/A	N/A	9958.7%	2031.6%

Turning to the end use of government funds, the analysis shows that public funds have increasingly financed programmatic activities, particularly on health administration and public health prevention programs across the studied countries (Table 15). Meanwhile, public funds on inpatient care have dropped except in Tanzania.

**TABLE 15: PERCENT CHANGE IN ABSOLUTE SPENDING BY GOVERNMENTS ON HIV/AIDS HEALTH FUNCTIONS SINCE THE INFLUX OF DONOR FUNDS**

	Kenya	Malawi	Rwanda	Tanzania	Zambia
Inpatient care	-30.2%	-38.2%	-67.9%	136.4%	-80.8%
Outpatient care	364.7%	-34.8%	80.7%	1198.2%	-77.3%
Pharmaceuticals	-100.0%	N/A	-60.4%	N/A	-98.3%
Public health prevention	-77.8%	110.0%	187.0%	973.6%	2764.8%
Health administration	992.0%	169.9%	42.7%	95.8%	-73.3%
Others	-100.0%	N/A	N/A	N/A	-79.1%

### 3.6 SUMMARY OF FINDINGS

The comparative analysis of NHA HIV/AIDS subaccount data in five countries demonstrates changes in national HIV financing patterns before and after the influx of external financing for HIV/AIDS in countries. The main findings include:

- The financial scale-up for the response to HIV/AIDS has been significant across the board, but the investment is not necessarily proportional to the prevalence rate. HIV/AIDS expenditure made up a fourth of total health expenditure in the country experiencing the lowest HIV prevalence among the studied countries (Rwanda); the figure is same for Zambia, which is experiencing the highest HIV/AIDS prevalence.
- Donor contribution increased sizably over the period in all countries studied, accounting for more than half of all spending on HIV/AIDS health care after the fund influx (and up to 94 percent in Rwanda). Donor contribution for other health priorities did not grow to the same extent; thus much of the increased donor health support to countries contributes specifically to HIV/AIDS.
- The influx of donor funds may be perversely affecting the generation of funds from domestic sources in many countries. Not only has the relative share from government and private companies declined,

the absolute investment amount has also dropped in most of countries. Donor investment on HIV does not appear to be additional to investments by local governments and private sources, which possibly violates the “additionality” agreement of many grants. The displacement of HIV domestic investment has sustainability implications particularly in light of the global economic recession.

- Observing levels of commitments, disbursements, and expenditures for HIV/AIDS is important for measuring and evaluating both donors and national health systems. Discrepancies imply the need for more comprehensive and specific tracking at regular basis at each level.
- In terms of who controls the funds, the government is the principal manager in some countries and donors/NGOs are in others. In this circumstance, it is important to ensure the effective coordination of all players and avoid duplications.
- The role of private companies and insurance in terms of managing HIV/AIDS resources has been decreasing (which was not the case in general health) signaling a possible crowding-out of this sector.
- Although PLWHA out-of-pocket spending remains higher than that of the general population, it generally decreased from the baseline. This narrowing of the gap between out-of-pocket payments by PLWHA and the general population may reflect a positive impact of the donor influx.
- With the use of a more rigorous research methodology, the Kenya KAIS 2006 produced more comparable measurements of financial burden of PLWHA over people who are HIV negative: annually, PLWHA spent 56 percent more out-of-pocket payment on health care than the HIV-negative population.
- At the provider level, health care spending has increased largely in public sectors and there is a shift away from spending in informal sectors and private pharmacies and shops, which indicates less reliance on traditional healers and self medication.
- Regarding the health activities or services financed by HIV/AIDS funds, on the whole, expenditure on outpatient care has increased, which is likely due to the introduction of ART. A large proportion of donor funds were spent on health administrative and public health programmatic activities.

## 4. DISCUSSION

### 4.1 TRACKING THE DONOR SURGE FROM THE GLOBAL TO THE COUNTRY LEVEL

Without an understanding of how current funds are being used, countries and other donors risk “flying blind” when planning for the future. Despite the critical need for resource tracking information, comprehensive information on how HIV/AIDS funds are channeled from the global level to the in-country level is not readily available. Moreover, much of the comparative analysis to date is limited to tracking development assistance at the level of commitments and disbursements made to a given country (Levine and Blumer 2007; Eiseman and Fossum 2005; Shiffman 2008; Kates, Lief, and Pearson, 2008; Easterly and Pfitze 2008; Bernstein and Sessions 2007; Piot 2008). When such data are compared with actual in-country expenditures of external aid based on recent national-level data from NHA subaccounts, this study finds that no straightforward pattern emerges.

While it may be anticipated that commitments, disbursements, and expenditures would not necessarily match for the same given year, one would expect expenditure to be the same or lower than disbursements, which in turn would be the same or lower than commitments— to account for legitimate bureaucratic delays, leakages, or limited absorptive capacity in recipient countries. Examples of “legitimate” bureaucratic delays may include:

- *Timing of the transaction:* If a disbursement (e.g., to a ministry of health) is made toward the end of a year, it is unlikely that it will be spent entirely in that same year; hence, expenditures for the year would be reported as being lower than disbursements.
- *Intended timeframe of the grant:* Some disbursements to government entities are intended to cover a multiple-year time frame and the funds are to be spent over two or more years. In such cases, the amount disbursed in a given year will unlikely and purposely not match actual expenditures incurred for a rendered service/product.
- *Issuance of funds is based on performance reporting:* For example, the GF acknowledges that its disbursements lag behind commitments because it follows a performance-based approach to grant making. Additional funds are not disbursed until evidence of progress has been seen.<sup>12</sup>
- *Administrative and official procedures by issuing grantor:* For example, in the United States, funds do not have to be disbursed in a single year, so US policymakers may think in terms of commitments but not actually disburse funds until the following year or years (Politics and Policy of HIV/AIDS, 2009).
- *Availability of comprehensive data by in-country donor offices:* Some in-country institutions may not have figures for aid that is not channeled through or managed by them. For example, a donor country may report having contributed to a country but the funds are managed in the donor country itself, for example, on scholarships to Ghanaian medical students in the donor country. Consequently,

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<sup>12</sup> [www.theglobalfund.org](http://www.theglobalfund.org)

donor-country agencies in Ghana may not have the full picture of aid flows in their executed budgets (Dreschsler and Zimmermann 2006).

Nevertheless, lower levels of financing flows reported at each level could also signal leakages and possibly poor absorptive capacities of recipient countries. Many countries with large AIDS epidemics historically spent little on health and so a sudden inflow of large sums may not be easily absorbed without sufficiently expanding the supply of health (Politics and Policy of HIV/AIDS 2009). Moreover, in some countries there may not be sufficient support or managerial staff available to process and disburse funds to providers in a timely fashion or to report back incurred expenditures. These are critical issues and highlight the need for robust resource tracking of each tranche of funds associated with an HIV/AIDS activity.

However, although the above explanations may be highly plausible, when NHA and HIV/AIDS subaccount data were compared to OECD DAC commitment and disbursement information, the authors found that disbursements are sometimes greater than commitments and that actual expenditure by donors is sometimes larger than disbursements and even commitments in the studied countries. Why is this the case? A review of existing literature alludes to the lack of comprehensive and robust data on resource flows at the global level. Despite the critical need to monitor resource flows at a global scale, the OECD DAC CRS database does not offer an entirely comprehensive or robust account of external aid flows to developing countries. Although the quality of data has improved since the inception of the database, it should be noted that cooperation with the DAC by external governments is voluntary (Easterly and Pfitze 2008) and donors do not necessarily report all grants and loans (Shiffman 2008). Moreover, the database does not involve all major donors, and foundations like the Bill and Melinda Gates Foundation are not targeted (Shiffman 2008). Also, donor countries may track different levels of spending and employ different terminologies that make comparisons difficult. For example, while the US may submit information on commitments and disbursements, the British government reports disbursements and commitments as if they were the same (Politics and Policy of HIV/AIDS 2009). Finally, as several studies have reported, disbursements are “poorly covered in the CRS” (Shiffman 2008) – a sentiment echoed by other researchers (Sridhar and Batniji 2008; Easterly and Pfitze 2008) leading some to conclude that “the data are terrible and patterns the data show are terrible” (Easterly and Pfitze 2008).

Given the mentioned weaknesses with commitment and disbursement data and the reliance on transparent and comprehensive reporting of resource flows by donors and their recipients (i.e., not based on audited spending), it is not possible to determine at this stage the extent to which poor absorptive capacity plays a role in preventing or delaying the spending of external resources for their intended purposes. To truly monitor and track resource flows from the global to the country level, it is critical that all external funders offer detailed information on their resource flows, for each individual program or project, and according to a standardized format (also echoed by Sridhar and Batniji 2008) and consistent definitions – to ensure that “apples are compared with apples.” Moreover, such reporting should not be voluntary but mandatory within in the spirit of the Paris Declaration on Aid Effectiveness (2005), which specifically asks donors to “provide timely, transparent and comprehensive information on aid flows so as to enable partner authorities to present comprehensive budget reports to their legislatures and citizens.”

## 4.2 HEAVY SPENDING BY DONORS AT THE COUNTRY LEVEL: IMPLICATIONS FOR SUSTAINABILITY, NEED FOR PREDICTABLE FINANCING

As shown in this paper, donor spending on HIV/AIDS in the study countries is considerable and accounts for over half of all spending on HIV/AIDS health care. On average, this translates to a sizeable 43 percent of all donor health investments in the targeted countries.

While current donor funding for HIV/AIDS reflects its high priority status among the global community, these unprecedented levels of financing raise concern about the long-term sustainability of HIV/AIDS programs. Sustainability in this context is defined as the ability of a country's HIV program to mobilize resources – especially domestic – to provide HIV/AIDS services efficiently at a desired scale and quality over time (Dutta and Fleisher 2008). Given that HIV/AIDS is a chronic disease and that donors almost entirely finance the treatment costs of patients on ART in the studied countries, any reduction in donor financing has grave implications – both ethical and political – that may involve the downsizing of ART to PLWHA patients. Moreover, sustainability of the surge is a concern considering that “most donor funding is committed on an annual or otherwise short-term basis, leading to a lack of predictability and stability in funding at the recipient country level” (Kaiser Family Foundation, Royal African Society, and Overseas Development Initiative. 2005).

This study finds that should donor contribution to HIV/AIDS health care be withdrawn or dramatically reduced from the 2006 levels, country governments (if there are no other local resources) would need to increase their shares by at least 10-fold in Kenya, 35-fold in Rwanda, 3-fold in Malawi and Tanzania, and 8-fold in Zambia to maintain current levels of financing for HIV/AIDS care and treatment. The sustainability of the HIV/AIDS response is therefore weaker, given warnings from UNAIDS that donor financing levels may drop in the current struggling global economy (UNAIDS 2008).

There may be signs that the influx is already perversely affecting the mobilization of funds from domestic sources. For example, this comparative analysis shows that in most countries studied, private company subsidization for HIV/AIDS care and treatment for their employees has dropped since the surge. In addition, some countries are also experiencing a decrease in government investment to finance the response.

This decrease in local investment has been a fear of many of the new donor surge stakeholders: UNAIDS in its 2004 report on the Global AIDS epidemic urges that “all parties commit themselves to the principle that additional funding for HIV/AIDS is to be used for additional spending otherwise displacement is inevitable to the detriment of overall development.” A World Bank study of current and former country directors of MAP projects found that 44 percent of the country directors interviewed for the study said that MAP funding is not additional and 38 percent said they were not sure (World Bank 2005). While this study's observed drop in domestic financing may be in violation of the “additionality clause” in many grant agreements, it is critical to investigate reasons for the shifting of local resources away from HIV/AIDS. Perhaps there has not been extensive involvement of the private sector in the dialogue concerning the HIV/AIDS response. In addition, there may be other pressing and critical health needs that are not being financed hence the shifting of government resources to those areas. Perhaps what is critical now is close scrutiny by stakeholders – both external and domestic – to work toward ensuring that adequate and predictable levels of funding exist for all health priorities including HIV/AIDS.

Efforts are underway to examine this issue and raise its profile on global agendas (Heller 2005; Lewis 2005; Paris Declaration on Aid Effectiveness; International Health Partnership and Related Initiatives

2008). Lewis (2005) articulates the basic concern that with the influx of financing for HIV/AIDS countries will have reduced incentive to mobilize domestic resources; indeed, he argues that African countries with the highest ratios of aid to GDP are also those that have stubbornly low tax ratios. Lewis also warns that increased aid may also “make governments less receptive to a more significant role for the private sector.”

The strongest recognition of the need to improve aid predictability can be observed in its inclusion in the Paris Declaration, in which over 100 ministers, heads of agencies, and other senior officials committed improving aid effectiveness including the specific need to urge donors to program aid over a multi-year framework, aligned with national budgeting and program cycles (Paris Declaration 2005). Building upon the Paris Declaration, a recent meeting in Ghana put forward an “agenda for action” that calls upon donors to agree on providing “3-5 year forward information on their planned aid to partner countries” (Accra Agenda for Action 2008).

Not only do current levels of financing need to be sustained but they also need to be increased. The World Bank reports that a fivefold increase of 2007 funding levels is needed by 2015 to successfully respond to the pandemic (Phumaphi 2008). Given such financial needs, it is critical that new mechanisms of financing be explored such as the engagement of potential local resources in recipient countries, the involvement of multilateral companies, and the development of National AIDS trusts (where countries can draw down as they gradually relax absorptive capacity constraints or as they manage to improve their government systems).

### 4.3 COORDINATING HIV/AIDS RESOURCE ALLOCATIONS

Who determines how HIV/AIDS resources are used? From analysis of spending at the “financing agent” level (i.e. those entities that have programmatic control over resource allocation), this study finds that in four of the five countries studied (the exception being Malawi), NGOs and donors are increasingly controlling the largest share of resources relative to other stakeholders (such as the ministry of health, national AIDS councils, and insurance schemes) when compared to 2002 levels. While this may alleviate the administrative burden borne by the government to absorb and distribute HIV/AIDS funds, with multiple players involved in making resource allocation decisions, the government’s role as steward over the health sector becomes more critical – particularly to coordinate efforts among the many stakeholders in order to leverage activities, avoid redundancies and work toward national goals. Fostering greater ownership over the national response is a sentiment echoed by many declarations including the WHO Commission on Macroeconomics of Health and the International Health Partnership, as well as the Paris Declaration.

In addition to external and governmental financing agents, the private sector can also be important in managing health resources. Indeed for general health, the private sector plays a significant role. At the level of financing agents, the private sector includes private insurance schemes and firms that may contract with providers and/or provide direct onsite services. With respect to HIV/AIDS, the subaccount data for four of the five studied countries shows that private financing agents are playing a smaller role and are allocating less HIV resources compared to their pre-influx levels. This may signal that despite encouragements to foster public-private partnerships, for example, in the GF grant process, the private sector may be experiencing a crowding out from the HIV/AIDS sector. This may be due to increased subsidization of HIV resources from public and NGO providers, thereby decreasing an incentive for the private sector to include HIV/AIDS services as part of its health benefits. Onsite services at private companies have been successful in increasing utilization and offering quality tailored services to the specific needs of their employees (Zellner and Ron 2008). A decrease in these services

could have implications for sustainability of the HIV/AIDS response, and eliminate a potential source of quality care.

#### 4.4 HOW RESOURCES ARE USED— ‘POSITIVE’ RESULTS

What services do HIV/AIDS funds buy? Trend data from the HIV/AIDS subaccounts show increased spending on outpatient care in facilities, possibly to finance ART. Perhaps most striking are the observations with respect to the pattern of financing and use of services by PLWHA. Possibly due to the increased subsidization of care, country subaccount data show out-of-pocket spending on health care by PLWHA is starting to decrease considerably. Moreover, PLWHA spending at private pharmacies/shops and traditional healers has also dropped significantly, signaling less use and reliance on traditional healers and on self-medication to manage opportunistic infections. This may be due to greater awareness and acceptance of formal health care services in HIV/AIDS treatment and care. This may also be due to increased accessibility of health services. Additional funding for the health sector could create more health centers or provide expanded services to those that already exist, thus increasing physical accessibility to health care. Additional funding could also provide wider-reaching public health and prevention campaigns and reach a larger target audience. Financial accessibility could also improve with additional health funding in the health sector by expanding subsidies for ART and inpatient and outpatient care.

#### 4.5 SUMMARY

This comparative analysis of HIV/AIDS spending at the country level highlights:

1. The need for vigilant resource tracking from the global to the country level,
2. The need for greater attention to sustainable and predictable financing in light of decreasing financial investment from local sources,
3. The need for country ownership and involvement in the coordination of resource allocation decisions given the many agents involved in managing HIV/AIDS resources, particularly by NGOs and donors,
4. The need for greater involvement of the private sector, given its shrinking involvement in financing and managing resources for HIV/AIDS,
5. The possible effect of the donor surge in reducing the burden of financing by PLWHA as well as their reliance on the informal sector and self-medication for management of AIDS symptoms and its opportunistic infections.

Through the production and sharing of global and country-level resource data, the global community can assess progress made in the fight against AIDS. With this information, all partners working for this cause can strive to implement better-targeted programs that work more efficiently and produce greater outcomes. To improve upon this campaign, it is important to understand realities of financing to evaluate health system inefficiencies and allow for early identification of threats to sustainability.

# ANNEX A: DATA SOURCES FROM COUNTRY NHA AND HIV SUBACCOUNTS ESTIMATIONS

	Public Agencies	Insurance Agencies	Firms	Providers	Non-Governmental Organizations (NGOs)	Donors/Rest of the World	Household Out-of-Pocket Spending (General Population)	Household Out-of-Pocket Spending (PLWHA)
Kenya FY 2001/2002	<ul style="list-style-type: none"> <li>• 2001/2002 estimates of Recurrent and Development expenditures for the MOH issued by the MOF</li> <li>• Annual 2001/2002 Appropriation Accounts</li> <li>• Major Local Authorities delivering health were surveyed:               <ul style="list-style-type: none"> <li>o Nairobi, Mombasa, Kisumu, Nakuru, and Eldoret</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted insurer survey, for private insurance agencies</li> <li>• 18 insurance companies that provide health insurance in Kenya were surveyed</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted employer survey, of for-profit and parastatal firms</li> <li>• Sample of large private firms likely to provide health benefits for employees was obtained from the Nairobi Stock Exchange</li> <li>• 46 private firms were sampled, and 23 (52%) responded to the survey, respondents were weighted</li> <li>• List of operating parastatals obtained from the State Statutory Board</li> <li>• 92 identified, 32 sampled</li> <li>• Audited annual accounts were reviewed and 23 (72%) of parastatal firms completed targeted employer questionnaires</li> </ul>	<ul style="list-style-type: none"> <li>• Estimated based on household expenditure data, insurance data, employer data, and data from institutions</li> <li>• Primary data collection to estimate spending on traditional healers with a Traditional Healers Survey               <ul style="list-style-type: none"> <li>o Sample population of traditional healers was obtained from MOH's District Cultural Officers</li> <li>o 8% of traditional healers from each of the selected districts was sampled, totaling 320 traditional healers from which 304 (95%) responded</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted NGO survey, of functioning NGOs contributing to health</li> <li>• 120 NGOs working in health were identified through records maintained by the District Development Officers</li> <li>• 84 NGOs (70%) responded to the questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted donor survey, of bi- and multi-lateral donor organizations</li> <li>• 17 donors contributing to health in Kenya identified</li> <li>• 13 responded (76% response rate)</li> </ul>	<ul style="list-style-type: none"> <li>• National household spending estimated from the Households Health Expenditure and Utilisation Survey of 2003</li> <li>• 8,844 households surveyed at 95.2% response rate</li> </ul>	<ul style="list-style-type: none"> <li>• National spending by PLWHA estimated with HIV/AIDS Persons Survey</li> <li>• Ages 15 – 49 surveyed</li> <li>• Key entry points to identify participants: HIV/AIDS support groups, inpatients at hospitals, TB clinics at hospitals</li> <li>• Sample size 2,024</li> </ul>

	Public Agencies	Insurance Agencies	Firms	Providers	Non-Governmental Organizations (NGOs)	Donors/Rest of the World	Household Out-of-Pocket Spending (General Population)	Household Out-of-Pocket Spending (PLWHA)
Kenya FY 2005/2006	<ul style="list-style-type: none"> <li>Primary data collection, in the form of a targeted institutional survey, of government institutions providing health or health-related services or incurring expenses on employees health</li> <li>Major Local Authorities delivering health services were surveyed: <ul style="list-style-type: none"> <li>Cities/major towns of Nairobi, Mombasa, Kisumu, Nakuru, and Eldoret</li> </ul> </li> <li>MOH data obtained from 2005/2006 Annual Appropriation Accounts (Recurrent and Development), corroborated with the 2007 Public Expenditure Review report</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of a targeted insurer survey, for private insurance agencies</li> <li>15 of 23 insurance companies that provide health insurance in Kenya responded</li> <li>Weighting was undertaken based on the number of members covered by the 15 insurance firms sampled to the total members covered by private health insurance</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of a targeted employer survey, of for-profit and parastatal firms</li> <li>List of all private firms registered in Kenya obtained from the Kenya National Bureau of Statistics</li> <li>List of private firms likely to provide medical benefits to their employees was created from data obtained from Nairobi Stock Exchange and the Kenya Private Sector Alliance</li> <li>79 private firms identified, 46 of these were sampled, and 23 responded to the survey</li> <li>Weighting occurred by dividing firms into terciles based on their number of employees</li> <li>Review of audited annual accounts for the state corporations (parastatals)</li> <li>28 (78%) of parastatal firms completed targeted employer questionnaires</li> </ul>	<ul style="list-style-type: none"> <li>Estimated based on household expenditure data, insurance data, employer data, and data from institutions</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of a targeted NGO survey, of all (76) functioning NGOs contributing to health</li> <li>28 NGOs responded</li> <li>Data from the respondents was triangulated to estimate the total expenditure for NGOs</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of a targeted donor survey, of bi- and multi-lateral donor organizations</li> <li>16 donors contributing to health in Kenya identified</li> <li>100% response rate</li> </ul>	<ul style="list-style-type: none"> <li>National household spending estimated from the NHA Household Health Expenditure and Utilisation Survey of 2007</li> <li>Attempt made to visit the same households in the country as were visited in the 2003 household survey that informed the 2002 NHA</li> <li>8,844 households were surveyed at 95.6% response rate</li> </ul>	<ul style="list-style-type: none"> <li>Health spending by PLWHA captured by adding rider questions to the Kenya AIDS Indicator Survey (KAIS) of 2007 [1]</li> <li>Ages 15 – 49 surveyed</li> <li>Nationally representative sample of known and unknown HIV positive people</li> <li>Survey included HIV tests to discover unknown cases</li> </ul>

[1] KAIS is considered the Gold Standard for estimating PLWHA expenditure because the survey did not only target and capture people who are HIV positive who seek care at facilities, but estimated spending for all PLWHA regardless of HIV biomarkers and knowledge of infection. Note the change in methodology from the Kenya 2001/2002 PLWHA estimate. Because the 2002 HIV/AIDS Persons Survey uses entry points for determining the sample, there is likely selection bias present given the sample only includes those who seek support (support groups) or are sick enough to need care (inpatients). Therefore, caution is advised when comparing 2001/2002 PLWHA spending to that of 2005/2006.

	Public Agencies	Insurance Agencies	Firms	Providers	Non-Governmental Organizations (NGOs)	Donors/Rest of the World	Household Out-of-Pocket Spending (General Population)	Household Out-of-Pocket Spending (PLWHA)
Malawi FY 2002/2003 [2]	Government budgets, Consolidated Annual Appropriation Accounts, audited accounts, or expenditure print-out and ledgers from: <ul style="list-style-type: none"> <li>• MOH;</li> <li>• Other Ministries that contribute to health;</li> <li>• municipalities/local authorities;</li> </ul>	<ul style="list-style-type: none"> <li>• Data from Medical Aid Society of Malawi</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted employer survey, of for-profit and parastatal firms</li> <li>• List of all firms registered in Malawi obtained from the Malawi Chamber of Commerce</li> <li>• Provider data supplemented by insurance data</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of targeted provider surveys, of for-profit, not-for-profit, and public health facilities</li> <li>• Secondary data on utilization obtained from HMIS</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted NGO survey, of all (120) functioning NGOs during the relevant fiscal years</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted donor survey, of bi- and multi-lateral donor organizations</li> <li>• DFID donor mapping study (2005)</li> <li>• Internal MOH study on donor support done in preparation of the SWAp</li> <li>• Government development budget documents and vertical program expenditures</li> </ul>	<ul style="list-style-type: none"> <li>• Data from the 2005 Malawi Integrated Household Survey</li> <li>• Figures distributed to providers and health functions using the 2000 Health Expenditure and Utilization survey</li> <li>• For previous years, household data were extrapolated backwards by adjusting for inflation and population</li> </ul>	<ul style="list-style-type: none"> <li>• Data from 2005 PLWHA Targeted Survey of confirmed HIV-positive persons in Malawi age 15 years and older</li> <li>• Locations targeted for the survey were: <ul style="list-style-type: none"> <li>o PLWHA receiving ART in hospitals and health centers in 2005</li> <li>o PLWHA receiving PMTCT in 2005</li> <li>o Sample size: 900 persons (800 from hospitals, 100 from health centers)</li> </ul> </li> <li>• For previous years, PLWHA data was extrapolated backwards by adjusting for inflation and number of PLWHA</li> </ul>
Malawi FY 2004/2005	<ul style="list-style-type: none"> <li>• Malawi National AIDS Commission;</li> <li>• Nurses and Midwives Council;</li> <li>• Medical Council;</li> <li>• Pharmacy, Medicines and Poisons Board;</li> <li>• Malawi School of Health Sciences</li> </ul>							

	Public Agencies	Insurance Agencies	Firms	Providers	Non-Governmental Organizations (NGOs)	Donors/Rest of the World	Household Out-of-Pocket Spending (General Population)	Household Out-of-Pocket Spending (PLWHA)
Rwanda 2002	<p>Government executed budgets (recurrent and development), published reports and other public records from:</p> <ul style="list-style-type: none"> <li>• MOH;</li> <li>• MOF;</li> <li>• Banque National du Rwanda (National Bank of Rwanda);</li> <li>• IMF Statistical Tables</li> </ul>	<ul style="list-style-type: none"> <li>• Data from Rwandaise d'Assurance Maladie (Rwanda Health Insurance Scheme)</li> <li>• Data from Caisse Sociale Rwandaise (Social Security)</li> <li>• Primary data collection, in the form of targeted insurer surveys, from Rwanda Health Insurance Scheme and Rwanda Social Security</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted employer survey, of for-profit and parastatal firms</li> <li>• 19 private and parastatal firms identified and surveyed at 74% response rate</li> <li>• Weighting of respondents occurred by dividing firms into quintiles based on their number of employees</li> </ul>	<ul style="list-style-type: none"> <li>• Secondary data on providers from Rwanda Health Information System (2002)</li> <li>• Primary data collection, in the form of targeted provider surveys, of health centers (90% response), hospitals (95% response), health districts (67% response), private physicians (53% response), and pharmacies (39% response of estimated universe)</li> <li>• Provider data triangulated with data from financing agents (including households) to estimate actual expenditure allocation to providers</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted NGO survey, of 30 functioning NGOs at 15% response rate</li> <li>• Secondary data from database on development partner interventions in the health sector</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted donor survey, of 28 international partners at 46% response rate</li> <li>• Secondary data from database on development partner interventions in the health sector</li> </ul>	<ul style="list-style-type: none"> <li>• Data from the 2000 - 2001 Integrated Living Conditions Survey in Rwanda</li> <li>• Data from the 2000 Demographic and Health Survey in Rwanda</li> </ul>	<ul style="list-style-type: none"> <li>• Data from the HIV sentinel surveillance among pregnant women attending antenatal clinics from 2002</li> <li>• Primary data collection using NHA PLWHA survey of 2002 <ul style="list-style-type: none"> <li>o PLWHA identified using health centers, hospitals, and associations of PLWHA as entry points</li> <li>o Sample size 700</li> <li>o To adjust for the likely bias that sample population (PLWHA with known HIV+ status) have reached later stages of HIV, respondents were placed into one of the four WHO disease classification stages based on responses from carefully designed questionnaires</li> <li>o Respondents placed into three categories: Stages 1 and 2; Stage 3; or Stage 4</li> <li>o Results then adjusted using estimates of overall HIV population's stage of disease profile</li> </ul> </li> </ul>

[2] Malawi FY 2002/2003 and FY 2004/2005 NHAs were estimated at the same time and therefore share the same methodology.

	Public Agencies	Insurance Agencies	Firms	Providers	Non-Governmental Organizations (NGOs)	Donors/Rest of the World	Household Out-of-Pocket Spending (General Population)	Household Out-of-Pocket Spending (PLWHA)
<b>Rwanda 2006</b>	<p>Government executed budgets (recurrent and development), published reports and general ledgers from:</p> <ul style="list-style-type: none"> <li>• MOH;</li> <li>• MOF;</li> <li>• Banque National du Rwanda (National Bank of Rwanda);</li> <li>• Centre National de Transfusion Sanguine (National Center for Blood Transfusion)</li> </ul>	<ul style="list-style-type: none"> <li>• Data from Victims of Genocide Fund Annual Report and expenditure records</li> <li>• Public records on Mutuelles</li> <li>• Hospital records</li> <li>• Primary data collection, in the form of targeted insurer surveys, for public and private insurance agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted employer survey, of for-profit and parastatal firms</li> <li>• List of all firms likely to contribute to health in Rwanda obtained from government records</li> <li>• 78 companies targeted and 45 surveyed</li> </ul>	<ul style="list-style-type: none"> <li>• Estimated based on household expenditure data, insurance data, employer data, and data from institutions</li> <li>• Supplemented by records from the three major government referral hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted NGO survey, of 92 functioning NGOs contributing to health at 67% response rate</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in the form of a targeted donor survey, of 33 international partners contributing to health at 61% response rate</li> </ul>	<ul style="list-style-type: none"> <li>• Data from the 2006 Integrated Living Conditions Survey in Rwanda</li> <li>• Data from the 2005 Demographic and Health Survey in Rwanda</li> </ul>	<ul style="list-style-type: none"> <li>• Data from the 2006 Performance-Based Financing HIV Survey in Rwanda <ul style="list-style-type: none"> <li>o PLWHA identified from internal questions in the survey (the survey intentionally surveyed households without PLWHA)</li> <li>o 787 PLWHA identified as receiving antiretroviral therapy (ART), treated as a sample of the 31,400 people (estimated from WHO and MOH official estimates) receiving ART in Rwanda</li> <li>o 458 respondents identified as receiving Cotrimox or no identified medication, treated as a sample of the estimated 9,600 people (from WHO and MOH official estimates) who need ART but do not receive it</li> </ul> </li> </ul>
<b>Tanzania FY 2002/2003 [3]</b>	<ul style="list-style-type: none"> <li>• Budget books, Medium Term Expenditure Reports (MTEF), Appropriation Reports,</li> </ul>	<ul style="list-style-type: none"> <li>• Primary Data Collection involving all health insurers including social security in Tanzania</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection from sampled parastatals and private companies using the NBS establishment of Mainland Tanzania as sample frame</li> </ul>	<ul style="list-style-type: none"> <li>• Several data sources were used in estimation: insurance and social security data, firms' and corporations' data, household expenditure data, MTEF Reports, Budget books</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection from all international NGOs. Local NGOs expenditures were retrieved from donors and TACAIDS</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection from all donors working in the health sector in Tanzania.</li> </ul>	<ul style="list-style-type: none"> <li>• Data from 2002 Household Budget Survey (estimated using a ratio of health expenditure in total household consumption), Economic Survey 2006 and Health and Demographic Survey 2004</li> </ul>	<ul style="list-style-type: none"> <li>• Data from 2004 study on cost of HIV/AIDS and data from a study on health care seeking behavior in Tanzania</li> </ul>
<b>Tanzania FY 2005/2006</b>								

[3] Tanzania FY 2002/2003 and FY 2005/2006 NHAs were estimated at the same time and therefore share the same methodology

	Public Agencies	Insurance Agencies	Firms	Providers	Non-Governmental Organizations (NGOs)	Donors/Rest of the World	Household Out-of-Pocket Spending (General Population)	Household Out-of-Pocket Spending (PLWHA)
Zambia 2002	<ul style="list-style-type: none"> <li>Government budgets and public reports and ledgers (best available secondary data)</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of targeted insurance surveys, of insurance companies operating in Lusaka</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of a targeted employer survey</li> <li>Sample based on provincial and district population size</li> <li>Firms weighted by dividing sampled firms into two groups based on number of employees</li> <li>Data from employer and provider surveys supplemented data from insurance surveys</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection, in the form of targeted provider surveys, of samples of traditional healers and public and private facilities</li> <li>Facilities selected through the Zambia Medical Council, list also modified and added to by the lead investigator to reflect more accurate list of existing facilities</li> <li>Traditional healers sampled with information from the Traditional Healers Practitioners of Zambia <ul style="list-style-type: none"> <li>Sample included 110 traditional healers of 40,000 estimated to be operating in the country</li> </ul> </li> <li>Data from Zambia Demographic and Health Survey 2001 - 2002</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection in the form of targeted NGO surveys</li> <li>Data from responding NGOs extrapolated to national estimate by using estimate of 600 NGOs (this is a rough estimate and is not based on reliable secondary data)</li> </ul>	<ul style="list-style-type: none"> <li>Primary data collection in the form of targeted donor surveys</li> </ul>	<ul style="list-style-type: none"> <li>Household spending estimated using data collected from the NHA surveys targeted to providers, insurance, NGOs, donors, firms, and PLWHA</li> <li>Data from Zambia Demographic and Health Survey 2001-2002</li> </ul>	<ul style="list-style-type: none"> <li>Data from the NHA HIV/AIDS Subanalysis Survey of 2002 <ul style="list-style-type: none"> <li>PLWHA identified using health and VCT (voluntary counseling and testing) facilities and associations of people living with HIV/AIDS as entry points, random sampling when possible <ul style="list-style-type: none"> <li>Sample size 1,293</li> </ul> </li> <li>Respondents were placed into one of the four WHO disease classification stages based on responses from questionnaires <ul style="list-style-type: none"> <li>Expenditure for adults, stage of disease and prevalence rate within each of the surveyed provinces factored into the extrapolation to the national level</li> </ul> </li> </ul> </li> </ul>

<p><b>Zambia 2006</b></p>	<ul style="list-style-type: none"> <li>• Government budget Release reports, blue books, audited accounts</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection involving seven insurance companies operating in Lusaka-only two had health-related expenditures</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection from sampled parastatals and private companies</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection, in a form of targeted provider surveys of public and private-both for profit and not for profit, Budget Release Reports for MOH and CHAZ facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection in a form of targeted survey of 34 major NGOs</li> </ul>	<ul style="list-style-type: none"> <li>• Primary data collection from all donors working in the health sector in Zambia</li> <li>• Donor Disbursement Report kept by World Bank Staff Member</li> </ul>	<ul style="list-style-type: none"> <li>• Living Conditions Monitoring Survey (LCMS) 2004 extrapolated to 2006</li> </ul>	<ul style="list-style-type: none"> <li>• Data from the NHA HIV/AIDS Subanalysis Survey of 2007 <ul style="list-style-type: none"> <li>o PLWHA identified using ART clinics as entry points and thereafter random sampling of patients</li> <li>o Sample size 1,200 Respondents were targeted as PLWHA in Stages 3 and 4 on ARVs</li> <li>o PLWHA Stages 1 and 2 were subjected to general out-of-pocket spending while PLWHA Stages 3 and 4. No ARVs were calculated based on the difference in utilization pattern between PLWHA Stages 3 and 4-ARVs and PLWHA Stages 3 and 4-No ARVs</li> </ul> </li> </ul>
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