FROM EMERGENCY RELIEF TO SUSTAINED RESPONSE: EXAMINING THE ROLE OF THE PRIVATE SECTOR IN FINANCING HIV/AIDS SERVICES

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FROM EMERGENCY RELIEF TO SUSTAINED RESPONSE: EXAMINING THE ROLE OF THE PRIVATE SECTOR IN FINANCING HIV/AIDS SERVICES

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral therapy
ARV	Antiretroviral
CCM	Country Coordinating Mechanism
CDC	United States Centers for Disease Control and Prevention
CSO	Civil society organization
FBO	Faith-based organization
FY	Fiscal year
GDP	Gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV	Human immunodeficiency virus
KAIS	Kenya AIDS Indicator Survey
MAP	World Bank Multi-country AIDS Program
MASA	Mukono AIDS Support Association
NAC	National AIDS Council
NGO	Nongovernmental organization
NHA	National Health Accounts
OOP	Out-of-pocket
PEPFAR	President's Emergency Plan for AIDS Relief
PF	Partnership Framework
PFP	Private for-profit
PMTCT	Prevention of mother-to-child transmission
PNFP	Private not-for-profit
PPP	Public/private partnerships
PLWHIV	People living with HIV
UNAIDS	Joint United Nations Programme on HIV and AIDS

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EXECUTIVE SUMMARY

INTRODUCTION

The number of people infected with the human immunodeficiency virus (HIV) has grown exponentially in the past two decades. An estimated 33 million people were living with HIV in 2007, the majority residing in sub–Saharan Africa (UNAIDS, 2009a). The epidemic is generating tremendous and growing demands for HIV/ Acquired Immunodeficiency Syndrome (AIDS) and related health services, especially as more people living with HIV (PLWHIV) gain access to antiretroviral therapy (ART) and require ongoing care.

In light of escalating demands for HIV/AIDS services, funding for the global response has seen an unprecedented increase, driven by three major initiatives: the President's Emergency Program for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), and the World Bank Multi-country AIDS Program (MAP). The influx in donor funding--totaling more than $10 billion in 2007--has been credited with saving the lives of millions of people infected with HIV through the provision of ART (UNAIDS, 2009a; PEPFAR, 2009). Nonetheless, only 42 percent of eligible HIV-positive individuals in less-developed countries now receive ART (WHO/UNICEF/UNAIDS, 2009).

The global AIDS response has reached a turning point, evolving from an emergency response to a long-term sustained effort (H.R. 5501PEPFAR Reauthorization 2008; UNAIDS, 2009a). Global stakeholders are mobilizing all available resources to finance and deliver HIV prevention, care, and treatment services as efficiently as possible. Ideally, resource mobilization should include local investment from the public and private sectors. Efforts to sustain private sector investment in the HIV response will likely reach a critical point as the effects of the global economic crisis continue to ripple through nations' economies.

This paper examines private sector contributions, as compared to donor and public sector investments, to HIV/AIDS financing in five sub–Saharan African countries: Kenya, Malawi, Rwanda, Tanzania, and Zambia. We use data not commonly associated with the private sector – National Health Accounts (NHA). NHA is a tool for comprehensively tracking resources for health care, including public, private, and donor contributions. It follows the flow of funds through a country's health care system, making it possible to answer the following questions: How much money was spent? Where do the funds come from? Who manages the money? Where and how is the money spent?

While other papers have documented funding for HIV/AIDS services at the macro level, the use of NHA data allows for closer inspection of the flow of funds through the health system at the country level (Bernstein and Sessions, 2007). To our knowledge, this is the first application of NHA data to an examination of private sector contributions to financing HIV/AIDS services.

METHODS

The five countries of interest share similarities with respect to their socioeconomic contexts, the nature of their HIV/AIDS epidemics, and the availability of time-series HIV expenditure data representing the period before and after the influx of HIV/AIDS donor funding. These five countries are all GFATM and MAP recipients. With the exception of Malawi, all are also PEPFAR recipients. Each country has

expenditure data on HIV/AIDS health care and prevention dating back to about 2002, the year before the international community dramatically scaled up resources to fight the pandemic in African countries, as well as data for 2005 or 2006, when changes from the influx should be apparent.

Our analysis relied on country HIV/AIDS subaccounts and general NHA data, adjusted for inflation to determine actual changes in spending. All expenditure figures were converted to U.S. dollars based on the official average exchange rate of the most recent data year.

FINDINGS

Evidence of the donor influx for HIV/AIDS

At the macro level, NHA analysis showed that all five countries experienced significant increases in donor funding for HIV/AIDS in absolute terms during the four-year period, averaging a four-fold increase from 2002 levels. Spending on HIV/AIDS services accounted for a significant proportion of all health care spending by 2006, ranging from 24 to 29 percent of overall health spending in the study countries.

What are the sources of HIV/AIDS funds?

Not surprisingly, we found a significant decrease in the relative share of private sector (including households and private companies) contributions to HIV/AIDS in all five countries. Private contributions in 2002 accounted for 27 percent of all HIV/AIDS expenditures in the five countries but only 12 percent in 2006.

In absolute terms, domestic private sources of HIV/AIDS funds generally decreased over the four-year period. Private company contributions, which supported HIV prevention and treatment services before the advent of national programs, dropped considerably in all countries except in Tanzania, where a few multinational companies have recently stepped up their efforts to support HIV/AIDS services. Also of interest is the finding that government spending for HIV/AIDS decreased in two countries – Kenya and Zambia – during the four-year period.

These trends showing reductions in local investment (public and private) in HIV/AIDS are cause for concern, in light of increasing recognition of the need for broad resource mobilization and uncertainty of future donor funding given the global financial crisis.

Who manages the funds?

We further examined patterns of HIV/AIDS fund allocation, focusing on the extent to which the private sector makes decisions about how funds are spent and comparing results before and after the influx of donor funds. Key findings include the following:

- Since the influx, private insurance schemes and private companies are managing fewer resources in both relative and absolute terms.
- In four of the five countries (the exception is Malawi), nongovernmental organizations (NGOs) have increasingly made decisions about how HIV funds are spent; in the case of Kenya and Zambia, the shift is extreme.
- In Kenya, Zambia, and Rwanda, donors and NGOs were responsible for allocating more than 50 percent of all HIV funds as of 2006.

- PLWHIV spending for health care largely decreased over the four-year period, suggesting that this population benefitted from increased access to free or heavily subsidized HIV/AIDS services.

The private sector's reduced role in managing HIV/AIDS resources may signal a possible "crowding out" effect. This may be an unintended consequence of the influx in donor funding.

Where do the funds go?

Finally, we analyzed where (which sector and which type of provider) HIV/AIDS funds go. We examined patterns in use of the private health sector before and after the influx of donor funds.

- Our findings indicate that HIV resources are largely and increasingly channeled to public providers for both outpatient and inpatient care; private providers received a relatively modest share of HIV expenditures in 2006.
- Little if any public funds are transferred (or contracted out) to private providers, including hospitals and clinics.
- Funding for private facilities and hospitals largely comes from OOP payments.
- A positive change since the influx of donor funds is the decreased level of spending in the informal sector. PLWHIV may be less inclined to resort to traditional healers and to self-medicate for treatment of opportunistic infections, possibly in response to increased access to subsidized HIV treatment and care from the formal health sector.

DISCUSSION AND CONCLUSION

This paper explored the extent to which private sources contributed to financing the HIV response in five sub–Saharan countries and how the role of the private sector has changed since the recent influx of donor funds.

At a time when the global HIV community and the three major funders (GFATM, PEPFAR, and MAP) seem to be focused on the heightened need for resource mobilization, the trends toward decreased private sector contributions and, in some countries, decreased government contributions, should be cause for concern. In effect, the findings suggest that donor funds may be replacing both private and public sector contributions. The reasons behind the reduction in private sector contributions warrant further investigation, although one possible explanation may be falling prices for ART due to increased availability of generics in developing countries. However, with the rapid introduction of government programs, it is also feasible that companies no longer feel the need to shoulder the burden for HIV/AIDS care.

With the relatively recent onset of the global economic crisis, the need for mobilizing support from all sectors of society has never been greater (UNAIDS, 2009a). Closer examination is needed to determine if increased external aid has made governments and donors less receptive to engaging the private sector, possibly as a result of the "emergency relief" nature of the response. Yet, as that response evolves into a long-term, sustained effort, broader consideration of ways to engage the private sector may be warranted.

1. INTRODUCTION

The number of people infected with HIV has grown exponentially in the past two decades. By the end of 2007, an estimated 33 million people were living with HIV, the majority (67 percent) in sub–Saharan Africa. In the same year, 2.7 million people were newly infected, and 2 million people died of the disease (UNAIDS, 2009a). The epidemic generates tremendous and growing demands for HIV/AIDS and related health services, especially as more people living with HIV (PLWHIV) begin antiretroviral therapy (ART) and require ongoing care to monitor progression of the disease.

Recent years have seen an unprecedented increase worldwide in financing the global HIV response. Three major funding sources are responsible for the increase: the President's Emergency Program for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), and the World Bank Multi-Country AIDS Program (MAP). This influx in donor funding– totaling more than $10 billion in 2007– has been credited with saving the lives of millions of people infected with HIV through the provision of ART (UNAIDS, 2009a; PEPFAR, 2009). At the end of 2008, an estimated 4 million PLWHIV in developing countries were receiving ART, although another 5.5 million infected individuals needed but were not receiving such treatment (WHO/UNICEF/UNAIDS, 2009).

As a function of the progression of the epidemic and expanded access to life-saving treatment for millions of PLWHIV, the global HIV response is evolving from an emergency response to a long-term, sustained effort (H.R. 5501PEPFAR Reauthorization 2008; UNAIDS, 2009a). As a former manager of a PEPFAR-funded treatment program noted, "Starting 2 million people on treatment also means keeping 2 million on treatment for years (and hopefully decades)," (Navario, 2009). Global stakeholders are increasingly seeking to mobilize all available resources to finance and deliver HIV prevention, care, and treatment as efficiently as possible. Ideally, such resource mobilization should include local contributions from developing country governments and from the private sector. Broad-based and diversified financing for HIV/AIDS services will not only increase sustainability but also moderate the fluctuations often associated with external aid funding, particularly if a country depends on one source of funding (Lamontagne and Greener, 2008). Diversification of financing is particularly important given that recent projections for addressing the HIV pandemic through 2031 suggest that the gap between resource needs and available funding will continue to grow, even under the most optimistic scenario (Hecht et al., 2009).

There are many examples of private sector contributions to the HIV response in sub–Saharan Africa. In some countries, private companies played an early role in the response by providing their employees with HIV prevention and treatment services, and a growing body of literature on public/private partnerships (PPP) describes efforts to address burgeoning HIV/AIDS needs with increased private sector involvement (Feeley et al., 2007; UNAIDS, 2009b; World Economic Forum, 2006). However, attempts to engage the private sector have been uneven in the region, leaving ample space to more broadly engage private sector stakeholders in strategic planning for and financing of HIV/AIDS services .

Sustained or increased contributions from the private sector may become even more necessary as the global economic crisis continues to unfold. While global funding for HIV/AIDS has never been higher, some observers suggest that current commitments may not materialize (UNAIDS, 2009a; Coen, 2008, Hecht at al., 2009, Lamontagne and Greener, 2009). For example, the GFATM recently announced a US$4 billion shortfall due to economic downturns in developing countries (Kaiser Network.org, April 21, 2009). In addition, while PEPFAR appropriations for 2010 have not been finalized, it is conceivable

that funding will remain at 2009 levels (Zwillich, 2009; Mugyenyi, 2009). Recent reports suggest that PEPFAR budget shortfalls are already resulting in decreased access to HIV prevention and treatment services in some African countries (Mugyenyi, 2009; Navario, 2009). The emerging consensus on the need for ensuring the sustainability of the HIV response, coupled with potentially widening gaps between donor commitments and projected need, warrants further exploration of the private sector's role in financing HIV/AIDS services.

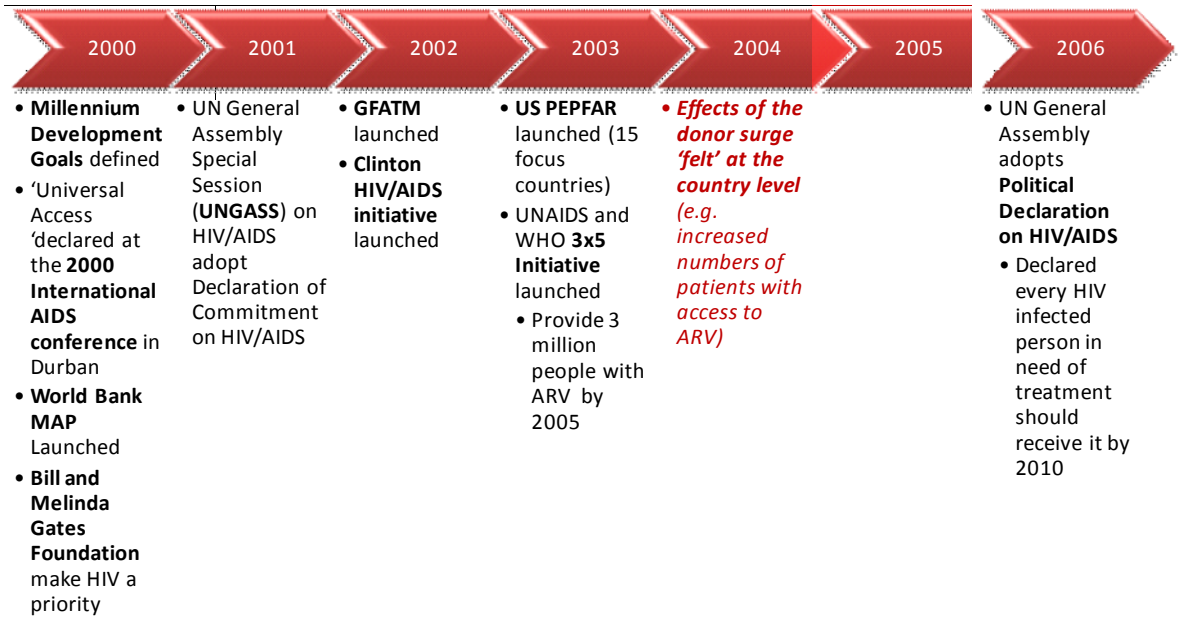
This paper contributes to the knowledge base by examining the role of the private sector in HIV/AIDS financing and resource consumption and by assessing trends in the financing of HIV/AIDS services. It uses a source of data not commonly associated with the private sector– National Health Accounts (NHA). While other papers have documented funding for HIV at the macro level, the use of NHA data allows for a more detailed examination of the flow of funds through the health system at the country level (Bernstein and Sessions, 2007). Using time-series data for five sub–Saharan African countries – Kenya, Malawi, Rwanda, Tanzania, and Zambia – we assess the extent to which private contributions have financed HIV/AIDS services and how these contributions have shifted as a result of the dramatic increase in donor funding in recent years.

2. BACKGROUND

2.1 EVOLUTION OF THE GLOBAL RESPONSE TO HIV/AIDS

While funding efforts for HIV/AIDS began before the new millennium, 2000 was a watershed year, ushering in the Millennium Development Goals (MDG), the declaration of universal access, and the World Bank's MAP (Figure 1). The Global Fund was launched in 2002 while PEPFAR and the "3 by 5" Initiative began in 2003. The effects of the combined global financing for HIV/AIDS began having an impact at the country level in/around 2004.

FIGURE 1: EVOLUTION OF DONOR FUNDING FOR HIV/AIDS



Source: De et al. 2009.

2.2 GLOBAL HIV/AIDS INITIATIVES: APPROACHES TO SUSTAINABILITY AND THE PRIVATE SECTOR

While much is known about the goals, mechanisms, and funding amounts of the major HIV/AIDS initiatives, their positions on sustainability and the role of the private sector are not as familiar. We briefly review these aspects for PEPFAR, GFATM, and MAP as well as the Joint United Nations Programme on HIV and AIDS (UNAIDS) to provide further context for our analyses.

2.2.1 PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF (PEPFAR)

Enacted in 2003, PEPFAR represents the largest international health initiative dedicated to a single disease. The program exceeded its original five-year commitment of $15 billion, resulting in a final funding level of $18.8 billion. It also surpassed its original goals, providing ART to more than 2.1 million people living with HIV/AIDS (PEPFAR, 2009).

Whereas PEPFAR's original plan reflected an emergency response to the AIDS pandemic, the 2008 reauthorization signals a shift towards a sustained response, committing an unprecedented $48 billion to achieve:

- Treatment for at least 3 million people
- Prevention of 12 million new infections
- Care for 12 million people, including 5 million orphans and vulnerable children

In terms of PEPFAR's view of the private sector, the original legislation carved out a role for PPPs, although the majority of initiatives involved partnerships with nongovernmental organizations (NGO) and civil society organizations (CSO) as opposed to the private commercial sector. Signed into law in 2008, the reauthorization of PEPFAR seeks to expand PPPs and private sector efforts while placing new emphasis on strengthening countries' underlying health systems and increasing the sustainability of HIV/AIDS services (H.R. 5501, 2008).

The new legislation underscores the importance of sustainability, which is viewed as a key building block of one of four primary objectives: establishing a "comprehensive, coordinated, and integrated" five-year global strategy (Sec. 4 (1)). In addition, the PEPFAR reauthorization calls for further engaging the private sector, as evidenced by another primary objective: "encouraging the expansion of private sector efforts and expanding public-private sector partnerships" (Sec. 4 (4)) (H.R. 5501, 2008).

A new initiative supported by the reauthorization is the Partnership Framework (PF), designed to provide a "5-year joint strategic framework for cooperation between the United States government, the host country government, and, in some cases, other partners to combat HIV/AIDS in the host country through service delivery, policy reform, and coordinated financial commitments" (PEPFAR, 2009b). It is envisioned that the framework will promote transparency, accountability, and the active participation of other key partners, including the private sector and other bilateral and multilateral partners (e.g., GFATM and MAP).

The emphasis of PFs is on sustainable programs, with the goal of increased country ownership of HIV/AIDS strategies. Of particular relevance to this paper is the guidance that PF country assessments take advantage of existing resources, such as NHA data, to gain a better understanding of program costs, available resources and projected gaps and trends over time (PEPFAR, 2009b).

2.2.2 GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA (GFATM)

Established in 2001, the GFATM aims to scale up proven interventions against AIDS, TB, and malaria. Despite assertions that the model was working well, the GFATM launched a new phase in 2007 to "sustain and further expand the coverage of interventions against the three diseases in the years ahead" (GFATM, 2007a). The new phase centers on three strategic objectives:

- Grow to meet demand
- Adapt to country realities
- Innovate for greater impact

As of December 2008, the GFATM had signed grant agreements worth US$10.2 billion and had disbursed US$6.8 billion to grant recipients (Global Fund, 2007b). As further indication of the rapid increase in funding, the GFATM added another $5 billion in grants in the first three months of 2009. GFATM disbursements to the private sector increased from 2 percent in 2006 to 6 percent in 2008 (http://www.theglobalfund.org/en/commitmentsdisbursements/).

Recent assessments of the GFATM's performance to date have noted that there has been uneven inclusion of key stakeholders in country partnerships, specifically mentioning the lack of private sector participation (Global Fund, 2007b; Global Fund, 2009). Recognizing the urgent need to mobilize capacity both to sustain and scale up efforts, one report concludes, "Countries need to use the full force of their partnerships with civil society, communities, the private sector, and government. This is particularly true in Africa, where health care is often delivered by NGOs, FBOs [faith-based organizations], the private sector and within communities" (Global Fund, 2007b). Some authors have asserted that GFATM recipients from civil society and the private sector "are, on average, more effective than governmental (recipients), moving money more rapidly and achieving higher rates of programmatic success" (Radelet and Siddiqi, 2007).

The recently published five-year evaluation of the GFATM asserts that "partnership with the private sector requires significant strengthening and a more consultative approach" noting that thus far private sector stakeholders have not been fully engaged in Country Coordinating Mechanisms (CCMs). A strong recommendation coming from the evaluation is for the GFATM to "seek new, more innovative and more consultative ways to work with the private sector such as co-investment and pro bono and in-kind contributions" (GFATM, 2008, GFATM, 2009).

2.2.3 WORLD BANK MULTI-COUNTRY AIDS PROGRAM (MAP)

Initiated in 2000, the World Bank MAP for Africa endeavors to revitalize the bank's AIDS strategy through a comprehensive, multisector approach. With the intention of scaling up programs and increasing access to treatment, MAP's ultimate goals call for a decline in infection rates and an increase in recipient countries' capacity to respond to the HIV epidemic. As MAP transitions into the second of its three planned phases, the World Bank reports that it has committed $1.6 billion to over 30 countries (World Bank, 2007).

The private sector plays a vital part in the MAP's success. In fact, to be eligible for funding, countries must demonstrate their willingness for direct engagement of NGOs, community- and faith-based organizations, and the private sector in their HIV/AIDS response. MAP's measures of achievement include an assessment of private sector involvement, and indicators include strengthened partnerships

and the participation of private sector business leaders. In addition, to analyze country program success, MAP used a Country Feedback Form that inquired about the private sector's involvement in the national HIV response (World Bank, 2007).

MAP is aware of the private sector's unique ability to scale up programs in a relatively short time. One such example is the Mukono AIDS Support Association (MASA) in Uganda. Once an organization of six providers, MASA is now one of the Mukono District's major service providers. An incredibly innovative association, MASA uses the funds raised from its farm animal projects to provide for its members (World Bank, 2007).

MAP provides direct technical assistance to encourage private sector engagement in 10 countries, and an additional 7 countries have participated in related events (MAP web site). The program's recognition of the importance of the private sector in addressing HIV/AIDS needs and its ability to harness private sector innovations and resources is forward-thinking.

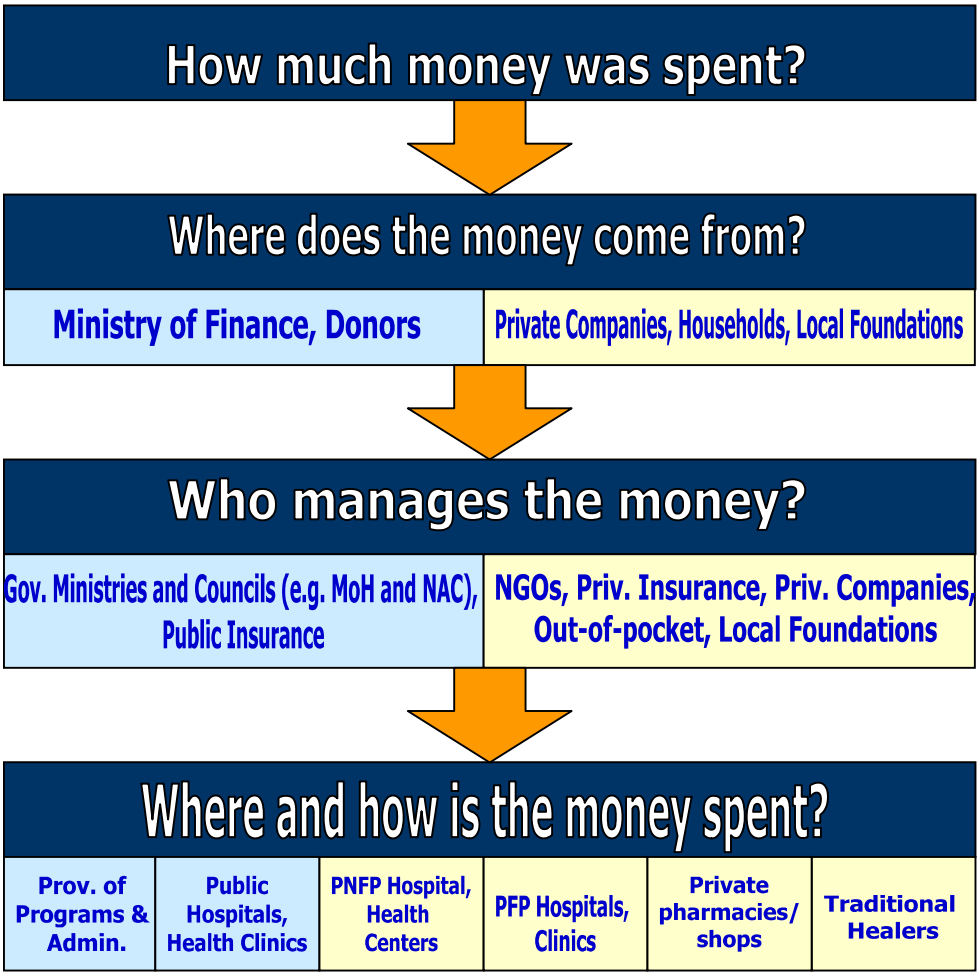
2.2.4 JOINT UNITED NATIONS PROGRAMME ON HIV AND AIDS (UNAIDS)

While not a donor per se, UNAIDS plays a major leadership role in advocating for a coordinated response to the HIV epidemic. Given its emphasis on strategic partnerships and mobilization of resources in support of the global HIV response, UNAIDS is potentially a pivotal force for engaging the private sector. Recent UNAIDS publications signal a heightened interest in ensuring sustainable financing for HIV/AIDS services and broader consideration of the private sector's role in such financing (Lamontagne and Greener, 2008; UNAIDS, 2009b).

2.3 APPLICATION OF NATIONAL HEALTH ACCOUNTS (NHA) DATA TO TRACK PRIVATE SECTOR ASPECTS OF HIV/AIDS FINANCING

NHA is a tool for comprehensively tracking resources for health care, including public, private, and donor contributions. NHA tracks actual expenditures (as opposed to commitments or allocations) through the health system. As noted in Figure 2, NHA follows the flow of funds through a country's health care system, making it possible to answer the following questions: How much money was spent? Where do the funds come from? Who manages the money? Where and how is the money spent?

FIGURE 2: ASPECTS OF THE PRIVATE SECTOR TRACKED BY NHA



Note: MOH = Ministry of Health; NAC = National AIDS Council; PNFP = private not-for-profit; and PFP = private for-profit.

The NHA approach may be applied to a particular area of health care, such as HIV/AIDS, in what is known as an NHA "subaccount." HIV/AIDS subaccounts focus on measuring health expenditures associated with HIV/AIDS activities and, as such, are the data of interest for this paper, although we also look at overall health expenditures as a comparison. To our knowledge, this is the first application of NHA data to specifically examine private sector contributions to financing HIV/AIDS services.

It is important to note that when we refer to the private sector, we broadly mean all entities outside the purview of government. The various private sector players vary with the aspects or levels of health care financing. For example, in terms of source of financing (Where does the money come from?), the private sector entities, as highlighted in yellow in Figure 2, are private companies, local foundations, and households (reflecting out-of-pocket [OOP] payments for health care). Private managers include NGOs, private insurance companies, private companies, local foundations, and individuals (i.e., determining where OOP expenditures go). In terms of service provision (Where is the money spent?), private options include private not-for-profit providers (PNFP) and private for-profit (PFP) facilities, private pharmacies or drug shops, and traditional healers. More details about NHA can be found in Annex A.

2.4 HIV/AIDS CONTEXT IN THE COUNTRIES STUDIED

The sub–Saharan region has some of the world's highest HIV/AIDS prevalence rates. UNAIDS reports that two-thirds of the world's PLWHIV live in the region and that three-quarters of all AIDS deaths in 2007 occurred there (UNAIDS, 2009a). The countries highlighted in this paper– Kenya, Malawi, Rwanda, Tanzania, and Zambia – are all low-income countries that face generalized epidemics; that is, HIV is firmly established in the general population and spreads principally through heterosexual contact. In East and Southern Africa, the regional average prevalence stands at 10 percent,[1] but the nature of the epidemic is highly variable within the region. For example, Kenya, Rwanda, and Tanzania exhibit rates (5.1, 3.0, and 6.5 percent, respectively) lower than the regional average, while prevalence in Malawi and Zambia, is higher than the regional average at 12.0 and 16.5 percent, respectively. Table 1 offers background statistics on the five countries for 2006 (in accordance with the year of latest NHA subaccount estimates).

TABLE 1: BACKGROUND STATISTICS ON HIV/AIDS IN KENYA, MALAWI, RWANDA, TANZANIA, AND ZAMBIA

Indicators	Kenya	Malawi	Rwanda	Tanzania	Zambia
Gross domestic product (GDP) per capita in 2006 (US$)*	$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 in years (2006)**	53	50	52	50	43
Adult HIV/AIDS prevalence rate*	5.1%	12.0%	3.0%	6.5%	16.5%
Number of adults with HIV/AIDS*(2006)	1,091,000	897,853	160,000	1,300,000	1,100,000
Adult PLWHIV as a percentage of overall country population (to date)*	3.1%	7.5%	1.8%	3.5%	9.6%
Percentage of ART coverage among people with advanced HIV infections** (2006)	27%	21%	52%	14%	26%
Percentage of ART coverage among HIV-infected pregnant women for prevention of mother-to-child transmission (PMTCT) (2006)**	48%	14%	55%	15%	35%

Source: De et al. 2009.

*As published in respective country NHA HIV/AIDS subaccounts. ** WHO Statistical Information System, http://www.who.int/whosis/en/.

All the study countries are the recipients of GFATM and MAP funds. With the exception of Malawi, all are also PEPFAR recipients. Before the influx of donor funds (beginning around 2003), access to HIV treatment was severely limited. Because of this, PLWHIV in the advanced stages of disease focused on managing opportunistic infections, which resulted in higher death rates. Accordingly, the scaled-up response to HIV/AIDS has increased access to HIV treatment (facilitated by pressure to reduce prices for AIDS drugs in Africa and other poor regions), expanded the necessary infrastructure and capacity to support treatment programs, and supported prevention programs. The scaled-up response has been credited with helping to stabilize sub–Saharan Africa's prevalence rates and increasing condom use and responsible sexual behavior. Nevertheless, as depicted in Table 1, coverage of ART among those in need is still not comprehensive as AIDS continues to be the leading cause of death in the region (UNAIDS, 2009; Feeley, 2007).

[1] http://www.unaidsrstesa.org/regional-adult-hiv-prevalence.

3. METHODOLOGY

3.1 COUNTRY SELECTION

This analysis focuses on the sub–Saharan African countries of Kenya, Malawi, Rwanda, Tanzania, and Zambia because of the similarity of their socioeconomic contexts and HIV/AIDS epidemics and the availability of time-series HIV expenditure data representing the period before and after the donor influx of HIV/AIDS funds. Each country has expenditure data on HIV/AIDS health care and prevention dating back to around 2002– shortly before the international community dramatically scaled up resources in response to the AIDS pandemic in Africa– and data from 2005 or 2006, when the effects of the influx in donor funding should be apparent.

3.2 DATA COLLECTION

NHA HIV/AIDS subaccounts were added to the data collection efforts for the general NHA estimate; thus, HIV/AIDS expenditure questions were appended to ongoing general NHA surveys targeting donors, NGOs, employers, insurance firms, and providers. To determine OOP spending by PLWHIV, each HIV/AIDS subaccount effort either conducted a separate survey of confirmed HIV-positive adults or, in the case of Kenya, relied on a nationally representative household survey focused on HIV/AIDS that identified HIV-positive individuals and included health care expenditure questions.

3.3 DATA ANALYSIS

We used country-specific HIV/AIDS subaccounts and general NHA estimates to populate a Microsoft Excel (Microsoft Corporation, Redmond, WA) database and then to compute the target indicators. We adjusted for inflation to determine actual changes in spending and converted all expenditure figures to U.S. dollars based on the official average exchange rate of the most recent data year. Annex B presents details on methodology and study limitations.

4. FINDINGS

We present findings in accordance with the flow of funds through the health sector. As such, subsequent sections describe observations on the total expenditures for HIV/AIDS, followed by a discussion of the role of the private sector in financing, managing, and consuming HIV/AIDS funds.

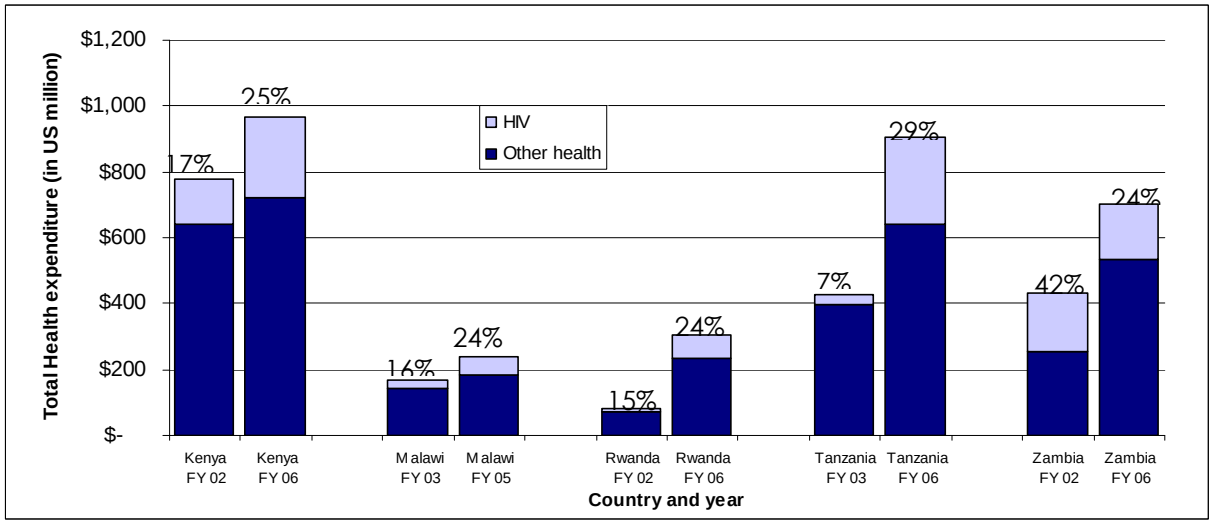
4.1 HAS THE HIV/AIDS FUNDING INFLUX BEEN FELT AT THE COUNTRY LEVEL?

To date, the influx of HIV/AIDS funds has largely been documented in terms of "commitments" and "disbursements." Commitments refer to the point at which funding is legally promised to a recipient, but they do not signify the transfer of funds. Disbursements refer to the point at which funds are transferred from the funding mechanism to the recipient, usually from a donor to a government entity. However, what happens to those funds once received by a country? Does the country spend the funds? NHA can help answer these questions because it tracks actual country-level expenditures as opposed to commitments or disbursements.

As shown in Figure 3, each of the five study countries benefitted from significantly increased donor funding for HIV/AIDS between 2002 and 2006. In absolute terms (and adjusting for inflation) funding for HIV/AIDS averaged a four-fold increase between 2002 and 2006 in the five countries.

Figure 3 also shows how the sudden and dramatic influx of funds affected health budgets in the five countries. Spending on HIV/AIDS services accounted for a significant proportion of all health spending post-influx, ranging from 24 to 29 percent of overall health spending. Even in Rwanda, which has the lowest HIV prevalence of the five countries, the share of health expenditures on HIV/AIDS services represented nearly a quarter of the country's total health expenditures in 2006.

FIGURE 3: ABSOLUTE SPENDING ON HIV/AIDS AND AS A PERCENT OF TOTAL HEALTH SPENDING



4.2 WHAT IS THE ROLE OF PRIVATE FINANCIERS IN THE HIV/AIDS RESPONSE?

With respect to source of financing, domestic private sources of HIV/AIDS funds generally decreased over the four-year period. As shown in Figure 4, contributions from private companies, who were early supporters of HIV prevention and treatment services before the advent of national, government-sponsored programs, declined in absolute terms in all countries except in Tanzania. In the case of Tanzania, NHA data from 2006 detected the contributions of a few multinational companies that had recently stepped up their efforts to offer HIV workplace programs, care for opportunistic infections, and ART in private hospitals and employer clinics (not the case in 2003). For example, The Abbott Fund has entered into a seven-year $50 million partnership with the Government of Tanzania to strengthen health systems and train health workers to meet the needs of PLWHIV (Bio-Medicine web site, June 2007).

As shown in Table 2, the largest declines in private company spending occurred in Rwanda (85 percent) and Kenya (83 percent). In Kenya, the private company contribution dropped to US$0.3 million from about US$2 million pre-influx; in Zambia, it fell to US$4 million from about US$13 million.

FIGURE 4: ABSOLUTE PRIVATE COMPANY CONTRIBUTIONS TO HIV/AIDS AND AS A PERCENT OF TOTAL PRIVATE COMPANY CONTRIBUTIONS TO HEALTH

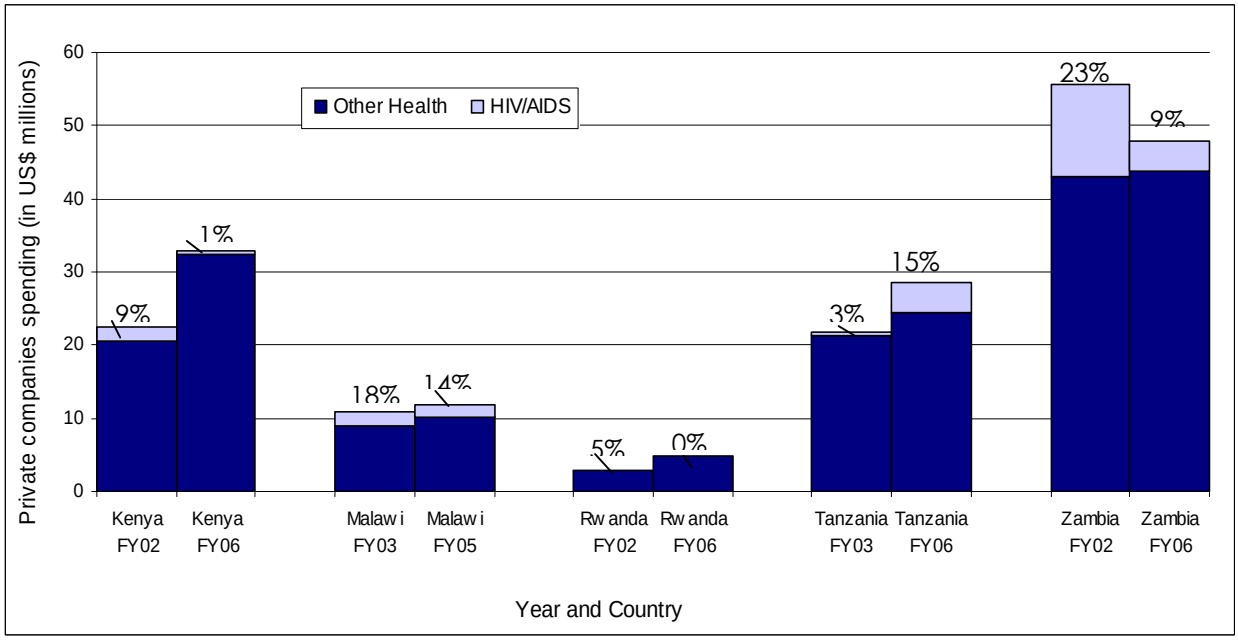


TABLE 2: PRIVATE CONTRIBUTIONS: PERCENT AND MAGNITUDE OF CHANGE BETWEEN PRE- AND POST-INFLUX YEARS

Magnitude of Change Indicator	Kenya	Malawi	Rwanda	Tanzania	Zambia
Percent change relative to 2002 levels [(2006 amount-2002 amount)/2002 amount]	-83%	-18%	-85%	581%	-66%

In addition to the reduction in private company contributions, the NHA data also revealed declines in absolute public sector contributions in two of the five countries (Kenya and Zambia) (Figure 5 and Table 3). In Kenya, the public contribution dropped by more than one-third of its 2002 level (prior to the arrival of ART in the country), and Zambia experienced a 51 percent reduction in its public contributions relative to 2002 levels. Although government spending on HIV/AIDS services in Tanzania has increased, the earmark for HIV/AIDS could not be classified into specific activities and may have been largely allocated to workshops, per diem expenses, fuel, and so forth.

FIGURE 5: ABSOLUTE GOVERNMENT CONTRIBUTION TO HIV/AIDS AND AS PERCENT OF TOTAL GOVERNMENT CONTRIBUTION TO HEALTH

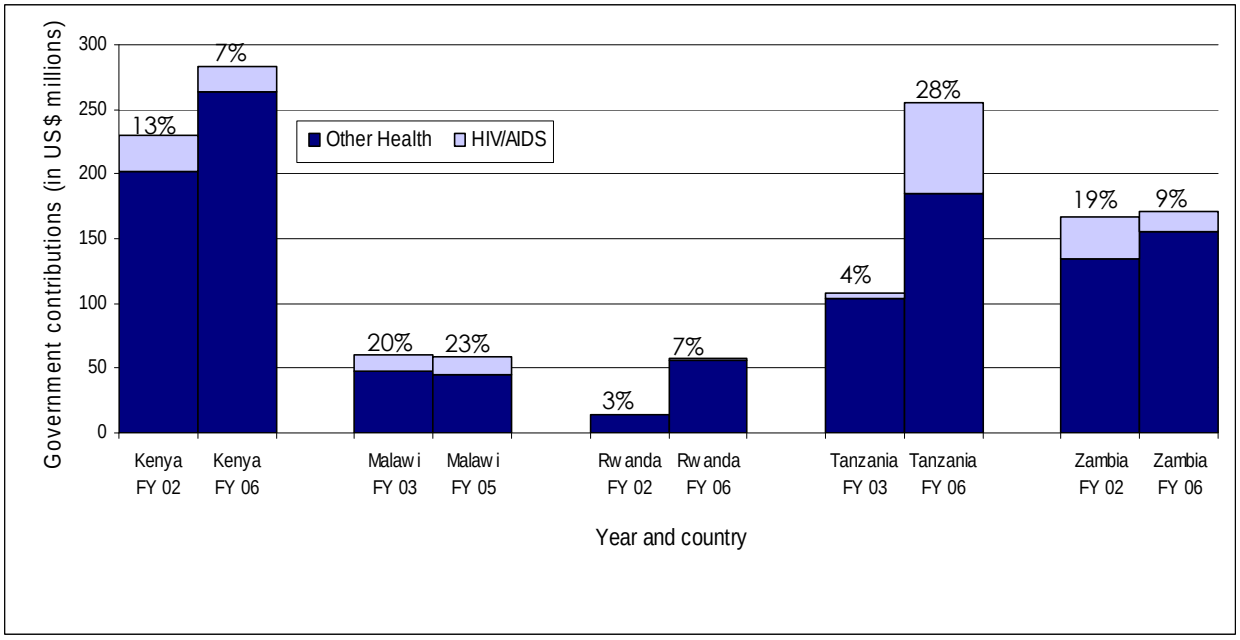
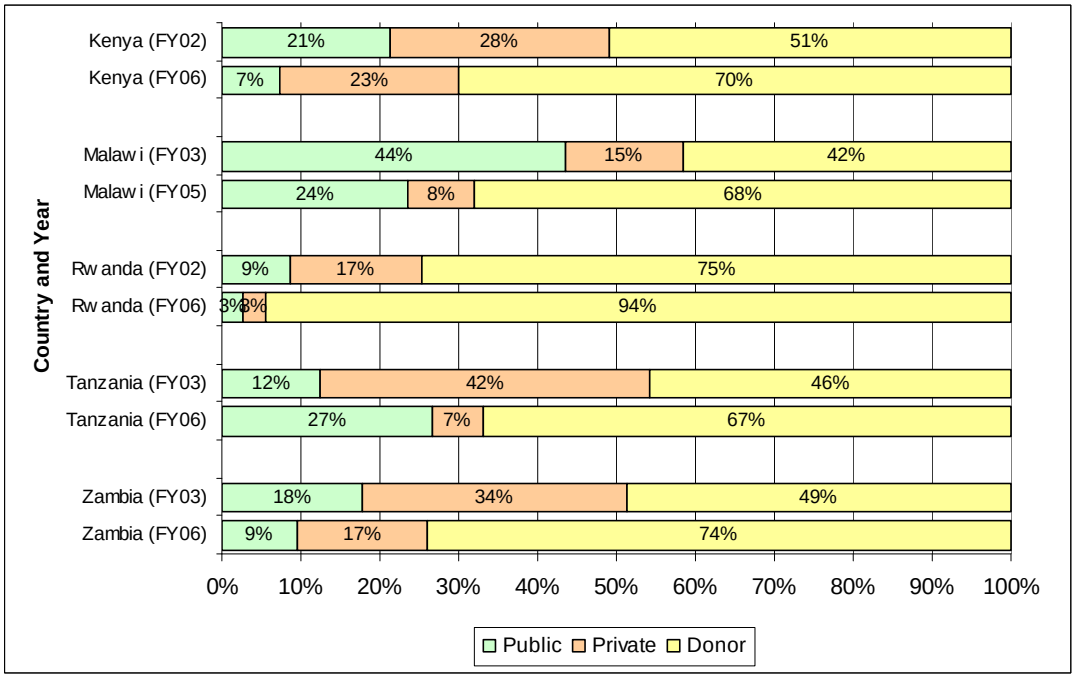


TABLE 3: GOVERNMENT CONTRIBUTIONS: PERCENT AND MAGNITUDE OF CHANGE BETWEEN PRE- AND POST-INFLUX YEARS

Magnitude of Change Indicator	Kenya	Malawi	Rwanda	Tanzania	Zambia
Percent change relative to 2002 levels [(2006 amount-2002 amount)/2002 amount]	-35%	15%	92%	1730%	-51%

In terms of relative contributions by each financier, Figure 6 shows that donors continue to represent the major source of funds for national HIV/AIDS responses in the five study countries. Moreover, the donor share of financing grew post-influx, accounting for at least two-thirds of all spending in 2006.

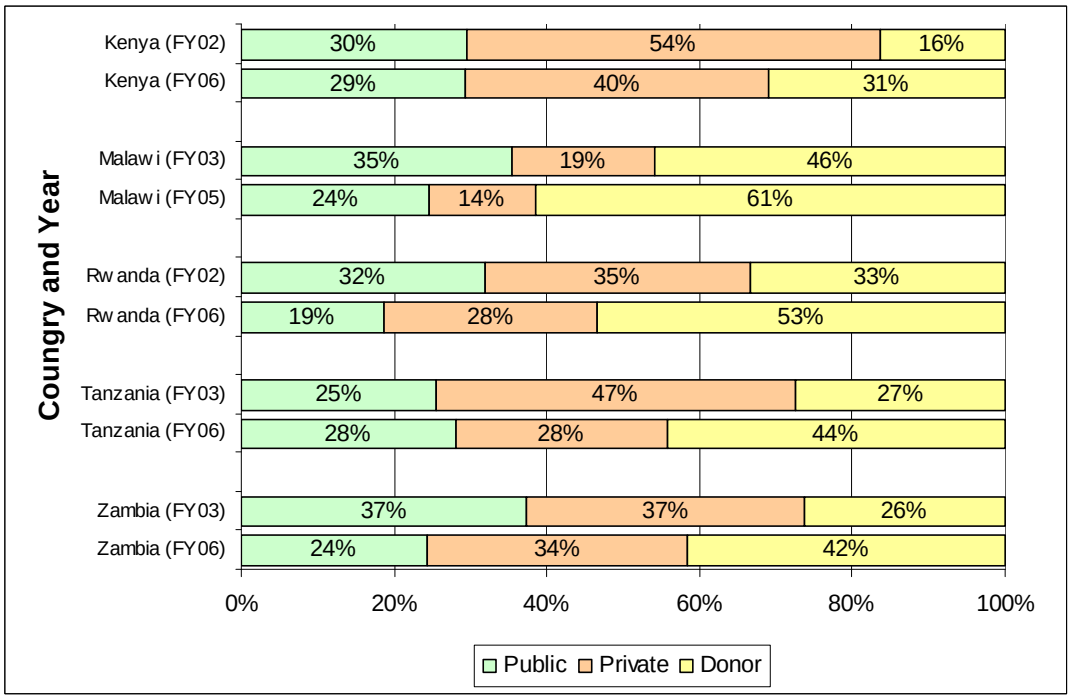
FIGURE 6: RELATIVE SHARE OF FINANCING SOURCES FOR HIV/AIDS HEALTH CARE



Not surprisingly, there was a significant decrease in the relative share of private sector (including households and private companies) contributions in all five countries. On average, contributions were 50 percent lower, although Rwanda and Tanzania experienced even greater declines. In Tanzania, private contribution shares exceeded 40 percent pre-influx but dropped to 7 percent post-influx. On average, private contributions in 2002 accounted for 27 percent of all HIV/AIDS expenditures in the five countries but 12 percent in 2006.

Does this pattern hold with respect to investments in general health care? As shown in Figure 7, donors do not play as significant a role in financing general health services as for financing the HIV/AIDS response. Put another way, domestic sources of funding (both public and private) comprise a greater share for general health services, as compared to HIV/AIDS services.

FIGURE 7: RELATIVE SHARE OF FINANCING SOURCES FOR GENERAL HEALTH



4.3 WHAT IS THE ROLE OF PRIVATE ENTITIES IN MANAGING HIV/AIDS FUNDS?

In four of the studied countries, the sizable increase in donor funding means that **private for-profit** (PFP) entities now manage (or have programmatic control of) fewer HIV/AIDS resources (Table 4). In this context, PFP refers to entities (1) that directly pay providers, such as private insurance schemes and private companies, to deliver on-site health care and (2) that contract with public and private providers to offer services for employees and their dependents. But is this observation unique to the HIV response? Indeed, analysis of who manages general health services (not shown) reveals that, contrary to HIV/AIDS services, private stakeholders are increasingly managing general health care services in Kenya, Malawi and Tanzania, signaling a potential "crowding out" of the private sector in the HIV response as consequence of the donor influx.

TABLE 4: PERCENT CHANGE IN ABSOLUTE CONTRIBUTION OF FUND MANAGERS TO HIV/AIDS HEALTH CARE, BEFORE AND AFTER THE INFLUX

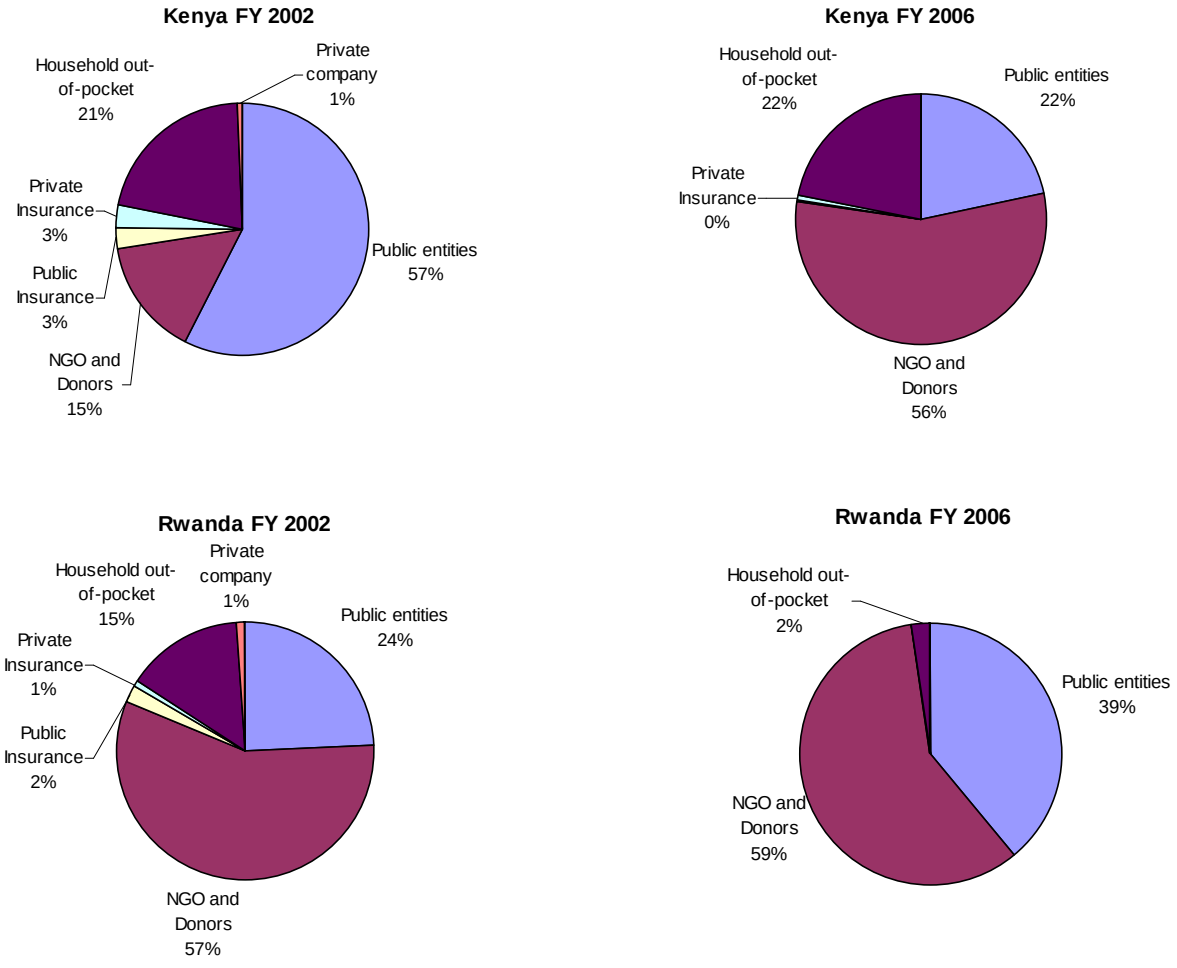
	Kenya	Malawi	Rwanda	Tanzania	Zambia
Public agents	-32%	175%	885%	1559%	-48%
Private insurance agents	-76%	51%	-97%	-5%	-97%
Private companies	-94%	-47%	-100%	1797%	-49%
NGOs and donors	558%	42%	540%	909%	638%

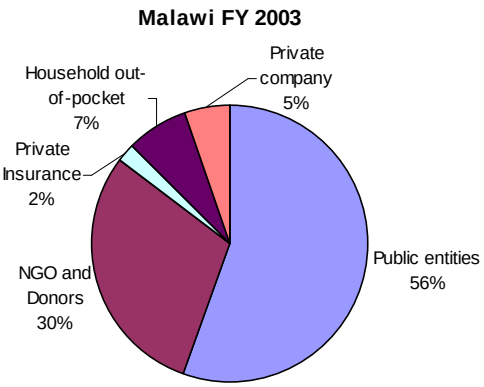
Contrary to the PFP sector, the **private not-for-profit** (PNFP) sector is playing an increasingly powerful role in deciding how resources are allocated across health providers. Figure 8 provides a

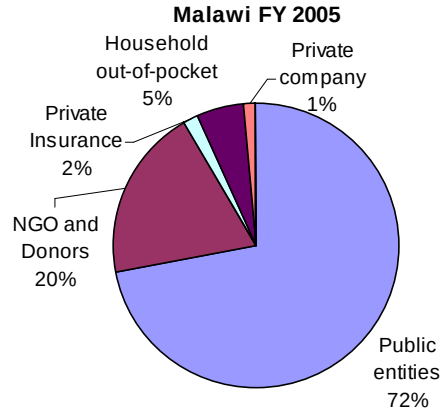
breakdown of the entities that receive and manage HIV/AIDS funds, including the public sector, donors and NGOs, households through OOP spending, private insurance firms, and private companies.

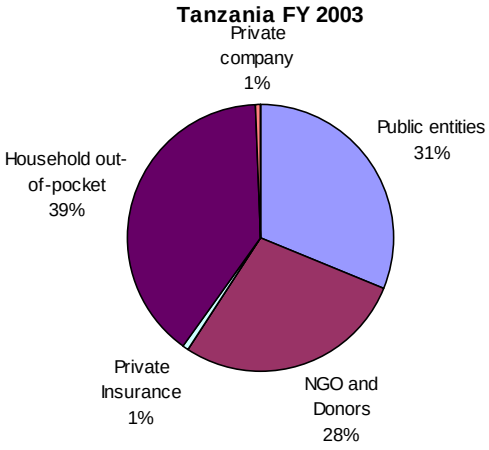
Who exercises the greatest degree of programmatic control? In four of the five countries (the exception being Malawi), the PNFP sector, primarily NGOs and to a lesser extent, donors (e.g. , UNHCR), increasingly controlled the largest share of resources relative to other stakeholders (e.g. Ministry of Health, National AIDS councils, private insurance schemes) in 2006 as compared to 2002.

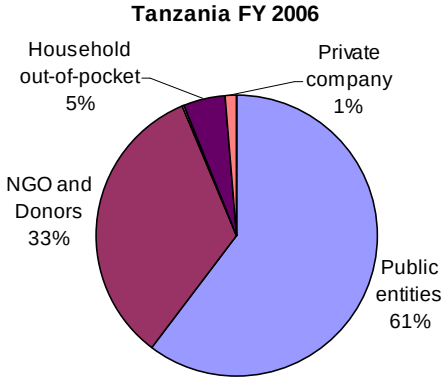
FIGURE 8: BREAKDOWN OF HIV/AIDS FUND MANAGEMENT, PRE- AND POST-INFLUX, KENYA, RWANDA, MALAWI, TANZANIA, AND ZAMBIA

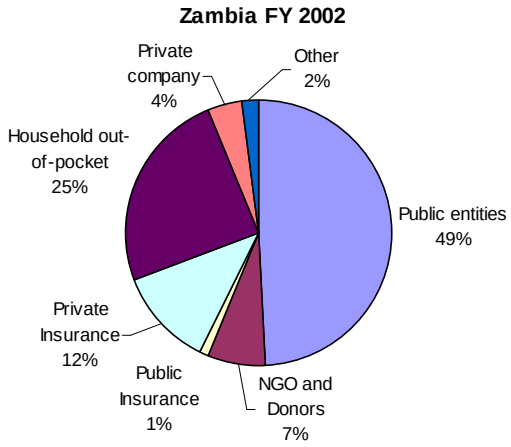


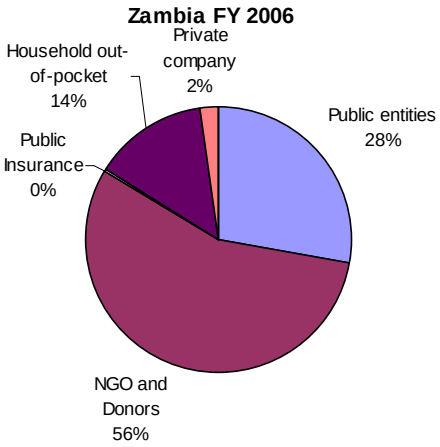

Malawi FY 2003
Private company 5%
Household out-of-pocket 7%
Private Insurance 2%
Public entities 56%
NGO and Donors 30%


Malawi FY 2005
Household out-of-pocket 5%
Private company 1%
Private Insurance 2%
NGO and Donors 20%
Public entities 72%


Tanzania FY 2003
Private company 1%
Public entities 31%
Household out-of-pocket 39%
Private Insurance 1%
NGO and Donors 28%


Tanzania FY 2006
Household out-of-pocket 5%
Private company 1%
NGO and Donors 33%
Public entities 61%


Zambia FY 2002
Private company 4%
Other 2%
Household out-of-pocket 25%
Public entities 49%
Private Insurance 12%
Public Insurance 1%
NGO and Donors 7%


Zambia FY 2006
Household out-of-pocket 14%
Private company 2%
Public entities 28%
Public Insurance 0%
NGO and Donors 56%

PLWHIV are another important private "manager" of funds. Through **out-of-pocket** (OOP) payments directly to health providers (public, private, traditional healers, and so forth), PLWHIV exert programmatic control over how they use their funds by determining which providers receive their monies. In this regard, what is the burden of financing by PLWHIV for direct payment for care and treatment? Table 5 shows that, with the exception of Malawi, OOP spending by PLWHIV has decreased over the four-year period, suggesting that PLWHIV enjoy increased access to free or heavily subsidized HIV/AIDS services, probably as a direct result of increased donor funding. With respect to the general population, OOP spending per capita has generally increased. Thus, the downward trend observed among PLWHIV since the donor influx appears specific to the HIV/AIDS response.

Given that PLWHIV may have, on average, more illness episodes than the general population, they likely spend more for health care than does the general population. However, to what extent does such a difference exist? If it does exist, is it linked to the donor influx? Table 5 shows that the differences in per capita spending narrowed since the donor influx. For example, in Zambia in 2002, HIV patients spent 485 percent more out of pocket than the general population, but only 23 percent more in 2006. Similarly, Rwanda and Tanzania experienced decreases in OOP spending, from 257 to 28 percent and 136 to 75 percent, respectively. The decrease in spending differences between PLWHIV and the general population may be attributable in part to increased subsidization of care and treatment services for PLWHIV. Further investigation is warranted to see if subsidization is the only cause; other causes might include increased utilization of subsidized services and/or a decreased prevalence of severe illnesses associated with HIV/AIDS. It should be noted, however, that the positive impact is not universal. In Malawi, OOP spending by PLWHIV has increased, and the difference versus the general population was even larger post-influx. While this finding may be due to the method of estimation for Malawi, (e.g., deriving fiscal year (FY)05 estimates from FY03 data), it may also reflect the disproportionate allocation of donor funds to programmatic activities rather than to curative care.

TABLE 5: COMPARING OUT-OF-POCKET SPENDING FOR PLWHIV 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
PLWHIV	$2.14	$3.42	$10.16	$9.78	$11.92	$9.75	$53.78	$20.67
Percent difference	18%	89%	257%	28%	136%	75%	485%	23%
Magnitude of change in spending by general population (2006 amount/2002 amount)	0.99		2.69		1.10		1.82	
Magnitude of change in spending by PLWHIV (2006 amount/2002 amount)	1.60		0.96		0.82		0.38	

With respect to Kenya, Table 5 does not present PLWHIV OOP because of the adoption of a more rigorous methodology in 2006, which prevents direct comparison with 2002 figures. The 2002 methodology identified HIV-positive individuals first through national registries, associations, and so forth, which tends to skew the sample population toward those who rely on formal health care (see Limitations in Annex B). While efforts were made to adjust for such biases in the 2002 estimate, Kenya's

approach to PLWHIV estimation in 2006 is a significant improvement, relying on a randomly sampled household survey that included biomarker testing for HIV.

The Central Bureau of Statistics, with support from the U.S. Centers for Disease Control and Prevention (CDC), conducted the survey, called the Kenya AIDS Indicator Survey (KAIS). KAIS collected blood samples from nearly 16,000 respondents to test for HIV antibodies and identified 1,106 individuals with HIV. Most were undiagnosed until the survey test. All survey respondents provided information about their level of spending for inpatient and outpatient visits and their attitudes and risk behaviors. Unlike the case of the 2002 survey, the data were used to match a group of HIV-negative respondents to HIV-positive respondents.

4.4 WHERE IS THE MONEY SPENT?

Further analysis of NHA data reveals not just who manages HIV/AIDS funds but also where the funds are spent– public sector or private sector (for-profit and not-for-profit)– and type of facility or provider (hospital, clinic, pharmacy, or traditional healer).

Major findings related to this analysis include the following:

- The largest share of HIV/AID funds is spent in the public sector.
- Still, a considerable share of HIV/AID funds is spent in private facilities, tending toward high-end facilities such as private hospitals.
- Spending in private pharmacies and traditional healers in some countries has largely declined
- Most spending in the private health sector comes from OOP payments as opposed to donor or government funding.

Regarding changes in absolute terms, Table 6 shows percent change in expenditure post-influx relative to pre-influx by provider type. The informal private sector, including traditional healers and private pharmacies/shops, exhibited a decrease in spending.

Before the donor influx, spending on traditional healers represented a considerable amount (in absolute terms) of expended HIV/AIDS resources (but a smaller relative share). Since the influx, data for four of the five countries (except Malawi) showed a drop in expenditures for traditional healers (whose principal source of payment is household OOP spending). Zambia saw a 67 percent reduction in HIV/AIDS expenditures on traditional healers while Kenya and Tanzania experienced 40 and 12 percent reductions, respectively. This finding suggests a positive effect of the donor influx in that PLWHIV are less inclined to resort to traditional healers for treatment of opportunistic infections. The shift is likely indicative of increased awareness of and access to subsidized HIV treatment and care from the formal sector.

The findings also show reduced spending at private pharmacies/shops in Rwanda and Tanzania, perhaps suggesting a decrease in self-medication, while also reflecting the fact that ART is generally provided at health centers/hospitals. For example, spending in private pharmacies in Rwanda and Tanzania decreased by 4 and 12 percent, respectively, following the donor influx. With respect to Kenya, the increased amount of spending at pharmacies (largely attributable to OOP spending) should be viewed with caution. The method used to measure OOP spending by PLWHIV could have led to a greater inclusion of respondents who used the informal sector in 2006 as compared to 2002.

As for the formal sector, the findings show that, since the influx, higher levels facilities are consuming more resources, particularly hospitals. In general, we see an increase in HIV resource consumption at both public and private hospitals, but larger increases in private hospitals relative to 2002 levels. Except for Zambia, the other four countries experienced a variety of increases—as high as 1,247 percent in public hospitals. The increases in private hospitals range from 73 percent in Tanzania to 1,395 percent in Rwanda.

TABLE 6: PERCENT CHANGE IN RELATIVE SPENDING AT PROVIDER TYPES BEFORE AND AFTER THE INFLUX

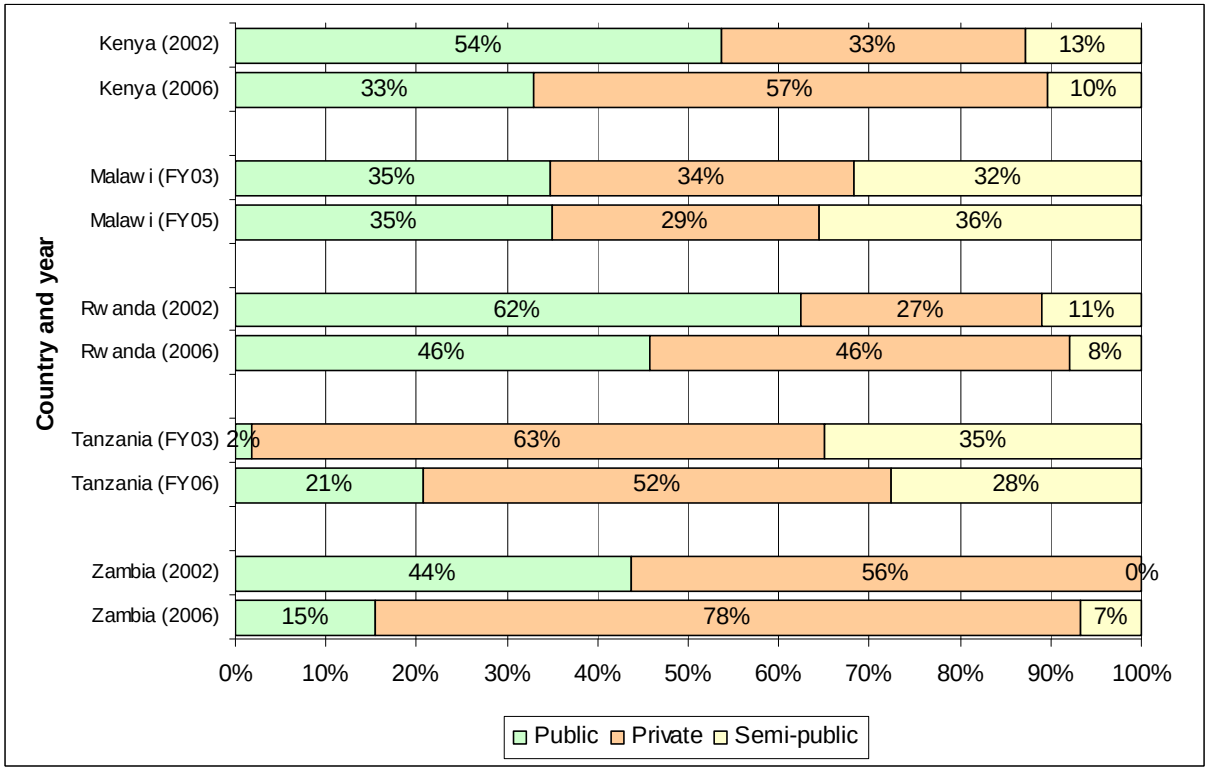
	Kenya	Malawi	Rwanda	Tanzania	Zambia
Private hospital	375%	86%	1,395%	73%	726%
Private clinic	-64%	33%	-42%	96%	-94%
Not-for-profit hospital	189%	43%	938%	-12%	-48%
Not-for-profit clinic	57%	N/A	1,526%	-4%	-15%
Private pharmacy/shop	155%	14%	-4%	-12%	554%
Traditional healer	-40%	3%	N/A*	-12%	-67%
Public hospital	20%	61%	869%	1,247%	-87%
Public health center	400%	-2%	1,029%	115%	-83%

* In 2002, Rwanda's NHA did not track spending on traditional healers.

In general, the data show also show increased expenditures in PNFP facilities that often receive funds from both government and external sources. This increase is suggestive of greater involvement of this faction of the private sector in national HIV responses.

While OOP payments among PLWHIV are largely decreasing, the relative share of OOP payments to private providers is increasing (Figure 9).This can be explained by the fact that PLWHIV are increasingly accessing free or subsidized HIV treatment through the public sector, and therefore OOP payments to this sector are decreasing. Thus, OOP payments to private providers comprised an increasing share of all OOP spending for HIV/AIDS in 2006. For example, in 2002, 54 percent of Kenyan PLWHIV OOP payments went to public providers and 33 percent to private providers; by 2006, the spending share at public providers decreased to 33 percent while the share at private providers increased to 57 percent. In contrast, in Tanzania, where OOP payments by PLWHIV have since the donor influx, public facilities now attract a greater share of OOP spending. Further examination of this phenomenon is warranted. In Malawi, the shift to private provision is less pronounced than in the other three countries experiencing such a shift, possibly owing to methodological limitations in the data.

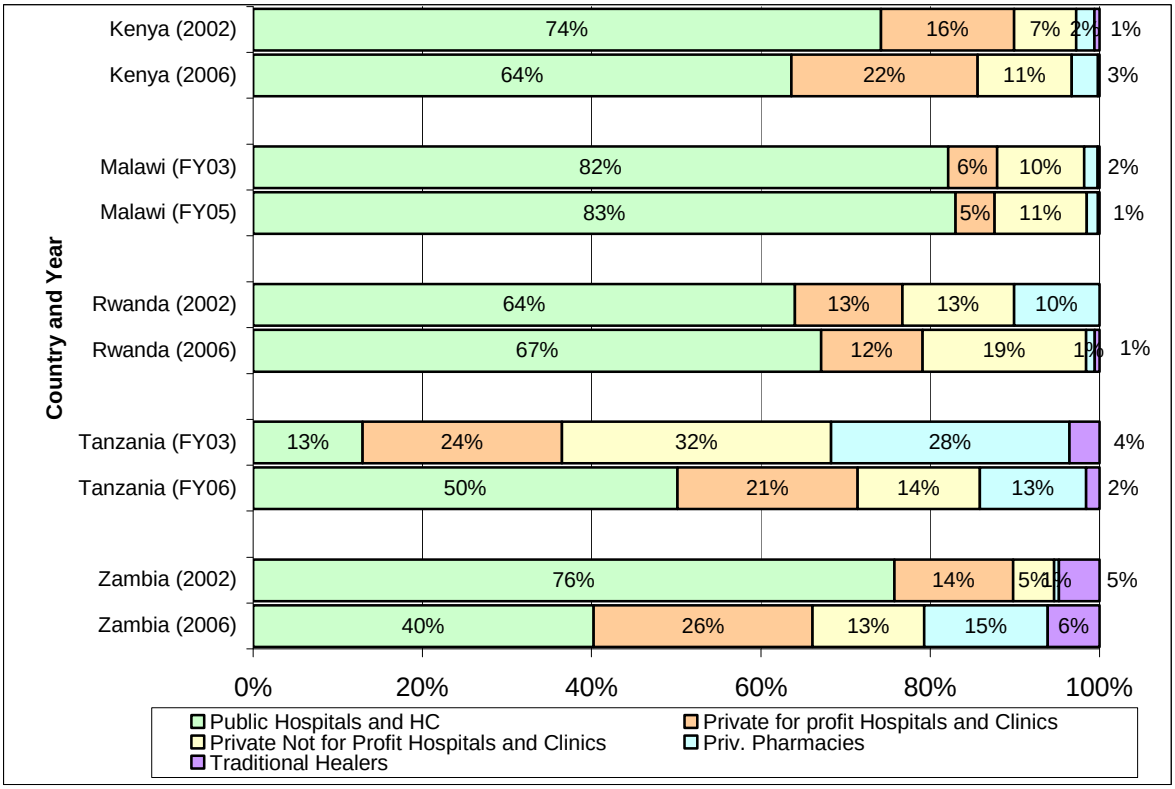
FIGURE 9: OUT-OF-POCKET SPENDING BY PROVIDER TYPE



Which health providers consume the most HIV/AIDS resources? A comparison of relative shares between public and private providers (Figure 10) shows that the majority of medical care and treatment expenditures occur in public facilities as opposed to private facilities, for both inpatient and outpatient services. On average, 15 percent of all personal expenditures[2] occurred in private facilities in 2002, increasing slightly to 17 percent in 2006. The large proportion of expenditures made in public facilities underscores the tendency for external aid to be directed to this sector.

[2] Personal care expenditures include all spending at facilities and all spending for the services of individual health care workers (including traditional healers). It is not equivalent to total health expenditure on HIV/AIDS in that it does not include spending on the provision of public health programs and central administration.

FIGURE 10: HIV/AIDS HEALTH EXPENDITURES BY PROVIDER TYPE

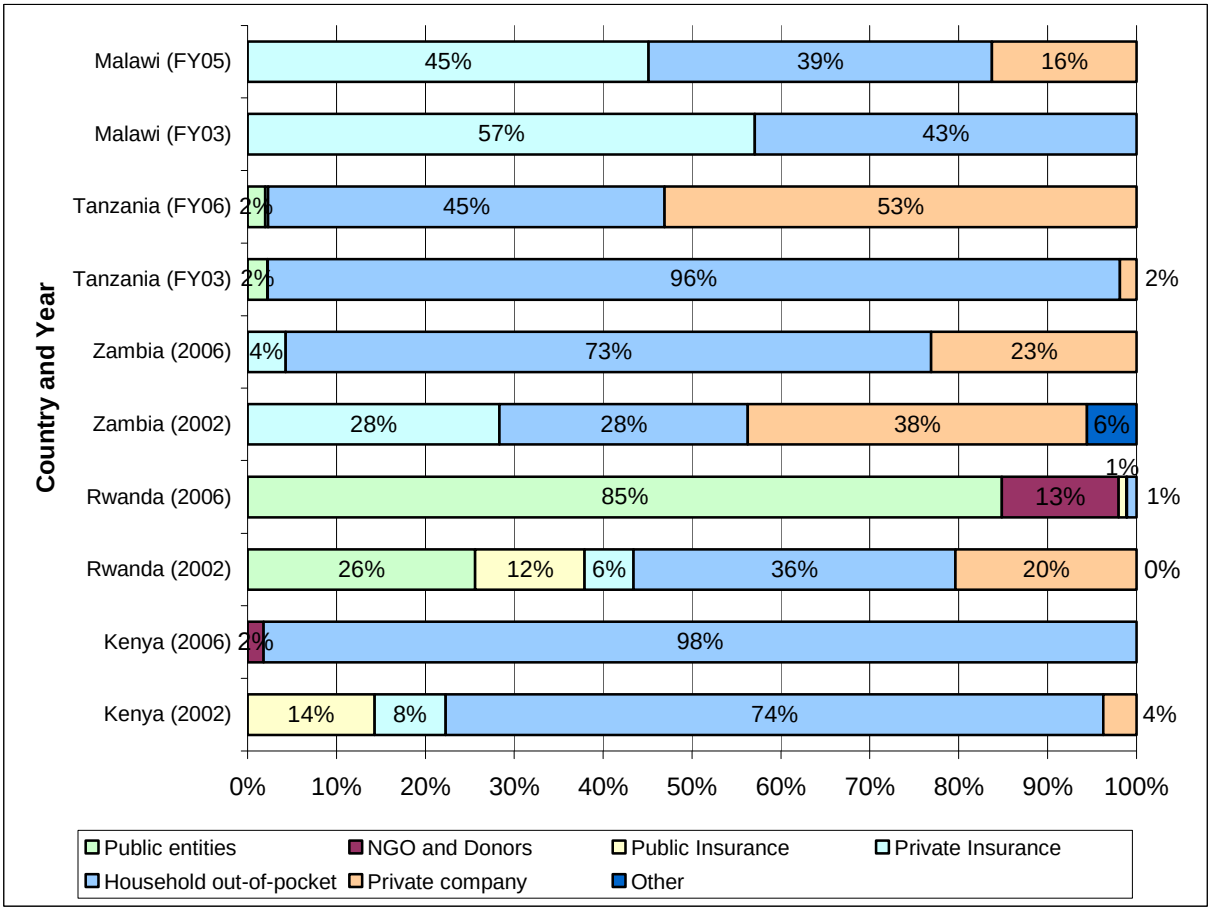


4.5 WHO PAYS PRIVATE FOR-PROFIT PROVIDERS?

While most HIV/AIDS resources are channeled through public and international partners, the major global HIV initiatives are increasingly open to partnering with private providers as a means to expand access to essential HIV/AIDS services. Little data currently exist on the extent to which such partnerships, such as contracting with private providers to deliver HIV/AIDS services, are actually occurring. Put another way, to what extent are funds transferred from public payers or donors to private providers?

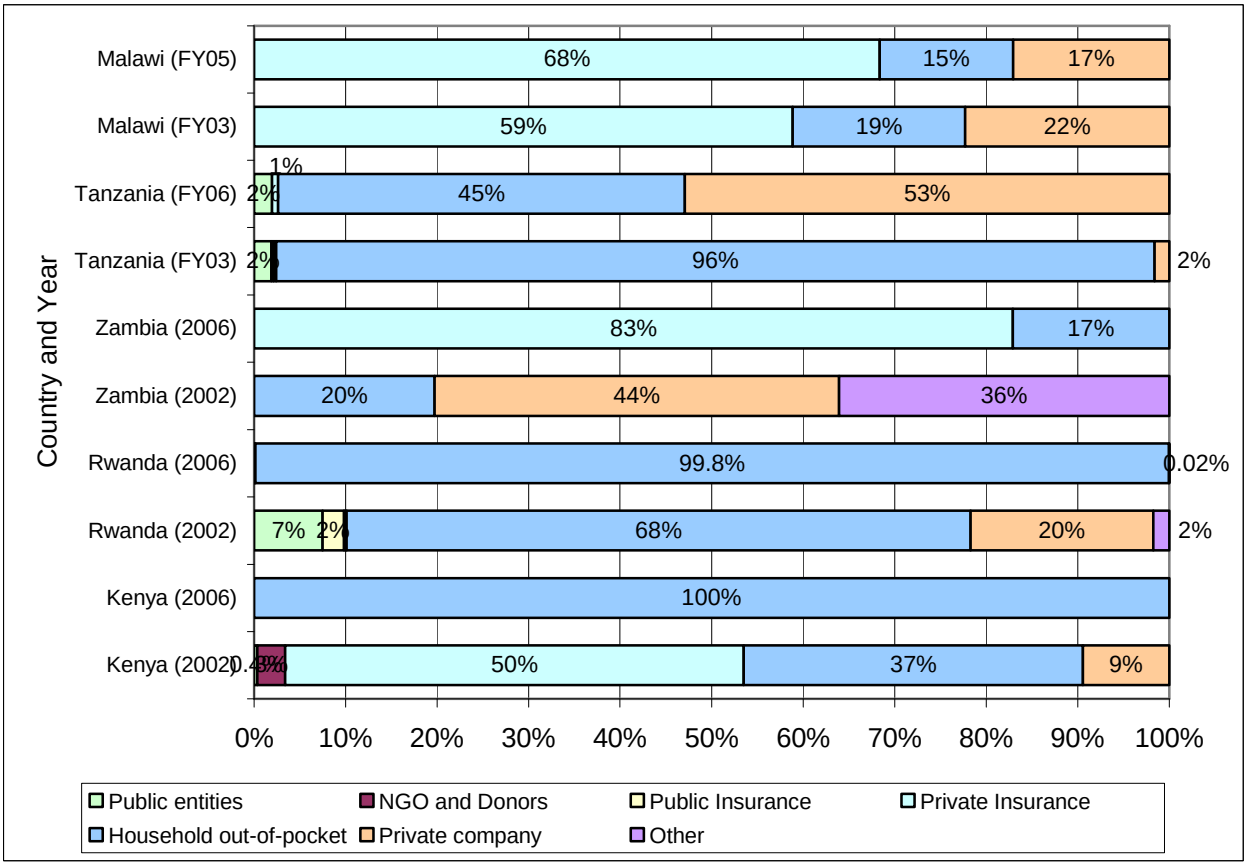
With respect to private hospitals (Figure 11), the funds spent at such facilities largely come from household OOP spending. In Kenya in 2006, 98 percent of funds spent in private hospitals came from OOP spending; in Zambia 73 percent of funds spent in private hospitals came from OOP payments that same year. Across most countries, little public financing goes to private facilities, suggesting an absence of financing mechanisms to engage private health providers in national HIV responses.

FIGURE 11: CONSUMPTION OF HIV/AIDS FUNDS AT PRIVATE FOR-PROFIT HOSPITALS BY TYPE OF MANAGER



Compared to private hospitals, private clinics (Figure 12) receive even fewer public funds. Indeed, in Kenya and Rwanda, the public sector contribution to private health clinics has decreased since the donor influx. The major source of revenue for private clinics is OOP payments, followed by private insurance or private companies. Similar to private hospitals, private clinics do not receive funds from international NGOs.

FIGURE 12: CONSUMPTION OF HIV/AIDS FUNDS AT PRIVATE FOR-PROFIT CLINICS BY TYPE OF MANAGER



5. DISCUSSION

In this paper we examine the role of the private sector in HIV/AIDS financing and resource consumption, using a source of data not commonly associated with the private sector– National Health Accounts. Focusing on five African countries– Kenya, Malawi, Rwanda, Tanzania, and Zambia– we assess the extent to which private contributions have financed HIV/AIDS services and how these contributions have shifted as a result of the sizable increase in donor funding in recent years. In this selection, we summarize the key findings below and discuss their implications.

5.1 HOW MUCH MONEY WAS SPENT AND FROM WHAT SOURCE?

We explored the extent to which private sources help fund the AIDS response and how their role has changed since the recent influx of donor funds targeted to mitigating the epidemic.

- Not surprisingly, we found that the private sector's contribution to the AIDS response is much lower than donor contributions. Moreover, since the dramatic increase in donor funding, private sector contributions dropped on average from 27 percent of total HIV/AIDS health expenditures in 2002 to 12 percent in 2006. The decrease is significant in absolute terms; private company investments have diminished sizably.
- Perhaps more surprising is the finding that absolute government spending for HIV/AIDS also declined in Kenya and Zambia during the four-year period.

At a time when the global HIV community and the three major funders seem to be coalescing around the heightened need for broader resource mobilization, these trends suggest otherwise. In other words, these data indicate that donor funds may be replacing domestic private and public sector contributions, running counter to the premise of "additionality" of funding now promoted by the GFATM (GFATM, 2009). The reasons behind the reduction in private sector contributions warrant further investigation. One possible explanation may lie in falling prices for antiretrovirals (ARVs) as a result of the introduction of generics in developing countries (MSF, 2008). While the annual cost of the most commonly used first line drug combination dropped marginally between 2003 and 2006 (from US$621 to US$549), the introduction of the generic combination drug Cipla lowered the price to US$132 by 2006 (MSF, 2008). Generic ARVs are generally available without restrictions, so presumably private companies in the five study countries would be able to purchase drugs at these prices.

While the reduction in ARV costs may have contributed to the decline in private sector investment, there is some evidence that the advent of national treatment programs has convinced companies that they no longer need to shoulder the burden for HIV/AIDS services (Ivan, 2009; Feeley et al., 2007). The temptation for companies to withdraw their support in light of government services is understandable. However, current and future demands for HIV/AIDS prevention, treatment and care coupled with the uncertainty of future foreign aid for HIV/AIDS suggest that a message underscoring the need for continued private sector investment is warranted. The private sector has been an important source of financing for HIV/AIDS in developing countries in the past – the challenge will be to sustain this support (Hecht, 2009).

According to a recent report on financing projections for HIV/AIDS through 2031, even under an optimistic funding scenario, donor funding will fall short of projected needs (Hecht et al., 2009). In fact, several factors suggest that the funding scenario will be much more conservative, raising the specter of a need for broad and innovative resource mobilization for HIV/AIDS for many years to come. The global economic crisis, as well as competing demands for other critical issues, such as climate change and food security, are suggested as key factors behind a projected funding shortage for the global AIDS response (Hecht, 2009; Lamontagne, 2008).

Beyond the resource mobilization argument, studies have shown that employer-sponsored treatment efforts have proven highly effective in terms of increasing both adherence to ART and survival rates--additional arguments for preserving and potentially increasing the private sector's role in financing and supplying HIV services (Connelly, 2006; Van der Borght, 2006; and Charalambous, 2007).

Elsewhere in Africa, successful examples of the public sector's leveraging of company-sponsored HIV/AIDS programs typically involve the government's provision of free ART pharmaceuticals (often purchased with donor funding) to company clinics, with the remaining costs of treatment covered by the employer (Feeley, 2007). It should be noted that the same model has been applied to private health clinics. For example, private providers in Malawi underwent training in ART management and received ARVs from the government. Patient fees for the drugs were capped at US$4 per month, and providers were allowed to charge normal fees for consultation. Uganda has since initiated a similar arrangement (Feeley, 2007; Schouten, 2006). Government tax incentives may be another way to encourage or sustain private company provision of HIV/AIDS services.

5.2 WHO MANAGES THE FUNDS?

We examined patterns related to the extent to which the private sector makes decisions about how funds are spent, comparing the results before and after the donor influx. Key findings included:

- Private insurance schemes and private companies managed fewer resources—in both absolute and relative terms--since the donor influx.
- In four of the countries (the exception is Malawi), donors and NGOs are increasingly making decisions about the expenditure of HIV funds. For Kenya and Zambia, the shift was extreme.
- In Kenya, Zambia, and Rwanda, donors and NGOs were responsible for allocating more than 50 percent of all HIV funds as of 2006.
- PLWHIV "manage" funds through deciding how and where they allocate OOP payments directly to health providers. With the exception of Malawi, OOP spending by PLWHIV largely decreased over the four-year period, suggesting that PLWHIV benefitted from increased access to free or heavily subsidized HIV/AIDS services.

With respect to the diminishing role of the private sector in managing HIV resources, this finding may signal a possible "crowding out" of the private sector's involvement in allocating resources to health providers. In view of the need to meet and sustain the growing demand for HIV/AIDS services, this weakened role poses a concern. There is ample evidence that the private sector has not been sufficiently included in global or national strategic planning to address HIV/AIDS. Indeed, other researchers have noted that increased aid can "make governments less receptive to a more significant role for the private sector" (Lewis, 2005). Further findings from our analysis may support this notion. In contrast to the decline in private sector involvement in managing HIV/AIDS funds, private sector management of general health care funds increased in all countries except Rwanda.

The diminished role of the private sector in managing HIV/AIDS funds seems to be in conflict with the major global HIV initiatives, which increasingly recognize that in order to sustain HIV/AIDS services, not only should private sector investment be encouraged, but so should the active participation of this sector in strategic planning for national HIV responses. Given that this shift in donor thinking has occurred recently, it is possible that the data from 2006 have not captured this evolution. Another round of analyses based on subsequent NHA HIV subaccounts more accurately reflect current trends.

Despite the findings related to reduced private company participation in HIV/AIDS, it is important to point out that PLWHIV spent less on health care in 2006 than in 2002, reflecting increased access to free or subsidized HIV/AIDS services. Moreover, in comparing health care expenditures among PLWHIV to their HIV-negative counterparts, we found that the spending gap is narrowing (i.e., PLWHIV still spent more on health care than did the general population, but the difference is decreasing). This clearly represents a positive and intended effect of the significant increase in donor funding.

5.3 WHERE DO THE FUNDS GO?

Finally, we analyzed where HIV/AIDS funds are allocated. We examined patterns in use of the private health sector before and after the donor influx, distinguishing between for-profit and not-for-profit providers.

- HIV resources are largely and increasingly channeled to public providers for both outpatient and inpatient care; for-profit providers received a relatively modest share of HIV expenditures in 2006.
- Despite donor encouragement to foster greater PPPs, including contracting with the private sector, little if any public funds are transferred (or contracted out) to PFP providers, including hospitals and clinics.
- Funding for private facilities and hospitals largely comes from OOP payments.
- A positive change since the donor influx is the decreased level of spending in the informal sector, including traditional healers and self-medication purchases at private pharmacies/shops. This change may imply that PLWHIV are less inclined to resort to traditional healers and self-medicate for treatment of opportunistic infections, perhaps in response to increased access to subsidized HIV treatment and care in the formal health sector.

The fact that private facilities are largely supported by OOP payments, as opposed to government or donor funding, points to an opportunity for introducing financing arrangements, such as contracting out or vouchers, to engage private providers in HIV prevention and treatment, and in so doing, increase access to critical HIV/AIDS services while subsidizing the cost of care. Working with existing private health providers to implement innovative financing mechanisms may prove to be cost-effective, in that it involves harnessing a previously untapped resource, and thus could potentially drive down the costs of treatment (Hecht et al., 2009). Such mechanisms are being piloted in Africa, and deserve further consideration.

6. CONCLUSION

Our analysis of NHA data for five sub–Saharan countries points to mixed effects of the substantial increase in donor funding experienced by these countries between 2002 and 2006. While the findings provide evidence of a reduced burden on PLWHIV to pay for health care and decreased spending in the informal sector for HIV/AIDS care, the role of the private sector has generally contracted since the donor influx.

As the global AIDS response evolves from one of emergency relief to ensuring sustainable programs, major stakeholders (e.g., PEPFAR, GFATM, MAP and UNAIDS) are gradually recognizing the potential for the private sector to make a considerable contribution. The PEPFAR reauthorization pledges to increase efforts to partner with and engage the private sector, and the Partnership Framework provides a structure for including the private sector in the national HIV response. MAP points to areas in which the private sector previously played a role and is currently involved in efforts to address country-specific HIV/AIDS needs. The GFATM is likely to follow suit, in response to a recent evaluation that notes lapses in the mechanism's inclusion of the private sector, and recommends that the initiative "increase its efforts to engage the private sector in the partnership, expanding the range" (GFATM, April 2009). UNAIDS continues to promote public/private partnerships in response to growing HIV/AIDS needs,

Given the recent shift in the global HIV response, and the corresponding emphasis among global HIV initiatives on sustaining the response, it is possible that these data have not captured the current situation in 2009. Additional research will shed light on whether these trends hold true, or whether changing attitudes toward the private sector are starting to take root in national HIV responses. This research is intended to serve as a baseline to which future analyses can be compared.

Several factors suggest an increased role for the private sector in the HIV response: the changing nature of the epidemic and increased access to ARVs which translates into the need for long-term chronic care for PLWHIV, the global economic crisis and the uncertainty of donor funding it brings, and increased political will on the part of global HIV initiatives to seriously consider the private sector as a partner in achieving universal access goals. Further engaging the private sector, including private health providers, may help to meet the growing needs for HIV prevention, care and treatment in the years to come.

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ANNEX A: OVERVIEW OF NATIONAL HEALTH ACCOUNTS

Conducted in over 100 countries, National Health Accounts is an internationally accepted framework used for comprehensively tracking resource flows for health care, including public, private, and donor contributions. It specifically aims to track **expenditures**[3] through the health system:

- From their **financing sources**, such as the Ministry of Finance, donors, households, and so forth
- Through their **financial agents**, which are the principal managers of health funds that directly pay (payers) providers and may include entities such as the Ministry of Health, nongovernmental organizations, and so forth
- To **providers**, such as hospitals, clinics, dispensaries, pharmacies, traditional healers, and so forth
- To **functions**, which are the types of service or products delivered, including curative care and preventive, rehabilitation, administration, and so forth

These resource flows are presented in a series of two-dimensional tables (Box 1) that adhere to the norms outlined in the *Guide to producing national health accounts; with special application for low-income and middle-income countries*.[4] Worldwide support for NHA stems in part from the tool's two principal goals: (1) to be used for policy purposes and (2) to be institutionalized and conducted on a regular basis as part of routine national data collection efforts. Another feature of NHA is its ability to produce internationally comparable data while offering sufficient flexibility to inform local policy needs.

When the framework is applied to a particular area of health care, such as HIV/AIDS, it is termed an NHA "subaccount." Subaccounts produce the same series of two-dimensional tables as accounts but only for those services that address the disease of interest. Generally, subaccounts are conducted simultaneously with a general NHA to place disease-specific health spending estimates within the context of overall health expenditure patterns.

In keeping with the National Health Accounts framework, the HIV/AIDS subaccounts focus on measuring the **health** expenditures associated with HIV/AIDS activities.[5] However, it should be noted that many country estimates also offer non-health HIV/AIDS expenditure estimates, but they are documented separately from the health estimates to preserve the integrity of the NHA framework.

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[3] Expenditures are measurements in monetary terms of the value of consumption of the goods and services of interest. This implies that the service or product has been rendered to the population or patient.

[4] Published by the World Health Organization, World Bank, and United States Agency for International Development, 2003.

[5] Defined "as those intended to have an impact on the health status of people living with HIV and AIDS in a given period of time, and those expenditures intended to prevent the spread of HIV and AIDS, which may target the population at large."

Box 1: NHA Reveals the Amounts and Flows of Funds through the Health System

The following figure illustrates the two-dimensional nature of NHA tables and how each table links to each other table to reveal the flow of funds from one level to the next. The first table shows the amount of funds flowing from financing sources to financing agents. The second table shows how financing agents spend the funds from financing sources (row totals in Table 1) across various health care providers.

1)	***Financing Sources***				
Financing Agents	FS.1.1.1 Central Gov. (Ministry of Finance)	FS.3. Rest of the World (Donors)	FS.2.1 Employer Funds	FS.2.2 Household Funds	**TOTALS**
HF.1.1.1.1 Ministry of Health	A	B			**A+B**
HF.1.1.1.2 Ministry of Education	C				**C**
HF.2.2 Private Insurance Enterprises			D	E	**D+E**
HF. 2.3 Private households' out-of-pocket payment				F*	**F***
TOTALS					**G**

2)	***Financing Agents***				
Providers	HF.1.1.1.1 Ministry of Health	HF.1.1.1.2 Ministry of Education	HF.2.2 Private Insurance Enterprises	HF.2.3 Households	**TOTALS**
HP.1.1.1 Public General Hospitals	W		X		
HP.1.1.2 Private General Hospitals		C		F	
HP.3.4.5.1 Public Outpatient Clinics			Y		
TOTALS	**W=A+B**	**C**	**X+Y= D+E**	**F**	**G**
* direct transfer of payment					

Use of the NHA framework to track HIV/AIDS expenditures is advantageous for several reasons. First, as mentioned, the framework allows for the production of internationally comparable data while meeting national policy needs. Second, its comprehensive approach to resource tracking, which permits the monitoring of spending by all public, private, and donor entities in the health sector, mirrors the multisectoral approach (also involving public, private, and donor entities) used by most countries to fight HIV/AIDS. Third, with the general NHA increasingly institutionalized in developing countries, including those hardest hit by the AIDS epidemic, additional implementation of the HIV/AIDS subaccounts could become a regular phenomenon through simultaneous implementation of general, ongoing NHA exercises. Thus, the subaccounts would provide meaningful baseline and trend data for assessing progress toward national priorities in the fight against HIV/AIDS and toward the goals of various global initiatives (De and Dmytraczenko, 2004).

ANNEX B: DETAILED METHODOLOGY

COMPARISON PROCESS

To prepare for the analysis process, the authors identified and developed a list of target financing indicators and tables. We used both the country HIV/AIDS subaccounts and the general NHA estimates to compute the target indicators and tables in a Microsoft Excel database and then adjusted for inflation to determine actual changes in spending. We next analyzed the database from different vantage points:

- Comparison of **relative** (percentage) and **absolute** spending changes over time in **a given country**.
- Comparisons of spending trends **between** countries with respect to **relative** share changes among stakeholders.
- Comparisons of HIV/AIDS **relative** spending patterns with those of overall health spending in **a given country** by, for example, examining the financing source distribution for HIV/AIDS against the financing source distribution for general health care within a given country in order to identify any marked differences and determine what is/is not specific to HIV/AIDS. Any distinctions between HIV/AIDS and General Health spending would also be compared with those in **other** countries.
- Comparisons **between** countries' indicators that place HIV/AIDS expenditures within the context of overall health expenditures, e.g., comparisons across countries' HIV/AIDS health spending as a percentage of total health expenditures.

We did not adjust the data for purchasing-power parity because of various time boundaries that challenged the consistency of the parity values. In addition, comparisons of absolute value amounts were largely limited to the evolution of spending within a given country.

For purposes of this comparative analysis, we included in the study only those transactions falling within the Total Health Expenditure for HIV/AIDS (THEHIV and AIDS). While individual subaccount reports present and distinguish health and non-health spending on HIV/AIDS, this analysis compares only HIV/AIDS health expenditures to allow for consistency and comparisons with overall health spending shown in the General NHA (THEgeneral). Table A1 illustrates what is included and excluded from the analysis.

TABLE A1: INCLUSIONS AND EXCLUSIONS TO HIV/AIDS SERVICES IN COMPARATIVE ANALYSIS

HIV/AIDS Expenditures Included in Analysis	HIV/AIDS Expenditures Excluded from Analysis
1. Services for curative care (inpatient, outpatient, home care, and so forth) 2. Services for rehabilitative care 3. Services for long-term nursing care 4. Ancillary services to medical care 5. Medical goods (pharmaceuticals and other non-durables) 6. Prevention and public health services related to HIV/AIDS 7. Health administration and health insurance 8. Capital formation for provider institutions (proportion going to HIV/AIDS services)	1. Health-related HIV/AIDS functions a. Education and training of health personnel b. HIV/AIDS health research and development c. Food, hygiene, and drinking water control d. Environmental health 2. Non-health HIV/AIDS functions (examples) a. School fees for PLWHIV b. Psychosocial support to PLWHIV or affected families c. Other

INFLATION AND CURRENCY CONVERSION

To compare absolute spending figures across years in each country, we adjusted all absolute spending numbers for inflation by 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. We therefore inflated the FY 2002 data to 2006 currency to allow for comparison. In countries with fiscal years split across two calendar years, the base year is the second calendar year. Therefore, for Tanzania, whose FY 2003 ran from July 2002 to June 2003, we inflated 2003 currency to 2006 currency to allow for comparison with FY 2006 data. The inflation rate average is based on the International Monetary Fund's World Economic Outlook Database (International Monetary Fund, 2008). The inflation rates are applied to the original currency.

HIV subaccounts data are ultimately recorded in local currency after data analysis. For purposes of this report, we converted all expenditure figures to US$ based on the official average exchange rate of the most recent data year, obtained from the central banks of the countries analyzed.

LIMITATIONS

Several limitations are associated with the underlying country-level data.

1. Country-level expenditure estimates depend on self-reporting by the surveyed institutions or households; NHA and HIV/AIDS subaccounts are not audits. That said, every attempt is made to verify each expenditure transaction from at least two data sources, although 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, potentially resulting in varying rigor and varying use of estimation techniques for individual country subaccount estimates. For example, hospital expenditure data may be readily obtained for curative care and disaggregated between outpatient and inpatient care; however, another country may have expenditure information only at the level of curative care such that further disaggregation requires the application of allocation factors (i.e., an estimation technique) based on what is known about cost and use of services. This is in essence a "best guess" as to the split between inpatient and outpatient services. As the NHA infrastructure is

institutionalized, estimates will likely improve in terms of accuracy and thus facilitate more extensive analysis.

3. Each country undergoes an evolution in the quality of data sources used in its estimates. Later estimates tend to be more robust and rely on more appropriate data sources as compared to the 2002 estimates, which, for many countries, were the first set of subaccount estimates. For example, many of the earlier subaccount estimates of OOP spending for PLWHIV were derived from data collected through a "targeted" survey; in other words, the survey confirmed the identification of HIV-positive individuals and then interviewed them. The targeted surveys relied on accessing PLWHIV through "key entry" points, namely, health care facilities and associations for PLWHIV. While such an approach offered a cost-effective way to obtain data from PLWHIV, the surveys were representative only of the subpopulations that frequent the entry points such that the surveys captured information on PLWHIV:

    - Who sought care in the formal and largely public health care system, perhaps underestimating expenditures incurred in the informal sector, including traditional healers
    - Who tended to have greater access to care and education
    - Who may have been more ill than the rest of the PLWHIV population because, during that time, PLWHIV tended to seek HIV testing after the onset of symptoms or emergence of opportunistic infections. The degree of illness has implications for PLWHIV expenditure estimates because other studies have found that the more advanced the stage of illness, the greater are the associated treatment costs (Bautista et al., 2003).[6]

Consequently, when determining national OOP expenditures, we adjusted survey data in accordance with assumptions about the PLWHIV population's stage-of-disease profile in each country.[7] In the later subaccounts, we tried to circumvent targeted surveys. For example, in Kenya, the NHA team added expenditure questions to a nationally representative survey that included biomarker testing for HIV (Kenya AIDS Indicator Survey). This method makes is possible to formulate estimates about the entire population of PLWHIV, thereby avoiding many of the biases inherent in the targeted PLWHIV survey method.

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[6] The HIV/AIDS treatment costing study in Mexico found that the average cost of treating patients with CD4 counts below 200 cells/mm^3 is approximately 30 percent higher than for 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 antiretroviral drugs (ARVs), treatment costs are two to three times higher for patients near death than for the average patient."

[7] Although best assessed through CD4 counts, stage-of-disease profiles may be inferred from WHO performance scales: Stage 1, asymptomatic, normal activity; Stage 2, symptomatic but normal activity; Stage 3, bedridden for less than 50 percent of the day during the last month; Stage 4, bedridden for more than 50 percent of the day during the last month. In Kenya, it was estimated that 12 percent of the HIV population is at Stage 1, 49 percent at Stage 2, 25 percent at Stage 3, and 14 percent at Stage 4. In Rwanda, it was estimated that 10 percent fall into Stage 1, 55 percent into Stage 2, 25 percent into Stage 3, and 10 percent into Stage 4. In Zambia, it was estimated that 65 to 70 percent are in Stages 1 and 2, 10 to 20 percent in Stage 3, and 10 to 15 percent in Stage 4.