Partners for Health Reform*plus*

National Resource Flows for HIV/AIDS in Kenya, Rwanda, and Zambia: A Comparative Analysis

June 2006

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Abstract

An effective fight against HIV/AIDS necessitates a comprehensive understanding of existing financing of national HIV/AIDS services (including public, private, and donor components). Yet many countries most affected by the epidemic lack data, which increases the risk of inappropriate allocation of funds, and suspension of donor funding. National Health Accounts (NHA) is a policy tool for tracking national spending on health care. The NHA HIV/AIDS subaccounts framework allows for more detailed examinations of spending on HIV/AIDS, which can inform national HIV/AIDS strategic plans and then measure progress toward planned goals. With the NHA tool rapidly becoming institutionalized in many countries that also receive major international HIV/AIDS grants, the subaccount framework can be used for the financial monitoring that these grants require.

This paper reports on subaccount findings for 2002 from Kenya, Rwanda, and Zambia, all of which face generalized HIV/AIDS epidemics. Estimates show that their resource envelopes for HIV/AIDS were quite sizeable even prior to the surge in donor funds for treatment. Expenditures for HIV/AIDS health care – in 2002, primarily treatment of opportunistic infections and programs for prevention and public health – represented approximately 1 percent of national gross domestic product (GDP) levels, this in countries where overall health care resources accounted for only 4-5 percent of the GDP. Although donor financing accounted for the largest share of resources (usually more than half), most of these funds were targeted to programmatic activities, leaving households to pay for at least half of all medical care services. Indeed, people living with HIV/AIDS paid 3–6 times more out-of-pocket for health services than did the general population. Perhaps reflective of the direction in which the response to HIV/AIDS is managed, fund flows in Rwanda are increasingly channeled through the nongovernmental sector. This raises questions about government stewardship of the fight against the epidemic.

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Acronyms

ARV/T	Antiretroviral/Treatment
BBC	Behavior Change Communication
DHS	Demographic and Health Survey
FY	Fiscal Year
GDP	Gross Domestic Product
GF	Global Fund
HC	Health Care Functions
HF	Financing Agents
HH	Households
HIPC	Heavily Indebted Poor Country
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HP	Health Care Providers
ICD-10	International Classification of Diseases-10
IEC	Information, Education and Communication
IFF	International Finance Facility
IP	Inpatient
KNASP	Kenya National AIDS Strategic Plan
KSh	Kenyan Shilling
M&E	Monitoring and Evaluation
MAP	Multi-country HIV/AIDS Program
MoH	Ministry of Health
MSF	*Médecins Sans Frontieres*
NGO	Nongovernmental Organization
NHA	National Health Accounts
OECD	Organization of Economic Cooperation and Development
OI	Opportunistic Infections
OOP	Out-of-pocket
OP	Outpatient
OVC	Orphans and Vulnerable Children

PEP	Post-exposure Prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PHR*plus*	The Partners for Health Reform*plus*
PLWHA	People Living with HIV/AIDS
PPP	Purchasing Power of Parity
PTMCT	Prevention of Mother-to-Child Infection
RWF	Rwandan Franc
STI	Sexually Transmitted Infection
TB	Tuberculosis
THAE	Total HIV/AIDS Expenditures (includes health and non-health spending)
$THE_{HIV/AIDS}$	Total Health Expenditure for HIV/AIDS
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNGASS	United Nations General Assembly Special Session
USAID	The United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

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The comparative analyses presented in this paper include additional analyses of the original country NHA and PLWHA survey datasets. For their patience and perseverance in achieving comparable analyses of the PLWHA datasets, the authors of this paper would like to acknowledge the diligent efforts of Ms. Sara Zellner, Mr. Ken Carlson, and Dr. Mursaleena Islam of Abt Associates Inc. Also, many thanks are extended to Ms. Paurvi Bhatt of Abt Associates for her comprehensive technical review of this paper.

Executive Summary

To effect a well-coordinated response to the HIV/AIDS epidemic, it is perhaps more important to know *how* funds are invested than to know simply *how much* is invested. That is, it is important to know who pays, for what services. This necessitates a comprehensive understanding of the existing organization and financing of national HIV/AIDS services. Currently, policymakers in many countries that are highly impacted by HIV/AIDS lack the data that allow informed decisions. This risks inappropriate allocation of funds as well as suspension of donor funding.

National Health Accounts (NHA) is an internationally recognized financial tracking tool that can help provide needed data. Currently implemented in more than 70 developing countries, including over half of sub-Saharan African countries, NHA is a framework to comprehensively measure national-level health expenditures, including public, private, and donor contributions. Adaptation of this framework to focus on HIV/AIDS health spending is called a NHA HIV/AIDS subaccount.

NHA HIV/AIDS subaccount estimates can answer pertinent policy questions such as:

- What is the total resource envelope for the fight against HIV/AIDS?
- Where is the money for HIV/AIDS coming from: public, private, and donors?
- What is the burden of financing on people living with HIV/AIDS?
- What entities are managing HIV/AIDS resources?
- What providers receive HIV/AIDS funds to deliver care?
- How are HIV/AIDS funds being used? For what services? Are they meeting their intended targets?
- Are new donor funds serving as "additional" sources of funds in the fight against HIV/AIDS?

This paper presents a comparative review of subaccount findings from three countries facing generalized epidemics, namely, Kenya, Rwanda, and Zambia.

Findings show that, in all three countries, the resource envelope for HIV/AIDS was quite sizeable even prior to the surge in donor funds (from the Global Fund to Fight AIDS, Tuberculosis and Malaria, the President's Emergency Plan for AIDS Relief, and the World Bank's Multi-country HIV/AIDS Program and other mechanisms). Health expenditures for HIV/AIDS represented, on average, approximately 1 percent of national gross domestic product (GDP), a significant level in countries where total health care resources accounted for only 4–5 percent of the GDP, and at a time when most HIV/AIDS resources went only to treatment of opportunistic infections and HIV/AIDS prevention programs. Although donors provided the largest share of financing in Kenya, Rwanda, and Zambia (usually more than half), most of their funds were targeted to prevention programs, leaving households to pay for at least half of all HIV-related medical services. The pressure on people living

with HIV/AIDS to pay for services is also illustrated by the finding that they paid 3–6 times more out-of-pocket for health services compared to the general populations in the three countries.

Of the studied countries, Rwanda was the only one to have conducted a subaccount more than once, thus allowing for the examination of spending over time. Perhaps reflective of the direction in which the response to HIV/AIDS is managed, fund flows in Rwanda are increasingly channeled through the nongovernmental sector. This questions the role of the government as steward of the fight against the epidemic.

With the NHA tool rapidly becoming institutionalized in countries that now receive major HIV/AIDS grants (from the Global Fund, etc.), the HIV/AIDS subaccounts should be seen as the logical and natural financial monitoring tool for meeting donor and stakeholder needs.

1. Introduction

1.1 The Need for HIV/AIDS Resource Tracking

With just 10 percent of the world's population, sub-Saharan Africa accounts for more than 60 percent of all people living with HIV/AIDS (PLWHA).[1] The severity of the epidemic is now well recognized by policymakers, donors, and other stakeholders, who have expressed firm commitment to curb the spread of HIV/AIDS, mitigate its impact, and extend treatment access. This commitment is articulated in a number of targets and declarations reached at various global and regional agreements. For example, the Millennium Development Goals, defined by the international community to serve as a framework for measuring country development progress, aim to halt and reverse the spread of HIV/AIDS by the year 2015. The 3 by 5 initiative of the World Health Organization (WHO)/Joint United Nations Programme on HIV/AIDS (UNAIDS) established the goal of having 3 million people on antiretroviral treatment (ART) by 2005. There are also bilateral commitments to combating the disease, such as the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), which is committed to providing antiretroviral (ARV) drugs to 2 million infected persons, preventing 7 million new infections, caring for 10 million infected people and those orphaned by HIV/AIDS, and building the health system capacity in Africa and the Caribbean – all by the year 2008. African country leaders themselves came together at the Abuja Declaration in 2001 to pledge their commitment to "mobilize all the human, material and financial resources required to provide care and support and quality treatment to our populations infected with HIV/AIDS, tuberculosis and other related infections."

Given such bold targets and commitments, policymakers and donors face the monumental task of determining how much should be spent and for what programs to achieve the desired health outcomes. Despite the recent surge in global funding for HIV/AIDS – in amounts that in some countries exceed the entire ministry of health budget – what will matter is not only the amount that is invested but *how* it is invested. UNAIDS warns that if decision-makers are not careful, these large amounts of funds may serve more to drive a "so-called AIDS industry" than to deliver a well-coordinated and improved response to the epidemic (UNAIDS, 2005). Thus, it is imperative that these funds be wisely allocated – in an effective and efficient manner based upon *informed* policy choices. An important prerequisite to this process is the need to fully understand the current organization and financing of national HIV/AIDS services, including public, private, and donor aspects. By doing so, decision-makers can see the strengths and weaknesses of existing delivery systems – the financial burden on households, potential areas for resource mobilization, dependencies on certain entities to pay for certain HIV programs, and so forth. In short, by understanding the present situation, one is better able to determine how to shape the future.

In reality, policymakers in middle- and low-income countries often face a paucity of data on their health care systems, particularly with regards to tracking of financial resources for HIV/AIDS. Without such data, it is difficult to make informed choices on resource allocation and to measure the success of that allocation. Now, the large influx of funds for HIV/AIDS makes it even more critical

[1] www.UNAIDS.org

that the disbursement process be properly monitored to ensure that funds are in fact going to intended programs. Lack of comprehensive data on the flow of HIV/AIDS resources increases the risk of misallocation or suspension of funding. Indeed, the Global Fund for HIV/AIDS, Tuberculosis (TB) and Malaria (Global Fund) has already withdrawn grants to countries that have failed to measure and verify that resources have been used as planned (Global Fund, 2004).

In addition to requiring assurance of appropriate disbursement, donors are increasingly concerned that, in order to be effective, their new funding should supplement existing resources and not be used as opportunities to shift domestic resources to other sectors. In short, these external funds are intended to be "additional." Often, this intention is mandated through an "additionality" clause in the contract between donor and recipient country. Failure to comply with this clause risks cancellation of the grant.

Thus, both national policymakers and donors require financial expenditure data for planning and monitoring purposes. One financial tracking tool that can contribute data is National Health Accounts (NHA) and its adaptation that focuses on HIV/AIDS health spending, NHA HIV/AIDS subaccounts. As adjunct to the existing national NHA framework, it is anticipated that regular tracking of HIV/AIDS resources by way of the subaccount exercise can become a reality.

Three countries in sub-Saharan Africa, Kenya, Rwanda, and Zambia, have done NHA HIV/AIDS subaccount estimates for fiscal year (FY) 2002. Their estimations offer baseline data against which the subsequent disbursement of new HIV/AIDS funds can be monitored. Moreover, they highlight the funding weaknesses and strengths in the countries' HIV/AIDS service deliver systems. This paper presents a comparative review of the NHA HIV/AIDS subaccount findings and implications in the three countries.

1.2 National Health Accounts

1.2.1 The NHA Framework

Currently implemented in more than 70 developing countries, including more than half of all sub-Saharan African countries, NHA is an internationally recognized framework for comprehensively measuring health expenditures at the national level. The standard framework tracks the annual flow of funds through a health care system:

- 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 and may include entities like the ministry of health and nongovernmental organizations (NGOs)
- to *providers*, such as hospitals, clinics, dispensaries, pharmacies, and traditional healers
- to *functions*, which are the types of service or products provided, including curative, preventive, and rehabilitative care, and administration

NHA estimates are presented in a series of two-dimensional tables that adhere to the norms outlined in the *Guide to producing national health accounts; with special application for low-income and middle-income countries* (WHO, World Bank, and U.S. Agency for International Development [USAID] 2003).

The NHA tool is increasingly popular worldwide because of the uses to which the findings can be put: 1) informing local policy development and evaluate policy implementation and outcomes, and 2) producing internationally comparable data, so that a country's performance can be compared to that of others in its region or with the same socioeconomic profile. In addition, many countries are institutionalizing NHA, i.e., conducting it on a periodic basis as part of routine national data collection efforts; these estimates over time serve a third use of NHA, namely, for trend analysis. In these ways, the NHA tool provides value to local policymakers who need information about national flows of funds and donors interested in global resource tracking.

1.2.2 Extending the NHA Framework to Track HIV/AIDS Expenditures

An NHA estimation is sometimes referred to as the "general NHA" when it examines *overall* health expenditure patterns. When the framework is used for additional stratification of these expenditures by disease-specific areas, such as for HIV/AIDS health services, it is referred to as a "subaccount."[2] Subaccounts produce the same series of two-dimensional tables, but only for those services that address the disease of interest. Generally, subaccounts are conducted simultaneously with a general NHA, to place the disease-specific health spending estimations within the context of overall health expenditure patterns.

Like the general NHA framework, the HIV/AIDS subaccount's focus is on measuring *health* expenditures associated with HIV/AIDS activities.[3] However, due to the far-reaching impact of the epidemic, program managers and policymakers have emphasized the need to understand the entire continuum of care that deploys both health and non-health intervention strategies. Thus, for policy purposes, it is important that both health and non-health expenditures for HIV/AIDS be measured. The USAID/Partners for Health Reform*plus* (PHR*plus*) publication entitled *Methodological Guidelines for Conducting a National Health Accounts Subaccount for HIV/AIDS* (De et al. 2004) offers a strategy for maintaining consistency with the NHA framework while also providing policy-relevant data to potential data users in the form of developing two total expenditure estimates: 1) total health expenditure for HIV/AIDS ($THE_{HIV/AIDS}$), which is derived from the general NHA's total health expenditure (THE) and, as its name implies, includes only HIV/AIDS health spending, and 2) total HIV/AIDS expenditure (THAE), which includes both health and non-health expenditure items. This allows for the comparison of HIV/AIDS health expenditures to overall health spending patterns (in accordance with the NHA framework) while also offering multisectoral policymakers the opportunity to view all spending related to the fight against HIV/AIDS.

Given this scope, the subaccount can inform critical national policy questions such as:

- What is the total resource envelope for the fight against HIV/AIDS?
- Where is the money for HIV/AIDS coming from: public, private, and donors?
- What is the burden of financing on people living with HIV/AIDS (PLWHA)?
- What entities are managing HIV/AIDS resources?

[2] Note, the previous term for such expenditure reviews was "subanalysis."
[3] Defined "as those intended to have an impact on the health status of people living with HIV/AIDS in a given period of time, and those expenditures intended to prevent the spread of HIV/AIDS, which may target the population at large."

- What providers receive HIV/AIDS funds to deliver care?
- How are HIV/AIDS funds being used? For what services? Are they meeting their intended targets?
- Are new donor funds serving as "additional" sources of funds in the fight against HIV/AIDS?[4]

Using the NHA framework to track HIV/AIDS expenditures is advantageous for a number of reasons. First as mentioned above, it allows for the production of internationally comparable data while also meeting national policy needs. Secondly, its comprehensive approach to resource tracking, which includes the monitoring of spending by all public, private, and donor players in the health sector, mirrors the multisectoral approach (that also involves public, private, and donor entities) used by most countries to fight HIV/AIDS. Third, with the general NHA becoming increasingly institutionalized in developing countries, including those hardest hit by the HIV epidemic, the additional implementation of HIV/AIDS subaccounts could also become a regular phenomenon through simultaneous implementation with ongoing general NHA exercises. Thus, the subaccounts would be able to provide meaningful baseline and trend data to assess progress toward national priorities in the fight against HIV/AIDS as well as towards the goals of various global initiatives.

1.3 The Current Study

1.3.1 HIV/AIDS Context in Kenya, Rwanda, and Zambia

Countries in the sub-Saharan region suffer some of the world's highest HIV/AIDS prevalence rates. The average adult prevalence rate in the region is 7.6 percent,[5] sizably more than the global rate of 1.1 percent. The countries covered in this paper – Kenya, Rwanda, and Zambia – have been greatly impacted by the epidemic. They are all low-income countries that, like the rest of the region, face generalized epidemics, where the disease is firmly established in the general population and spread principally through heterosexual contact. Their prevalence rates vary: Rates in Kenya and Rwanda, 6.7 percent and 5.1 percent respectively, are lower than the regional average. In stark contrast, Zambia has a high rate of 16.5 percent. Table 1.1 shows this and other background statistics on the three countries.

Unlike other diseases, which generally target the young, weak, and old, HIV/AIDS usually occurs in individuals in their prime years of economic and reproductive productivity. This has resulted in sizeable drops in average life expectancy. In Rwanda, life expectancy fell by six years (from 50 to 44) between 1990 and 2002. In both Kenya and Zambia, life span decreased by a staggering 15 years in the same 12-year period. Zambians are now expected to live on average to age 39. By shortening the lives of prime-age adults, the HIV/AIDS epidemic has engendered a new and growing generation of HIV orphans and vulnerable children. The effects of HIV/AIDS also accentuate existing inequities in society. For example, the disease disproportionately affects women. As the numbers in Table 1.1 show, women with HIV account for more than half of all adults living with the disease.

[4] This question can be addressed if time series data is available.
[5] By the end of 2003 (UNAIDS, 2004).

Table 1.1: Background Statistics on HIV/AIDS in Kenya, Rwanda, and Zambia, FY 2002

Indicators	Kenya	Rwanda	Zambia
Gross domestic product (GDP) per capita using purchasing power parity (PPP)	$917	$1,269	$827
Total population	31,190,843	8,128,553	10,300,000
Life expectancy			
1990	62	50	54
2002	47	44	39
Adult HIV/AIDS prevalence rate*	6.7%	5.1%	16.5%
Number of adults with HIV/AIDS	982,685	199,279	830,000
Adult PLWHAs as a percentage of overall country population	3%	2%	8%
Number of adult women with HIV/AIDS	515,987	130,000	470,000
Adult women as a proportion of all adult PLWHAs	53%	65%	57%
Number of children with HIV (0-14 years)	100,000	22,000	90,000

Source: Country NHA reports.

***** Adult HIV prevalence rate is calculated by dividing the number of adults (age 15-49) living with HIV at the end of a given year by the total adult population for that given year (UNAIDS, 2004)

Given the impact of HIV/AIDS on all aspects of society, local policymaker and donor response has been multisectoral in nature and is now quite aggressive in its approach. Following the movement crystallized at the 2002 World AIDS conference in Barcelona, stakeholder strategy for fighting HIV/AIDS has become an 'emergency response' of sorts, shifting from an emphasis on prevention to one on treatment. The 2002 HIV/AIDS subaccount findings reflect the period prior to this shift in strategy.

1.3.2 HIV/AIDS Subaccounts in Kenya, Rwanda, and Zambia

Rwanda was the first country in sub-Saharan Africa to implement a NHA HIV/AIDS subaccount estimation, for 1998. The country has done two subsequent subaccounts, for the years 2000 and 2002.[6] Kenya and Zambia also have completed subaccount estimations for the year 2002. All three countries conducted their subaccount estimations concurrently with general NHA exercises and with support from the USAID/PHR*plus* project.

The subaccounts were also done in anticipation of the new flows of funds from donors such as the Global Fund, PEPFAR, and the World Bank's Multi-country HIV/AIDS Program (MAP) for Africa, most of which began disbursements in 2003. All three countries eventually became recipients of new large donor grants. The countries undertook subaccount estimations to establish a baseline dataset against which future HIV/AIDS resource flows can be compared. Also, the subaccounts aimed to give policymakers a picture of the financial status of their HIV/AIDS delivery systems and the systems' strengths and weaknesses prior to the scaling up of programs and interventions. It should be noted that in 2002 the principal HIV/AIDS services consisted of those associated with health interventions and were largely restricted to the treatment of opportunistic infections.

[6] Note, Rwanda and Zambia's FY coincides with the calendar year. Kenya's FY 2002 was 1 July 2001–30 June 2002.

1.4 Objectives of this Paper

This study compares the 2002 baseline datasets of Kenya, Rwanda, and Zambia. Given the nature of the response to HIV/AIDS at that time, this analysis focuses on HIV/AIDS health-related expenditures.

The objectives of the comparative analysis and this paper are twofold, namely to:

1. Discuss financial patterns of spending in three sub-Saharan African countries prior to the influx of large donor grants for HIV/AIDS; and
2. Illustrate the utility of HIV/AIDS expenditure data for monitoring and planning purposes of donors and national stakeholders.

1.5 Organization of the Report

Chapter 2 outlines the methodological approach used in for the comparative analysis. Chapter 3 presents comparative findings from the 2002 HIV/AIDS subaccounts and examines 1) overall HIV/AIDS resource envelopes, 2) the types of activities financed, 3) their beneficiaries, and 4) the mechanisms used to pay and deliver HIV/AIDS health care. Chapter 4 then examines the utility of subaccount findings in informing priority areas of donors and national stakeholders. Concluding remarks are offered in Chapter 5.

2. Methodology

2.1 Country Subaccount Approach

This paper compares findings from NHA exercises conducted in Kenya, Rwanda, and Zambia. It relies on the final versions of the country NHA tables and associated PLWHA survey datasets for the 2002 national estimations. In a few cases, its estimates do not match those in the country reports; this is due to subsequent adjustments and revisions to the data.[7]

Led by their countries' Ministries of Health (in Zambia, by the Central Board of Health), the subaccounts were implemented within the context of general NHA initiatives that complied with the framework described in the *Guide to producing national health accounts; with special application for low-income and middle-income countries* (WHO, World Bank, and USAID 2003). The extension of this framework to monitor national HIV/AIDS spending is described in a USAID/PHR*plus* publication entitled *Methodological Guidelines for Conducting a National Health Accounts subanalysis for HIV/AIDS* (De et al., 2004).

Briefly, NHA subaccounts in each country "piggy-backed" onto the data collection and analysis efforts for the general NHA estimation of overall health care expenditures. HIV/AIDS expenditure questions were added to ongoing general NHA surveys that targeted international organizations, employers, insurance firms, and providers. Additionally, to determine out-of-pocket (OOP) spending by PLWHA, each HIV/AIDS subaccount effort included a separate survey, administered by medical professionals to confirmed HIV-positive adults. Questions asked on this PLWHA survey principally concerned spending patterns at health providers for inpatient (IP) and outpatient (OP) care.

2.2 Data Collection

The NHA exercises relied on a combination of secondary and primary data that are listed in Table 2.1:

[7] It was felt that, for Zambia, the targeted-PLWHA survey, which interviewed *confirmed* HIV-positive patients, yielded a more accurate estimate of out-of-pocket spending at traditional healers than did the traditional healer survey, used for the country report, because these practitioners did not know whether their patients were indeed positive. For Kenya, the PLWHA survey was re-weighted using 2001/2002 population estimates rather than 2003 estimates used in the original report.

Table 2.1: Data used in 2002 HIV/AIDS Subaccounts

Type of Data	Kenya	Rwanda	Zambia
Primary data sources			
Donor survey	√	√	√
NGO survey	√	√	√
Government institutions (incl. subnational levels) survey*	√	√	√
Employer survey	√	√	√
Insurance survey	√	√	√
PLWHA survey	√	√	√
Hospital survey	√ (Combined survey instrument)	√	√ (Combined survey instrument)
Health center survey		√	
Private practitioner survey		√	
Pharmaceutical survey		√	√
Traditional healer survey	√		√
Main secondary data sources			
Government executed budgets	√ (For FY2002)	√ (for 2002)	√ (for 2002)
General household survey reports	√ *Household Health Expenditure and Utilization Report 2003* (Ministry of Health)	√ Incl. *Integrated Household Living Conditions Survey in Rwanda 2000-2001*	
Demographic and Health Survey (DHS) report	√ *DHS+ 2003*. Central Bureau of Statistics	√ *DHS 2000.* National Population Office (ONAPO)	√ *DHS+ 2002* Central Statistics Office
Health information system		√	√
Donor mapping reports	√	√	

* Typical government entities from which data was collected include Ministries of Health, Education, Local Government, and Defense, and provincial and district health bureaus.

By using so many different data sources, every effort was made to triangulate expenditure estimates and to verify each estimate from at least two different sources. In some cases, however, triangulation was impossible due to the paucity of available data. For example, in Zambia, the NGO survey response rate was low but, in the absence of other information on NGO spending, the survey findings had to be used. This has implications for the subaccount findings, particularly with respect to NGO programmatic spending on HIV/AIDS; i.e., the reported findings for this category are likely to be an underestimation. Extrapolation of NGO survey data to the national level was challenging because the exact number of NGOs in Zambia is not known (despite attempts made by the Ministry of Health to find this information); survey findings were weighted to a roughly estimated 600 NGOs that provide health care services. Given the comprehensive nature of an HIV/AIDS subaccount, it is understandable that when undertaken in a resource and data-poor country, expenditure estimates will rely on data where available but in their absence on assumptions and estimation techniques. As the NHA infrastructure is institutionalized, these estimates will be improved in terms of accuracy and facilitate more extensive analysis.

2.2.1 Institutional Surveys

For the institutional surveys (namely those cited above except the survey targeting PLWHA), the questionnaires were either delivered and explained to respondents in person or sent by mail. Following this, NHA team members made several follow-up calls and visits to explain and answer any queries concerning the survey instruments. Respondents tended to be the accountants or financial managers of the target institutions. Filled-in questionnaires were emailed, faxed, or picked up by a designated NHA team member at the Ministry of Health.

The more difficult surveys to complete were those targeting international organizations. These questionnaires were rarely completed in a timely fashion and required extensive follow-up. This was due to a number of reasons, principally 1) the lack of understanding as to how the data would be used, and 2) the extent to which the organizations were required to document expenditures on expatriate or international consultant activities. With respect to the former reason, team members had to make sure that respondents understood that the data provided by donors and NGOs would be used in an aggregate manner and that no organization's data would be singled out and published in the report. With respect to the latter reason, as per the recommendations of the *Producers' Guide* and also due to a reluctance to offer data on expatriate and international consultant expenses, spending on, say, travel costs for an international consultant to fly from Europe to Kenya, Rwanda, or Zambia to provide technical assistance did not need to be included in the NHA estimations. Once such issues were understood, the returned questionnaires from international organizations proved quite useful to the HIV/AIDS subaccount estimation.

2.2.2 PLWHA Surveys

One of the main features of the three country subaccounts is their inclusion of surveys targeted to prime-age adults[8] confirmed to be living with HIV/AIDS. These targeted surveys relied on accessing PLWHA through 'key entry' points, namely at health care facilities and associations for PLWHA. Table 2.2 provides an overview of the sampling approach used in each country. For further details on the sampling frame, please see the original country NHA reports.

Table 2.2: Sampling PLWHAs in Kenya, Rwanda, and Zambia

	Kenya	Rwanda	Zambia
Sample size	1,900	700	1,293
Sampling frames/key entry points to respondents	▲ HIV/AIDS support groups ▲ Inpatients at hospitals ▲ TB clinics at hospitals	▲ ARV users ▲ Health centers ▲ PLWHA association members ▲ Hospitals ▲ Private clinic users	▲ Health facilities ▲ Home-based care users ▲ VCT (voluntary counseling and testing) centers

[8] Defined for purposes of this study to be age 15-49 years (UNAIDS, 2004). Due to ethical and confidentiality reasons, children were not interviewed.

The advantages of the targeted survey approach are that it allowed for the inclusion of respondents who have been tested positive for HIV, and was a cost-effective way to obtain data from PLWHA other than implementing a general randomized household survey with biomarkers.

However, this approach has certain limitations and biases. Findings are representative only of the subpopulations that frequent the key entry points, i.e., those who seek care in the formal health care system (thus perhaps resulting in underestimation of expenditures incurred in the informal sector, including at traditional healers), and who tend to have greater access to care and education.

In addition, because at the time of the surveys CD4 counts were not readily available from patient records or rosters in the study countries, a cross-section of the adult PLWHA population at various stages of disease progression could not be sampled. Due to the tendency for PLWHA to seek HIV testing after the onset of symptoms or emergence of opportunistic infections, respondents to the survey 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).[9]

Thus, the extent to which the results can be generalized to the rest of the population is variable and simple extrapolation of survey findings using national adult prevalence data would lead to biased results.[10] Consequently, when determining *national*-level OOP expenditures, survey data were adjusted based on assumptions of the PLWHA population's stage of disease profile in each country.[11] While overall spending by the PLWHA population was estimated using this approach, a similar approach was not feasible when examining expenditures by PLWHA in terms of gender, region of residence (urban/rural), and income level – principally because the stage of disease profile is not known for each of these groupings in the three countries. Therefore, it should be noted that in its description of overall national-level PLWHA OOP spending, the report refers to 'adjusted' survey results. When the report discusses OOP spending by gender, region, and income, these findings are 'unadjusted' and reflect expenditure patterns of symptomatic adult PLWHAs.

The targeted surveys were also limited in their ability to provide information on utilization of care by provider type. Because respondents were selected from various provider entry points, the sample is biased toward use at those health facilities.[12] Consequently, this report does not report on patterns of use of health care by provider type.

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[9] The HIV/AIDS treatment costing study in Mexico found that average cost of treating patients with CD4 counts below 200 cells/mm^3 is approximately 30 percent higher than 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."

[10] Including expenditure questions on "DHS+" sero-prevalence surveys would overcome many of the sampling difficulties and thus could yield more accurate results.

[11] 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 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-positive population are at Stage 1, 49 percent at Stage 2, 25 percent at Stage 3, 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 Stages 1 and 2 comprise 65-70 percent, Stage 3 10-20 percent, and Stage 4 10-15 percent.

[12] PLWHA OOP estimation is best served by adding expenditure questions to national random-sampled household surveys that also include biomarkers for HIV, e.g., the DHS+.

To determine income levels of PLWHA respondents, the surveys asked asset-based questions, in accordance with the approach taken by the DHS. With the exception of Kenya, monetary-based income questions were not asked because respondents were not necessarily the head of household and, given previous household survey experience (in the region), it was anticipated that they would be reluctant to disclose monthly income amounts due to concerns that such information may be used for tax purposes or that respondents would simply not have any monetary income to report. The asset-based approach produced mixed results. In some cases, reported assets did not provide clear distinctions between quintile levels. In others, due to the sample size and a need for highly disaggregated data, investigators would find only a few responses, not enough to be nationally representative, for a given quintile's spending on a specific category, such as on IP care at private facilities. Also, a comparison of wealth indices characterized by monetary income versus non-financial forms in the Kenya dataset showed strikingly different results. For example, quintiles determined by non-monetary means showed an unanticipated decrease in utilization at higher income quintiles. However, when characterized by monetary income responses, a strong positive correlation was shown between income and use. Thus, it is possible that money is a more influential determinant of health care utilization than non-monetary standard of living. So, for the most part, this paper does not delve into quintile analyses *unless* the results are statistically viable.

2.3 Time Frame

The studies estimated health expenditures for FY 2002. As noted previously, in Rwanda and Zambia, FY 2002 coincided with calendar year 2002. In Kenya, FY 2002 was 1 July 2001–30 June 2002.

2.4 Boundaries

In terms of scope, the subaccounts focused principally on *health* expenditure information on HIV/AIDS. Because they were conducted prior to the heavy targeting of funds of HIV/AIDS, non-health HIV/AIDS activities, such as advocacy, in-kind and monetary assistance to orphans and vulnerable children, were not widely prevalent. Consequently, unless otherwise specified this report limits its discussion to $THE_{HIV/AIDS}$.

The following definition of HIV/AIDS expenditures (from De et al., 2004) served as the guiding principle for determining the scope or boundary of the subaccounts:

> Spending on those activities that are 1) primarily intended to have impact on the health status of people living with HIV/AIDS in a given period of time, and 2) intended to prevent the spread of HIV/AIDS, which may target the population at large (e.g., recipients of condom distribution programs intended to curb the spread of HIV/AIDS.

When determining whether or not an expense should be included in the subaccount, study investigators assessed the functional nature of the expense first and foremost and not necessarily the provider/institution making the expense. Therefore, 'included' HIV/AIDS health expenditures accounted for HIV spending by not only the Ministry of Health but by other non-health entities as well, such as the Ministry of Justice, which may spend on HIV activities targeted to prison inmates.

As HIV/AIDS care in 2002 in the three study countries principally consisted of treatment for opportunistic infections, the bulk of expenditure tracking was to measure these types of spending in addition to the more specific HIV services of VCT and ARVs. Because TB was one of the main

opportunistic infections associated with HIV/AIDS in these countries, its expenditures were also included in the subaccounts. However, not all TB expenses were included. Instead, country NHA teams used co-infection rates to determine the proportion of TB expenses that were incurred by HIV patients – if 40 percent of all TB patients were considered to have HIV, then 40 percent of all TB expenditures were included in the HIV/AIDS subaccounts. While this may be a crude approach, it provides for a best possible estimate given the lack of financial costing data on services targeting co-infected individuals.

Overall the three country studies captured the same types of expenditure data, thus allowing for cross-country comparison. However, it should be noted that Rwanda, in contrast to Kenya and Zambia, did not estimate HIV spending at traditional healers as the national NHA team considered this to not be a true 'health' expense.

2.5 Definitions

Some important terms used in the report are explained below:

Curative care: in health accounts this refers to IP and OP care. For the HIV/AIDS subaccounts, the term is often replaced by "treatment" because there is no existing medical cure for HIV/AIDS.

Financing agents: institutions or entities that channel the funds provided by financing sources and uses those funds to pay for, or purchase, the activities inside the health accounts boundary (*Producers' Guide* definition). According to health account norms, this dimension is abbreviated by 'HF.'

Financing sources: institutions or entities that provide funds used in the system by financing agents (*Producers' Guide* definition). According to health account norms, this dimension is abbreviated by 'FS.'

Functions: the types of goods and services provided and activities (*Producers' Guide* definition). According to health account norms, this dimension is abbreviated by 'HC.'

Non-governmental organizations: this term typically brings together a range of heterogeneous entities that can include indigenous local organizations or local representations of larger international NGOs. Sometimes referred to as implementing agencies, this category can also include faith-based groups, such as churches that may contribute to health care or run their own health centers.

Providers: entities that receive money in exchange for or in anticipation of producing the activities inside the health accounts boundary (*Producers' Guide* definition). According to health account norms, this dimension is abbreviated by 'HP'.

Prevention and public health programs: This term, used by the international classification of health accounts, refers to those "services designed to enhance the health status of the population as distinct from the curative services, which repair health dysfunction. Typical services are vaccination campaigns and programs" (Organization of Economic Cooperation and Development [OECD], 2000) Note the inclusion of the word "program"; this refers to services offered at the *collective* level and not through personal medical care obtained at facilities as part of an IP/OP visit. Thus, if a patient receives an HIV test as part of an OP visit to a clinic, this is excluded from the category of "prevention and public health program" and embedded within the "curative care" classification. However, programmatic activities relating to VCT would be included, such as administration,

technical support, monitoring, raising public awareness, and trainings. So typical HIV programs would include VCT, sexually transmitted infection (STI), and prevention of mother-to-child transmission (PMTCT) programs.

Subaccounts: previously referred to as a "subanalysis," the subaccount follows the NHA framework and is a detailed expenditure review on a set of services aimed at addressing a particular disease (as defined by ICD-10) or program area, such as reproductive health.

Total Health Expenditure (THE): In the context of subaccounts, this includes HIV/AIDS spending for 1) goods and services directed at the care of individuals (personal health care), 2) collective health services for the operation of the system's financing agents, and capital formation by health care provider institutions (namely HC 1-7, HCR 1 classifications).

2.6 Currencies Used in Report

In keeping with standard international practice,[13] this report compares expenditure estimates in U.S. dollars that have been derived using the Purchasing Power Parity (PPP) method rather than by using country exchange rates. PPP conversion allows for expenditure estimates to be compared on the basis of the 'purchasing power' of national currencies, free from differences in price levels across countries. However, there are some limitations to the use of PPPs with respect to health care in particular because many key health expenses, such as pharmaceuticals and non-durables, are purchased at international market prices.

In this report, PPP estimates were determined by applying a multiplier to national expenditure estimates given in U.S. dollars (as determined from official national exchange rates). The multiplier was calculated by dividing the country GDP PPP estimate for the year 2002 by its GDP estimate in current U.S. dollar prices (International Monetary Fund, 2005). The multipliers for each country are listed in Table 3.3.

Table 2.3: PPP Multipliers Used in Comparative Analysis

Kenya	Rwanda	Zambia
2.4	6.0	2.3

In addition to cross-country analysis of expenditures, this report discusses observations of spending patterns over time in the case of Rwanda. This is the only country in Africa to have comparable time-series data on HIV/AIDS expenditure, namely for 2000 and 2002. This information is presented in constant dollars to adjust for the effects of inflation.

[13] As conducted by the World Bank, OECD, and WHO.

3. Findings of Comparative Analysis

This chapter examines the 2002 HIV/AIDS subaccounts' findings in Kenya, Rwanda, and Zambia at the various levels in the flow of funds through the health sector, namely 1) the overall HIV/AIDS resource envelope, 2) the types of activities financed, 3) their beneficiaries, and 4) the mechanisms used to pay and deliver HIV/AIDS health care. In a nutshell, the comparison aims to shed light on the financing patterns related to the key policy questions outlined in Chapter 1, namely:

- What is the total resource envelope for the fight against HIV/AIDS?
- Where is the money for HIV/AIDS coming from: public, private and donors?
- What is the burden on PLWHA?
- What entities are managing HIV/AIDS resources?
- What providers receive HIV funds to deliver care?
- How are HIV/AIDS funds being used? For what services? Are they meeting their intended targets?
- Are new donor funds serving as "additional" sources of funds in the fight against HIV/AIDS? (this will be addressed in Chapter 4)

3.1 Resource Envelope for HIV/AIDS

Estimations for each country study reflect a period prior to the heavy targeting of funds for HIV/AIDS. Despite this, spending on HIV/AIDS health care consumed 1-2 percent of country GDP. This is significant considering that health spending overall accounted only for 4-5 percent of GDP. When placed in the context of overall health expenditures, HIV/AIDS shares ranged from 15 percent to a sizeable 40 percent (Table 3.1). While this may seem wide-ranging, for each country, interestingly, these expenditure proportions consistently coincided with approximately three times the value of national prevalence rates.

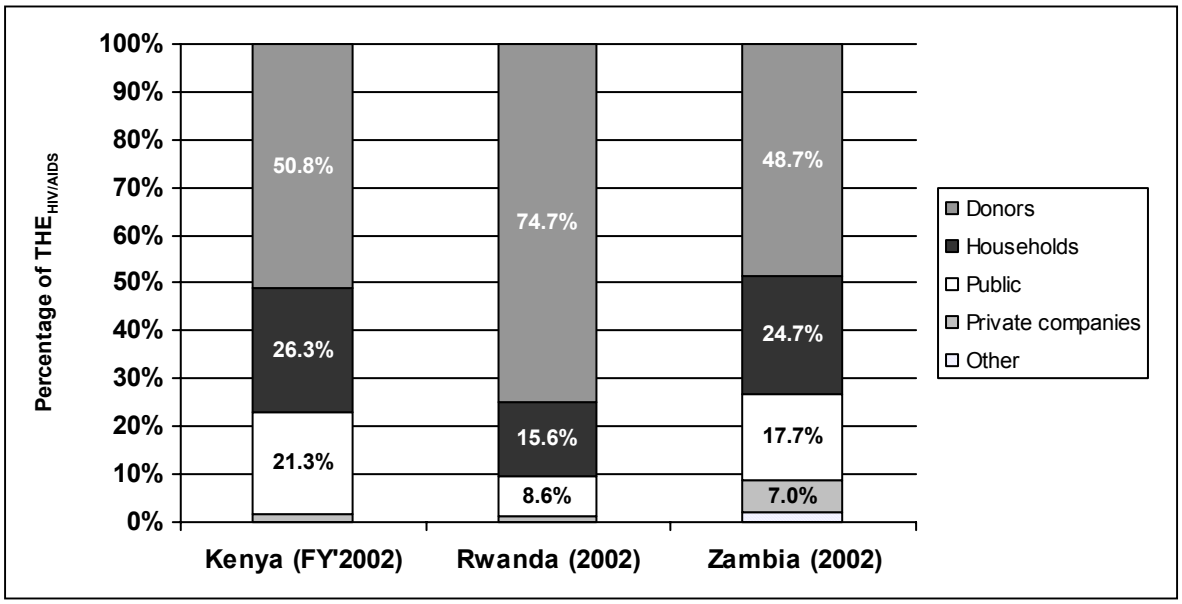
Table 3.1: Resource Envelope for HIV/AIDS Care, FY 2002

Indicators	Kenya	Rwanda	Zambia
$THE_{HIV/AIDS}$ in PPPs	$253,684,635	$61,943,730	$166,859,229
$THE_{HIV/AIDS}$ as a percentage of GDP	0.9%	0.6%	2.0%
THE as a percentage of GDP	5.1%	4.1%	4.8%
$THE_{HIV/AIDS}$ as a percentage of **overall** THE	17%	15%	40%
$THE_{HIV/AIDS}$ as a percentage of overall THE: HIV/AIDS prevalence rates	2.60	2.88	2.45

3.1.1 Contributors to the Resource Envelope

Further examination of the HIV/AIDS resource envelopes in Kenya, Rwanda, and Zambia revealed that in 2002, the principal financiers were donors, followed by households and, lastly, public[14] entities (see Figure 3.1).

Figure 3.1: Who Pays for HIV/AIDS Health Care?



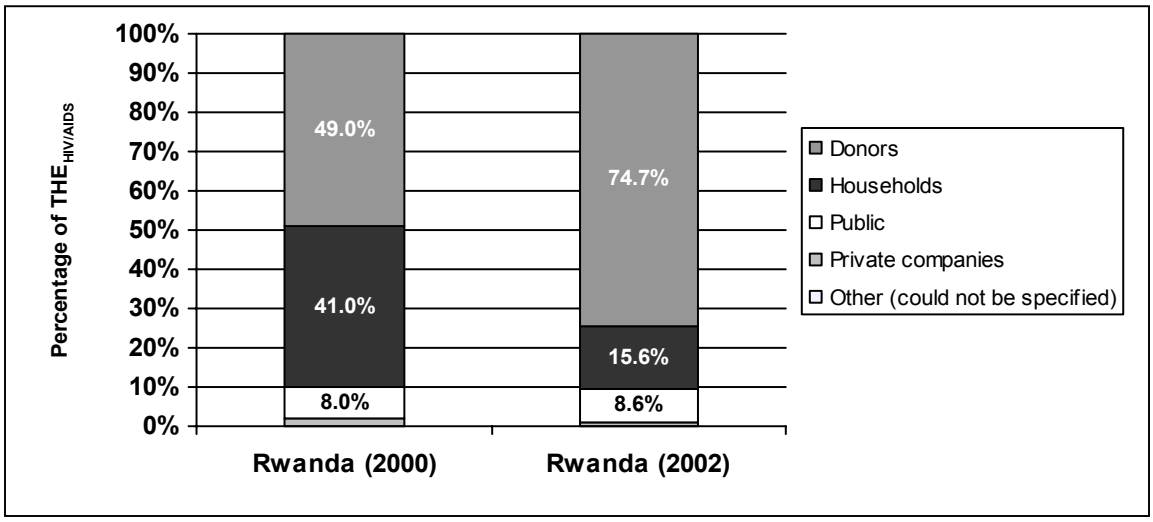
In all three countries, donors contributed the largest share of resources, in Rwanda accounting for three-quarters of HIV/AIDS expenditures, and in Kenya and Zambia approximately half. This share is considerably larger than the donors' shares of THE, to which they contribute between 16 percent and 37 percent. So, in 2002, there was considerably more dependence on donor financing for HIV/AIDS health care than for overall health care. With donor funding likely to increase in subsequent years due to the influx of large grants targeting HIV/AIDS, these NHA findings raise concern about the long-term sustainability of such financing 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, Overseas Development Initiative 2005). Should donor contributions to HIV/AIDS health care be withdrawn or dramatically reduced, country governments would need to increase their shares at least twofold in Kenya, eightfold in Rwanda, and threefold in Zambia to just maintain resource levels of the "pre-Global Fund" era (when, for the most part, donor expenditures did not include the subsidization of ARVs). As governments have many competing priorities, such a large increase in contribution is unlikely. The danger is that the burden of financing may, by default, shift to households, which, on average, already contribute more than their governments and account for close to a quarter of all HIV/AIDS spending. Such a shift can result in further inequities and more likely a

[14] Note, at the financing source level, the term "public" refers to only those funds derived from the central treasury and does not include funds contributed by donors directly to the Ministry of Health. Such funds are included under the "donor" financier category.

reduction of service utilization, which can adversely affect adherence to HIV treatment.[15] Thus, at minimum, efforts should be made to decrease the unpredictability of donor funds. Further examination of the sustainability issue is presented in Chapter 4.

The availability of time-series data in Rwanda allows for examination of the evolution of HIV/AIDS financing (see Figure 3.2). In terms of their relative contributions, donor spending increased sizably from 2000 to 2002, while the government contribution remained relatively stable, and the household share actually decreased. In absolute terms, comparisons of spending estimates over the same two-year period paint a slightly different picture. In contrast to its relative share of the $THE_{HIV/AIDS,}$ government expenditure per PLWHA almost doubled, in constant dollars. Household spending in absolute terms did continue to decrease, most likely due in part to the sharp fall of ARV drug prices that were financed mainly through OOP expenditures; nevertheless, the decrease was not as large as it seemed from the relative shares shown in Figure 3.2.

Figure 3.2: HIV/AIDS Financiers in Rwanda, 2000 and 2002



* All expenditures for 2000 are in constant 2002 RWF, converted using the Consumer Price Index (93.1 for 2000).
Source for CPI data: Ministry of Finance and Economic Planning and International Monetary Fund

3.1.2 Contributions to HIV in the Context of Overall Health

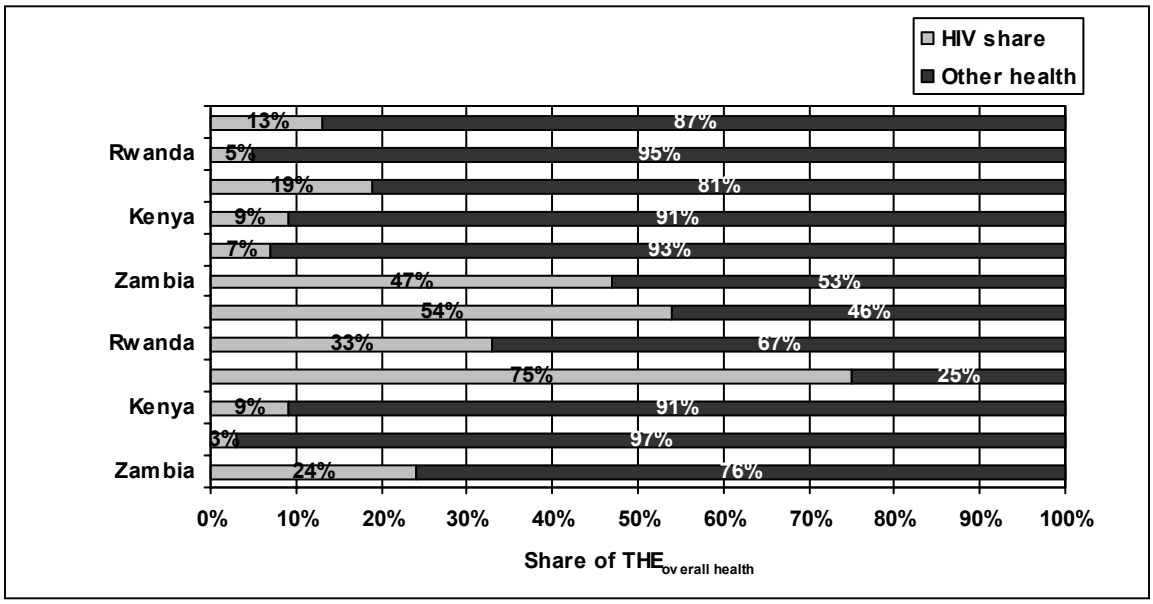
The relative priority of HIV/AIDS for each of the principal financiers is illustrated in Figure 3.3. The figure places HIV/AIDS contributions within the context of overall health expenditures. In 2002, HIV contributions accounted for 33 percent of all donor health funds in Rwanda, 54 percent in Kenya, and a staggering 75 percent in Zambia. Such a strong donor emphasis on HIV/AIDS, even prior to the large donor grant era, raises concern about the availability of donor funds needed for other critical priority areas, including malaria, the leading cause of morbidity and mortality in all three countries.

[15] Indeed, the humanitarian organization *Médecins Sans Frontieres* recently reported at the International Conference on AIDS and Sexually Transmitted Infections in Africa (ICASA) (Abuja, Nigeria; December 2005) that charging ART patients in Lagos and Kinshasa a user fee proved to be a significant barrier to accessing care and to increasing the risk of treatment failure.

The donor emphasis on HIV/AIDS contrasts with public funding for HIV/AIDS-related care, which accounted for 13 percent, 5 percent, and 19 percent of all public health[16] funds in Kenya, Rwanda, and Zambia respectively.

The burden of HIV/AIDS financing among households is quite significant when considering the size of adult PLWHA populations in each country. In Kenya, adult PLWHAs accounted for 3 percent of the population in 2002 yet incurred 9 percent of all OOP health expenditures. In Rwanda, PLWHAs, who represented 2 percent of the population, paid 7 percent of OOP health expenditures. In Zambia, the difference was most striking as PLWHAs, representing 8 percent of the population, incurred 47 percent of all OOP health expenditures. In short, PLWHA incur a share of health expenditures that is disproportionate to the share of the population that they represent.

Figure 3.3: Relative Priority of HIV/AIDS among Health Financiers



*Other health refers to all non-HIV/AIDS *health care*, including services for reproductive health, malaria, TB, respiratory infections and so forth.

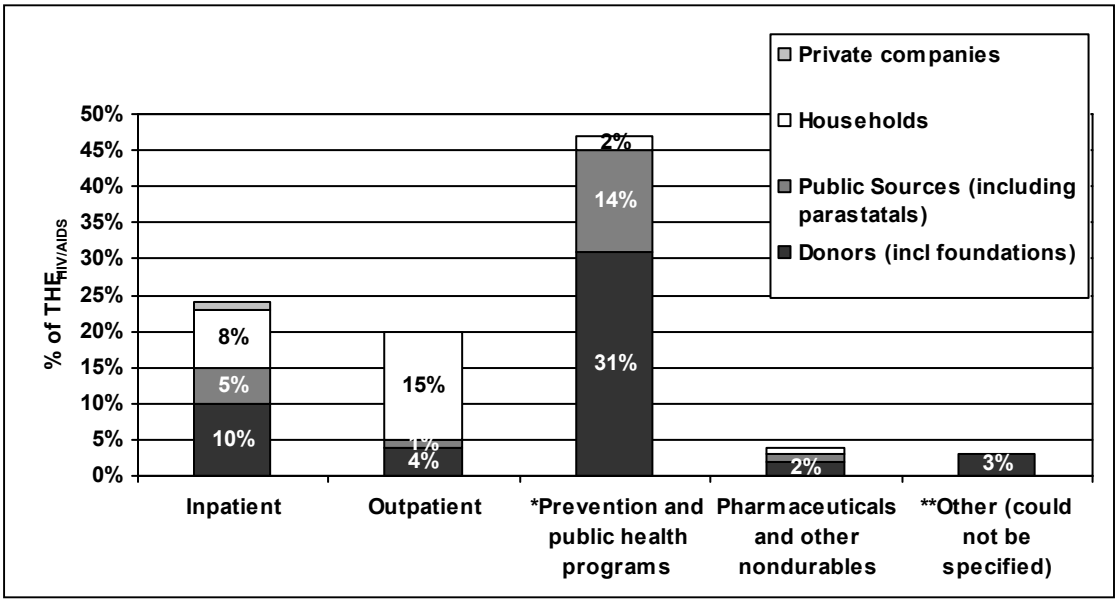
3.1.3 Activities Financed with HIV/AIDS Funds

Figures 3.4-3.6 illustrate the use of HIV/AIDS funds in each country. As discussed above, donors were the principal financiers of HIV/AIDS health care in 2002, and, generally, their funds went largely toward programmatic activities (prevention, awareness, and public health related to HIV/AIDS) rather than toward "curative" (i.e., medical) care. (This was not the case in Zambia, possibly due to poor NGO survey response.) Public funds also went largely to programmatic activities. As a result, households on average financed (principally out of pocket) close to half of all medical care (IP and OP) expenses (44.6 percent). Time-series examination from Rwanda (Figure 3.5) shows that the household share of curative care expenses decreased from 71 percent in 2000 to 56

[16] Please see Chapter 2 (Methodology) for what is included in "public health." Essentially, this refers to programmatic spending on predominately prevention *programs*, including activities such as administration, technical support, monitoring, and raising public awareness.

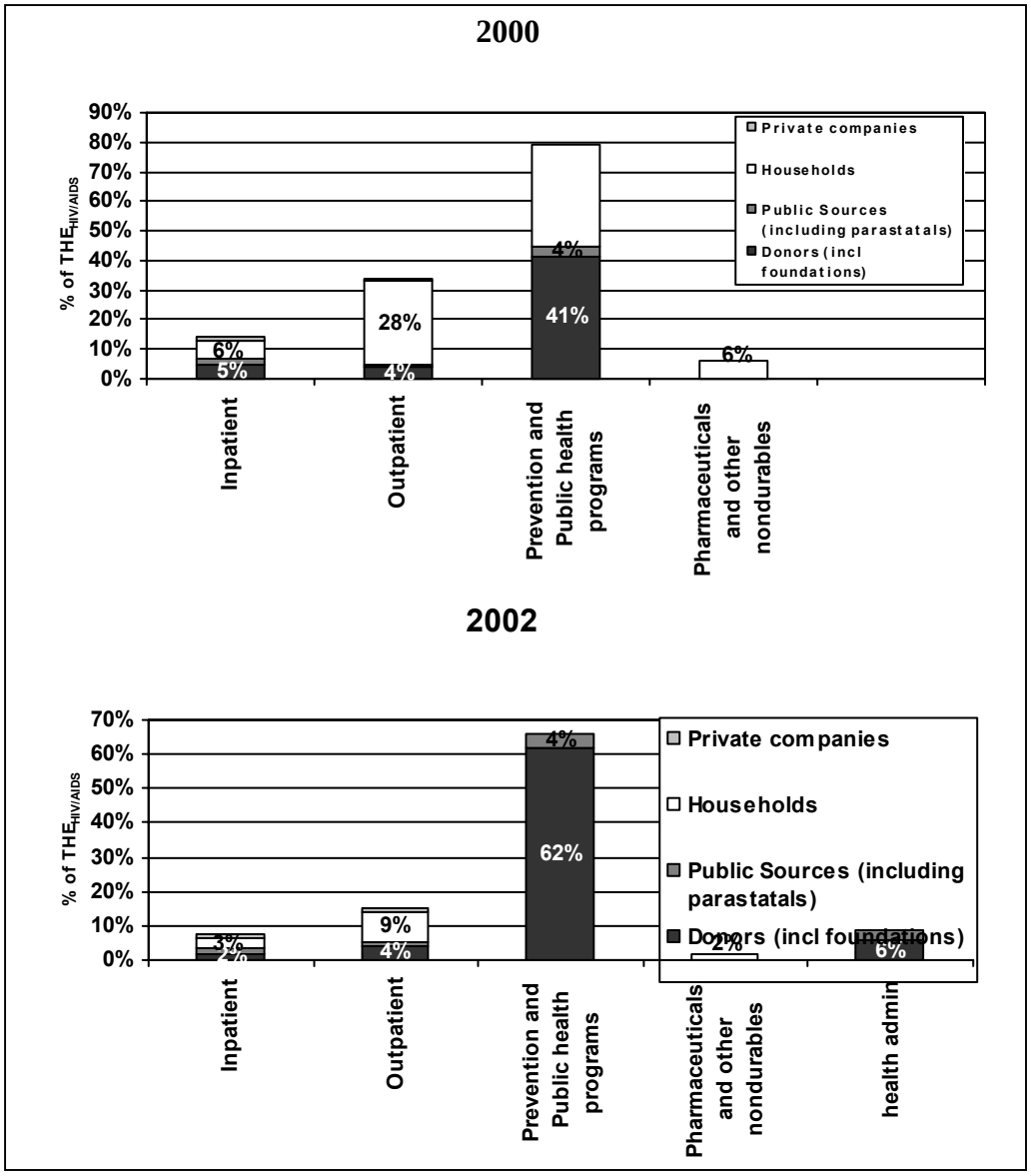
percent in 2002. This was due principally to an increase in contribution (in absolute and relative terms) from public and donor sources. It is encouraging that donors have increased their support for curative care. Still, the fact that households accounted for more than half of all HIV/AIDS curative care expenses in Rwanda in 2002 and donor funds were largely targeted for programmatic expenditures raises the issue as to whether the current mix of government and donor financing on prevention versus curative services is optimal. In subsequent years, it is expected that the pattern of financing will shift as donors begin to finance ARV treatment.

Figure 3.4: FS x HC – Kenya



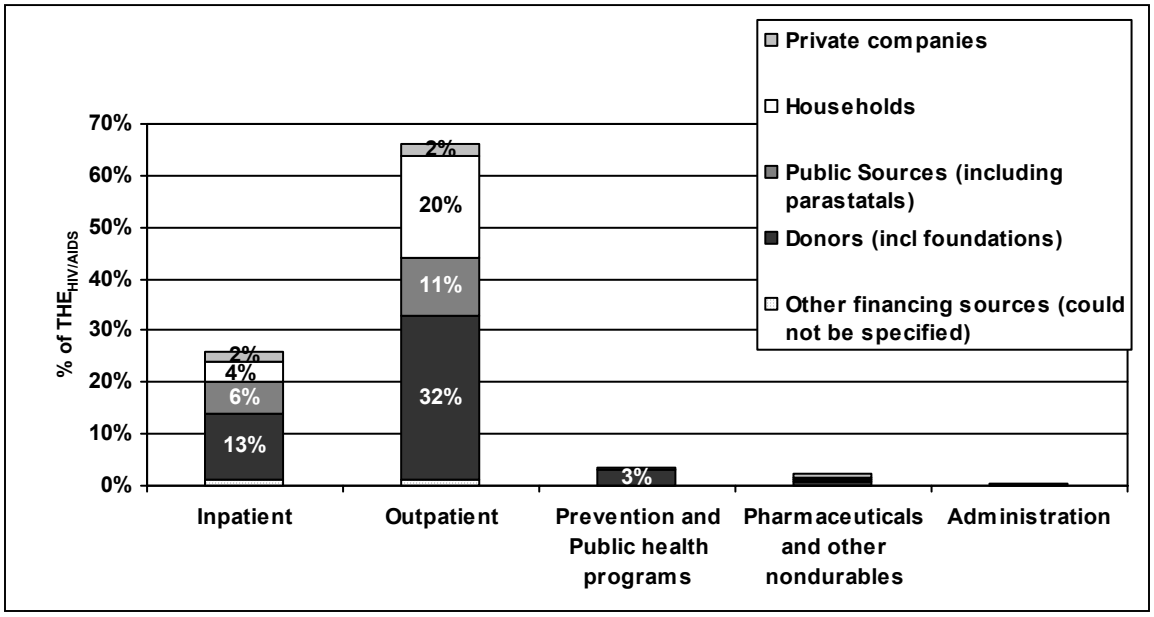
*'Prevention and public health programs' refers to services offered at the collective level. It refers to *programmatic* spending, such including program administration, technical support, raising public awareness, training etc.
** 'Other' in this case includes expenditures that could not be further specified and general health administrative costs

Figure 3.5: FS x HC – Rwanda, 2000 and 2002



*'Prevention and public health programs' refers to services offered at the collective level. It refers to *programmatic* spending, such including program administration, technical support, raising public awareness, training etc.

Figure 3.6: FS x HC – Zambia



*'Prevention and public health programs' refers to services offered at the collective level. It refers to *programmatic* spending, such including program administration, technical support, raising public awareness, training etc.

A breakdown of curative care (Figures 3.4-3.6) shows that households in each of the three countries consistently spent more (2-5 times more) on OP care than on IP care. Their contribution to OP care was substantial; as shown in Table 3.2, on average, households financed more than half (55 percent) (making them the largest financier of OP care). While less than their share of expenditures on OP care, their expenditures on IP care also was appreciable, 31 percent. Donors incurred the largest share of IP expenses (43 percent). The public share of financing was, on average, the lowest of the three big financiers for both IP and OP care, significantly less than household contributions in absolute and relative terms (approximately half of household IP contributions and one-sixth of household OP contributions). Overall, IP care is more heavily subsidized by donors and the government than is OP care. Whether or not this is an appropriate balance, again, requires further investigation. IP care is usually more expensive per episode than OP care; on the other hand, in the course of an illness, there are usually more OP visits, which can lead to larger expenditures over time. In fact, on average OP care (35 percent of $THE_{HIV/AIDS}$) incurs a larger share of total health expenditure than does IP care (19 percent of $THE_{HIV/AIDS}$).

Table 3.2 Average Share of Contribution to Curative Care

Financing Sources	Inpatient	Outpatient
Households	31.2%	54.6%
Government	19.4%	9.7%
Donors	42.6%	32.2%
Private companies	5.8%	3.0%
Other	1.0%	0.6%
Total	100%	100%

* Average of shares from Kenya, Rwanda, and Zambia.

3.1.4 National OOP Expenditures

The bulk (92 percent on average) of household expenditures for HIV/AIDS was direct OOP payments to providers (as opposed to indirect payments made through risk protection mechanisms, namely insurance schemes). Comparisons of OOP spending of PLWHA versus the general population show considerable pressures for PLWHAs to pay for medical care (see Table 3.3). HIV-positive individuals paid approximately 3-6 times more out of pocket for health care compared to the general population. In Rwanda, OOP spending on health care (Republic of Rwanda, 2002) generally accounts for 4 percent of mean non-food expenditure per adult equivalent whereas it accounts for 15 percent per HIV-positive individual.

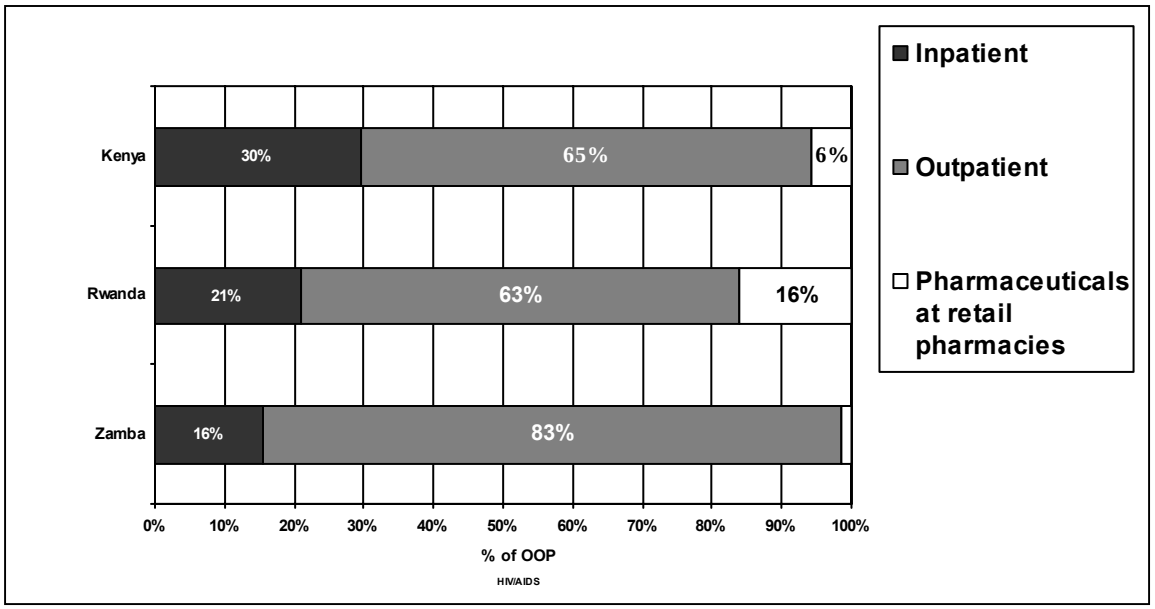
Table 3.3: Differences in OOP Spending on Health Care, PLWHAs and General Population

Indicator	Kenya (FY'02)	Rwanda (2002)	Zambia (2002)
Annual $OOP_{HIV/AIDS}$ per adult PLWHA (in PPPs)	**$54.98**	**$45.59**	**$49.61**
Annual $OOP_{HIV/AIDS}$ on IP care/ PLWHA (in PPPs)	$16.25	$9.48	$7.72
Annual $OOP_{HIV/AIDS}$ on OP care/ PLWHA (in PPPs)	$38.74	$28.93	$41.89
Annual $OOP_{general\ health}$ per capita (in PPPs)	**$20.94**	**$12.79**	**$8.48**
Magnitude of increase in OOP spending by PLWHAs	2.6	3.6	5.9

As mentioned earlier, PLWHA OOP spending is largely on OP care (63-83 percent of $OOP_{HIV/AIDS;}$ see Figure 3.7). This may be due in part to utilization patterns stemming from:

- The nature of symptoms endured by PLWHA population, due to their stage of disease,
- The cost of health care (OP care is cheaper than IP care per visit/admission), and
- The extent to which care is subsidized (public versus private).

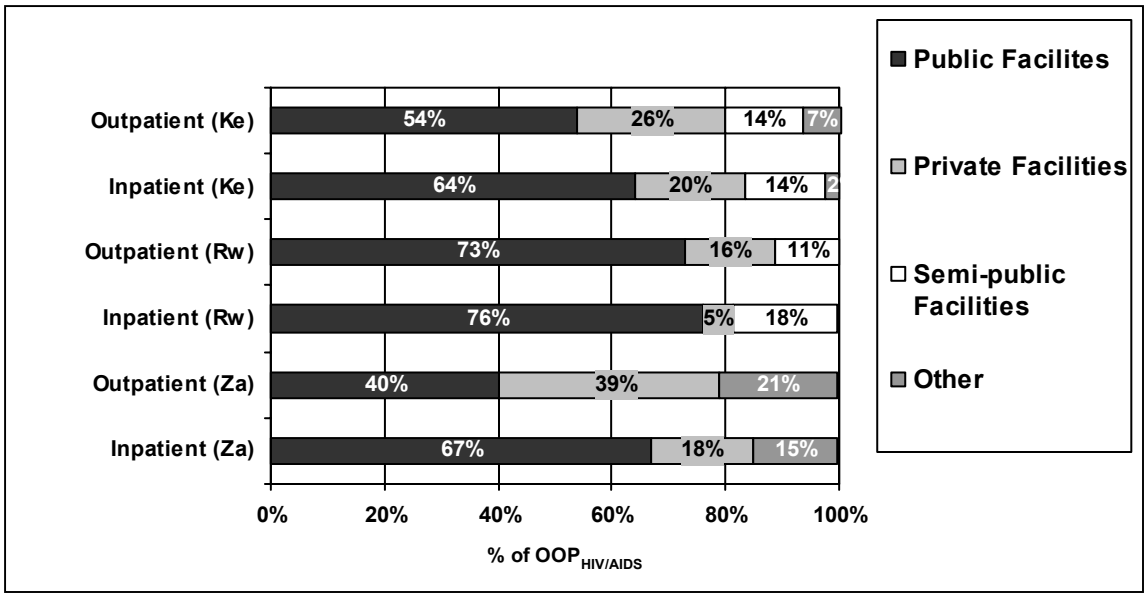
Figure 3.7: Breakdown of OOP Spending by PLWHAs



When considering the stage-of-disease profile of the PLWHA population in the three countries,[17] it is estimated that the majority of the population (approximately 65-75 percent) fall into Stages 1 or 2, which are characterized respectively as asymptomatic and symptomatic, but both allowing for normal activity. The rest of the population falls into Stages 3 or 4, which means they are bedridden during the day. With most people in Stages 1 or 2, it can be expected that the majority of the population ordinarily *need* and seek more OP services than IP care.

As episodes of IP care generally require greater OOP payments, PLWHAs may also be seek more OP care simply because they cannot afford to be hospitalized. Further research would be needed to determine if this is indeed the case. However, Figure 3.8 confirms that cost may be a factor in utilization of IP care, and it shows that for IP services, patients are more likely to switch from private providers to public ones, where care is partially subsidized.

Figure 3.8: Breakdown of PLWHA OOP Spending by Ownership of Provider

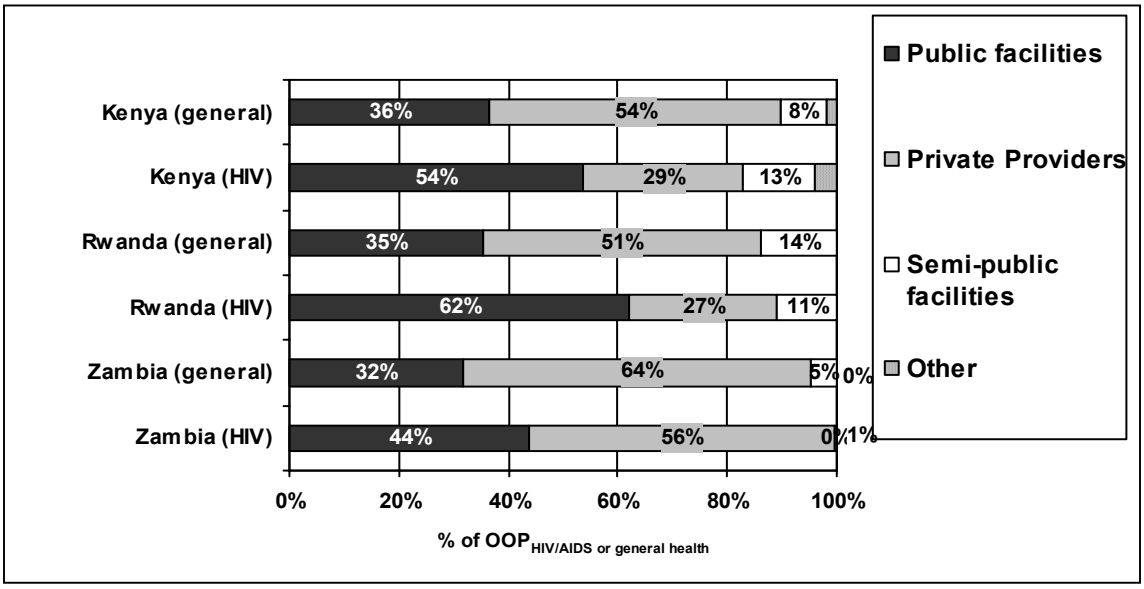


*In this figure, 'other' refers to providers not clearly specified by respondents in PLWHA survey and traditional healers (for Kenya and Zambia)

A general PLWHA preference for spending at subsidized facilities is illustrated in the context of OOP spending by the general population. As shown in Figure 3.9, in Rwanda, 49 percent of general OOP expenditures occurred at providers that are public and semi-public (NGO/church-based facilities that may receive some funding from the government); among PLWHA, 73 percent of OOP spending took place at subsidized facilities. In Kenya, a similar pattern was observed; 44 percent of the general population spent their health funds at public and semi-public providers whereas 67 percent of PLWHA did so. In Zambia, the respective percentages were 37 percent and 44 percent. This shift to public provision is less than that seen in other countries and may reflect a preference by households and PLWHA to seek traditional healer services, where payments can be made in-kind. With a sizeable 40,000 registered traditional healers in the country,[18] the Zambia NHA study estimated that approximately 60 percent of general OOP spending and 19 percent of PLWHA OOP spending occurred at traditional healers.

[17] This was calculated using the approach outlined in Annex A.
[18] As reported by the Traditional Healers Practitioners Association of Zambia.

Figure 3.9: OOP Spending by Ownership of Provider, HIV vs General Health



*In this figure, 'other' refers to providers not clearly specified by respondents in PLWHA survey and traditional healers (for Kenya and Zambia)

3.2 Breakdown of OOP Spending of PLWHAs in the Late Stages of Disease

PLWHA OOP spending was principally derived from NHA surveys conducted on prime-age adults confirmed for HIV/AIDS. Respondents to such targeted surveys were typically sicker than the overall HIV-infected population. This is because most people in the region seek testing (and therefore learn their status) only after they have symptoms. Thus, there is an inherent bias in these surveys towards *symptomatic* adult PLWHAs. This has implications for expenditures as it has been found that the more advanced the stage of illness the greater the associated treatment costs (Bautista et al., 2003).[19] Therefore, when calculating national-level OOP expenditures (as described in the previous section), the PLWHA survey data were adjusted using estimates of the PLWHA population's stage-of-disease profile in each country.[20] See Annex A for an example of the approach taken to estimate the epidemiological profile of HIV/AIDS in terms of stage of disease in Rwanda (similar approaches were used for Kenya and Zambia).

The following subsections reflect *unadjusted* findings from the targeted-PLWHA survey, namely from individuals who were aware of their status and are hence most likely to be symptomatic. For these reasons, these figures should not be extrapolated for the entire population of HIV-positive individuals without proper adjustments for stage of illness. These sub-sections discuss OOP spending by gender, region (urban/rural), and income level. Because the survey sample was drawn principally

[19] See footnote 9.

[20] See footnote 11 for WHO performance scales (Stages 1–4). Based on the review of literature (see Annex A), it is estimated that over half of the PLWHA population in generalized epidemic settings are in Stages 1 and 2, the remainder in Stages 3 and 4. Actual estimates were adjusted slightly to reflect the country setting and data availability.

from *provider* rosters,[21] this inherent respondent selection bias made it difficult to conduct provider utilization analyses.

3.2.1 OOP Spending by Gender of Symptomatic Individuals

Social and biological factors result in women being disproportionately affected by the epidemic. This is evidenced from their prevalence rates: In Kenya, Rwanda, and Zambia, women account for more than half of adult PLWHA (66, 57, and 57 percent respectively). However, NHA findings show that women generally paid the same or less men for each OP visit/IP admission (see Table 3.4). This is noteworthy considering that women are bigger consumers of health care overall due to pregnancy and childbirth-related health care needs. The lower spending pattern among HIV-positive women may be reflective of their lesser utilization of health care services. Indeed. generally speaking, HIV-positive women access fewer services (in terms of number of visits and/or services per visit) or do so at a later stage of illness than men. This is thought to be due to a number of reasons that are principally associated with cost, time, and general neglect of women's health care needs: Women often lack money and focus their time on catering to the needs of husbands and other family members (International Community of Women, 2004). Moreover, family resources are nearly always devoted to caring for men in a household (WHO, 2000). It has been observed that where ART services, for example, are offered free of charge, use rates by women increase and the converse is true when financial costs are involved (International Community of Women, 2004).

Table 3.4: Gender Differences in PLWHA OOP Spending on Health Care

Indicator	Kenya (FY'02)	Rwanda (2002)	Zambia (2002)
Average male $OOP_{HIV/AIDS}$ expenditure for **OP** care per visit (PPPs)	$10.03	$26.85	$19.82
Average female $OOP_{HIV/AIDS}$ expenditure for **OP** care per visit (PPPs)	$10.14	$28.24	$14.39
Females spend X times more than men	**1.01** ^{ns}	**1.05** ^{ns}	**0.73***
Average male $OOP_{HIV/AIDS}$ expenditure for **IP** care per visit (PPPs)	$171.22	$143.15	$17.25
Average female $OOP_{HIV/AIDS}$ expenditure for **IP** care per visit (PPPs)	$192.63	$71.49	$13.03
Females spend X times more than men	**1.13** ^{ns}	**0.50** ^{ns}	**0.8***
% of adult PLWHAs who are women^{+}	65.5%	56.5%	56.6%

* p < .05 ** p < .01 *** p < .001 ns = not significant difference

$^{+}$Based on UNAIDS estimate of number of adult women PLWHAs and total number of PLWHA for the end of 2003 (country official estimates for 2002 was not available) (UNAIDS, 2004).

3.2.2 OOP Spending by Urban/Rural Residence of Symptomatic Individuals

Initially perceived to be a largely urban phenomenon, the HIV/AIDS pandemic now also threatens rural communities, particularly in sub-Saharan Africa where much of the population resides in rural areas. In Kenya and Zambia, more than 60 percent of adult PLWHAs are rural residents. Although the exact percentage is not known for Rwanda, given the similar nature of the epidemic, the

[21] It was considered unethical to interview respondents in their homes – because of the stigma associated with HIV/AIDS, family/household members may be unaware of an individual's HIV status.

same urban/rural distribution can be expected. Health facility infrastructure in rural areas is far less developed than in urban settings, particularly with respect to critical HIV/AIDS services such as counseling, testing, and treatment. There also is a more limited range of health care providers (public, private, and semi-public facilities) in rural areas, where traditional medicine may predominate.

It was anticipated that urban PLWHAs would spend more for each health care visit than their rural counterparts due to a combination of factors including higher income levels, a greater variety of providers (including more costly private providers), and easier geographic access to providers. Indeed, this pattern was observed in Rwanda and Zambia for both OP and IP services (see Table 3.5). Rural residents in these countries may either be seeking less care than urban residents and/or are seeking care at subsidized rural facilities (and thus are charged less) and at traditional healers where payments can be made in-kind. In Kenya, there was no significant difference between urban-rural expenditures for OP care. Moreover, in contrast to Rwanda and Zambia, rural Kenyan residents spend more on IP care than their urban counterparts. Closer examination of survey results showed that in Kenya rural PLWHAs largely visit urban facilities for their IP services. Perhaps due to the relatively longer distance from home for rural PLWHA, their median average length of stay in urban hospitals was greater compared to urban counterparts – hence contributing to their higher reported expenditures. Another possibility for the longer lengths of stay could be that rural residents wait until the later stages of the disease before seeking care and thus their care is more complicated, and expensive.

Table 3.5: Urban/Rural Differences in PLWHA OOP Spending on Health Care

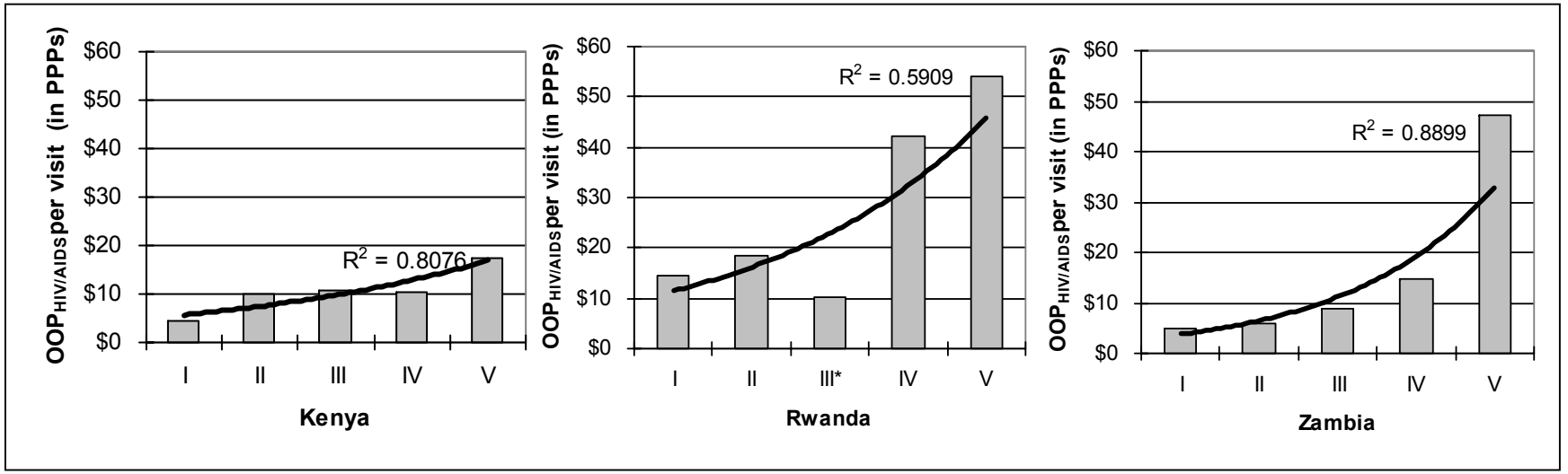
Indicator	Kenya (FY'02)	Rwanda (2002)	Zambia (2002)
Urban PLWHA $OOP_{HIV/AIDS}$ expenditure for **OP** care per visit (PPPs)	$9.76	$70.22	$20.20
Rural PLWHA $OOP_{HIV/AIDS}$ expenditure for **OP** care per visit (PPPs)	$10.40	$28.31	$9.13
Urban PLWHAs spend X times more	**0.94** ^{NS}	**2.48****	**2.21****
Urban PLWHA $OOP_{HIV/AIDS}$ expenditure for **IP** care per admission (PPPs)	$138.14	$167.20	$18.39
Rural PLWHA $OOP_{HIV/AIDS}$ expenditure for **IP** care per admission (PPPs)	$223.64	$134.98	$8.62
Urban PLWHAs spend X times more	**0.62***	**1.24** ^{NS}	**2.13*****
% of adult PLWHAs live in rural areas[+]	67%	Not known	61%

*p<0.10 ** p < .05 *** p < .01 **** p < .001 ns = not significant difference
[+] Based on Government and DHS+ estimates.

3.2.3 OOP Spending by Income Quintile of Symptomatic Individuals

In addition to gender and urban/rural differences, wealth affects OOP spending levels on HIV/AIDS health care. Socioeconomic status of PLWHA respondents were assessed through the principal components analysis approach developed by the DHS report in each country. The results of some of the quintile analyses are presented in Figure 3.10, with level 1 being the poorest and 5 being the richest. Note that due to a relatively small sample size of PLWHA inpatients and an inconsistency of the survey instruments, quintile analysis was not possible for IP expenditures.

Figure 3.10: OP OOP $_{HIV/AIDS}$ Spending by Income Quintiles



*The n for this quintile is small.

In each of the three countries, the wealthiest quintile accounted for a sizeable portion of OOP OP expenses, ranging from four to nine times the amount spent by the poorest quintile. This may be due to higher utilization and/or higher payments made per visit by wealthier individuals. Indeed, in Kenya, there is some evidence for the former explanation; comparisons of monetary-based[22] wealth indices showed that there is a strong correlation between income and use (see Table 3.6). Further research is needed to explore the barriers to care faced by the poor.

Table 3.6: Utilization of OP Services by PLWHAs in Kenya, by Wealth Levels

Wealth levels	Mean Number of OP visits
0 KSh	0.69
<10,000 KSh	1.15
10,000-34,000 KSh	1.19
35,000-80,000 KSh	1.26
>80,000 KSh	1.44

3.3 Allocating HIV/AIDS Resources to Providers and Services

3.3.1 To Which Health Care Providers are Funds Allocated?

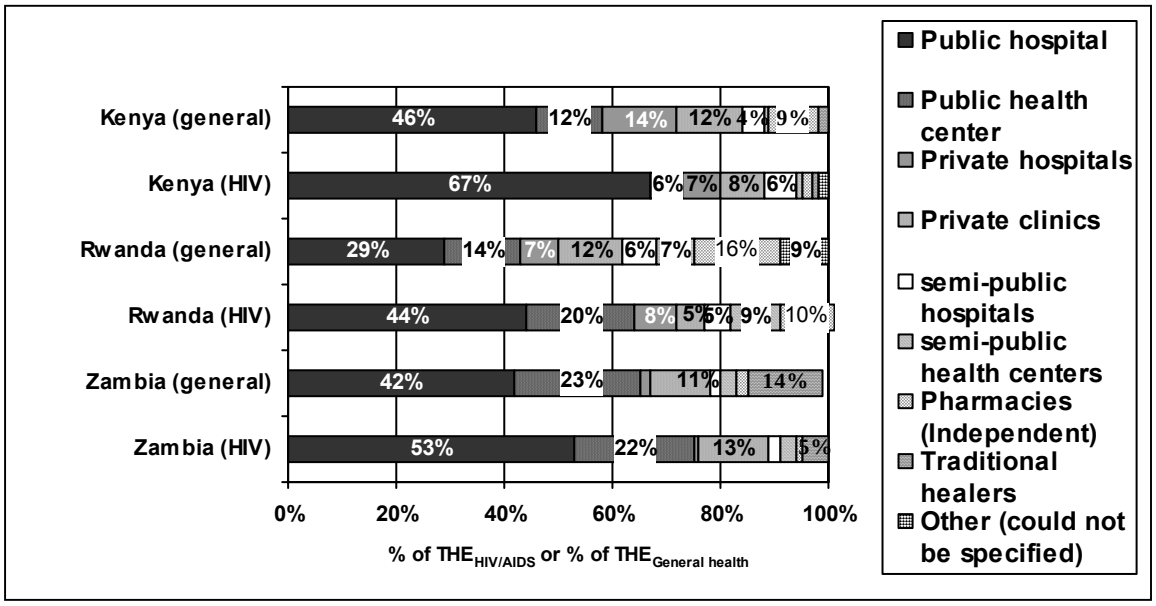
To achieve equitable distribution of health services, policymakers must make difficult choices regarding resource allocation among providers. Future allocation decisions benefit from information about where current resources are being spent. Figure 3.11 shows that a higher percentage of $THE_{HIV/AIDS}$[23] than of overall THE goes to public providers – and this largely to hospitals. For example, in Kenya, 73 percent of HIV/AIDS funds were spent at public facilities (67 percent at public hospitals, 6 percent at public health centers) versus 58 percent of general health funds (46 percent at public hospitals, 12 percent at public health centers). Similar patterns are observed in Rwanda and Zambia. Generally speaking, in all three countries, the increase of $THE_{HIV/AIDS}$ on public providers displaced $THE_{HIV/AIDS}$ on private providers.

What accounts for the shift toward public facilities? As stated earlier, it could reflect increased utilization by PLWHA as they seek more affordable, subsidized care.

[22] Note, in this case, wealth levels were characterized by monetary income. Kenya's PLWHA survey was the only instrument to include monetary-based questions in addition to asset-based ones. Interestingly, when computed using asset-based levels, the opposite trend was witnessed. Due to the similar ownership of assets among respondents, the investigators found that the distinctions between asset-based wealth levels were sometimes difficult to distinguish. It is possible that money is a more influential determinant of utilization than non-monetary standard of living.

[23] Excluding the NHA provider categories of "provision of public health programs" and central "administration."

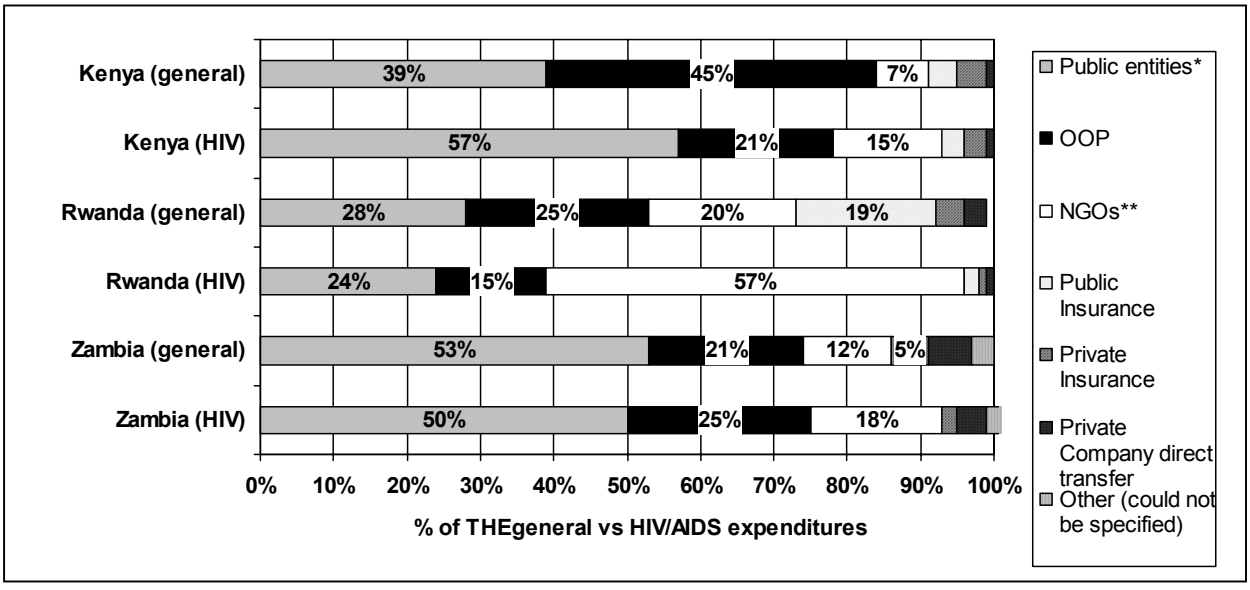
Figure 3.11: Research Allocations to Providers; HIV vs General Health



3.3.2 Who is Allocating the Funds?

Figure 3.12 shows entities that purchase health care, i.e., allocate health care resources to providers and services. For general health care, the Ministry of Health is the principal steward in Rwanda and Zambia; in Kenya, households "program" the largest share of funds by virtue of their OOP spending decisions.

Figure 3.12: Financing Agents (HIV vs General)

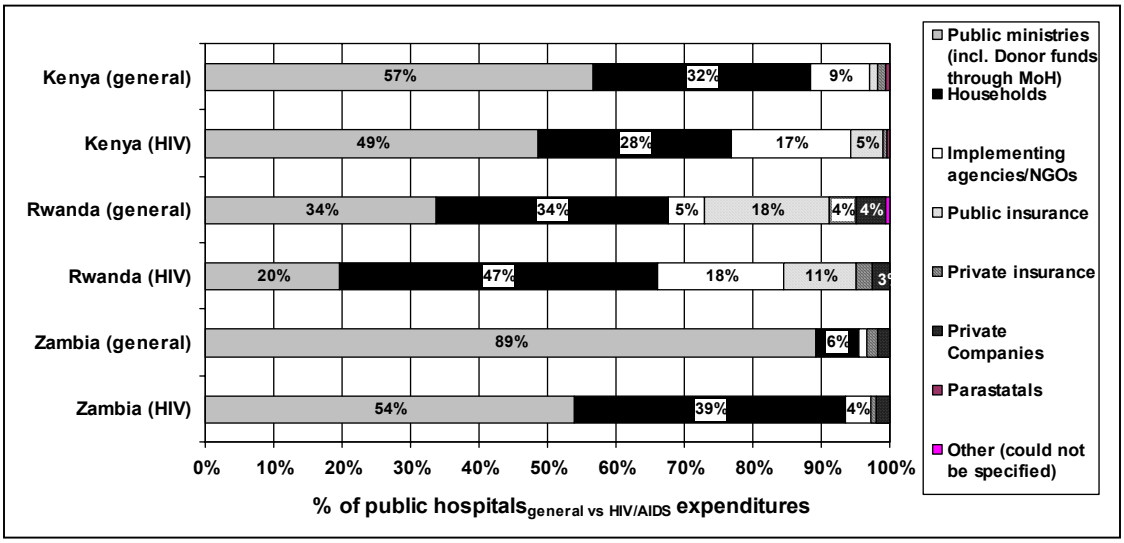


*Namely MoH, other ministries, National AIDS councils, and decentralized government entities.
** Includes implementing agnecies and direct donor transfers to providers

For HIV/AIDS health care, NGOs are increasingly important as purchasers of all HIV/AIDS health care and not just care in public hospitals. In Kenya, while the government remains the principal purchaser of HIV services, the NGO share more than doubled. In Rwanda, NGOs program the largest share – more than half – of HIV resources, an appreciably greater share than the 20 percent of general health resources that they program. In Zambia, NGO shares increased slightly with respect to HIV/AIDS.

Figure 3.13 looks more closely at the entities that purchase services from public hospitals. The figure shows that OOP payments and NGO contributions play a larger role in financing HIV/AIDS care than in financing overall health care, and that the importance of public payers[24] is significantly diminished (by 35, 14 and 8 percentage points in Zambia, Rwanda, and Kenya respectively). In Zambia and Rwanda, the shift is towards OOP, highlighting the burden of financing on households to pay for care even at public hospitals. In Kenya, the shift is to contracts and grants from NGOs.

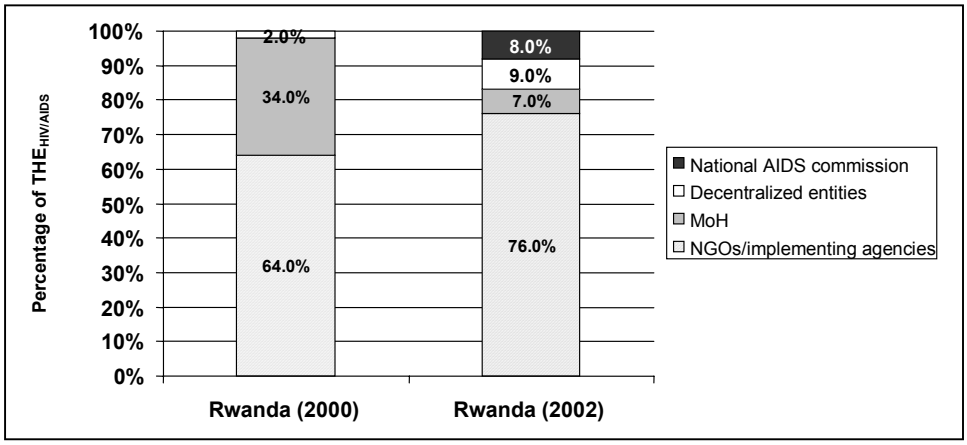
Figure 3.13: Purchasers of Care (HIV vs General) at Public Hospitals



Time-series data for Rwanda (see Figure 3.14) also show a sizeable decline in donor funding given to the Ministry of Health, from 34 percent of donor funds in 2000 to 7 percent in 2002. Donor funds were increasingly channeled through NGOs/implementing agencies, from 64 percent in 2000 to 76 percent in 2002. Donors also increasingly used the independent National AIDS Council and decentralized entities. This trend in donor financing raises the issue of stewardship for HIV/AIDS health care – the Ministry of Health's role is diminishing, and this trend may continue with the influx of large donor grants that rely heavily on NGOs for the distribution of monies and implementation of health services. What does this reduction in government stewardship imply? The agenda for HIV/AIDS health care could become driven by NGOs more than by government. While this may alleviate the government's managerial burden in the short term, it raises questions regarding long-term sustainability of financing for HIV/AIDS.

[24] NHA uses the term "financing agents" for these entities that purchase health care, i.e., that "program," "manage," or allocate health care resources. Financing agents are not necessarily the source of funds. For example, public-sector financing agents such as the Ministry of Health may allocate funding that originally came from both public and donor sources.

Figure 3.14: Managers of Donor Financing for HIV/AIDS in Rwanda, 2000 and 2002



3.4 Concluding Remarks

To summarize, NHA HIV/AIDS subaccount findings show that the resource envelope for HIV/AIDS was substantial in 2002, accounting for sizeable portions of overall health spending. Although donor financing accounted for the largest share of resources, most donor funds were targeted to program activities leaving households to pay for at least half of all medical care services. Governments, while their contribution is significant, often fall behind household contributions. Perhaps reflective of the direction in which the response to HIV/AIDS is managed, fund flows in Rwanda are increasingly channeled through the NGO sector. This questions the role of the government as steward in leading the fight against the epidemic.

4. Informing Stakeholder Indicators

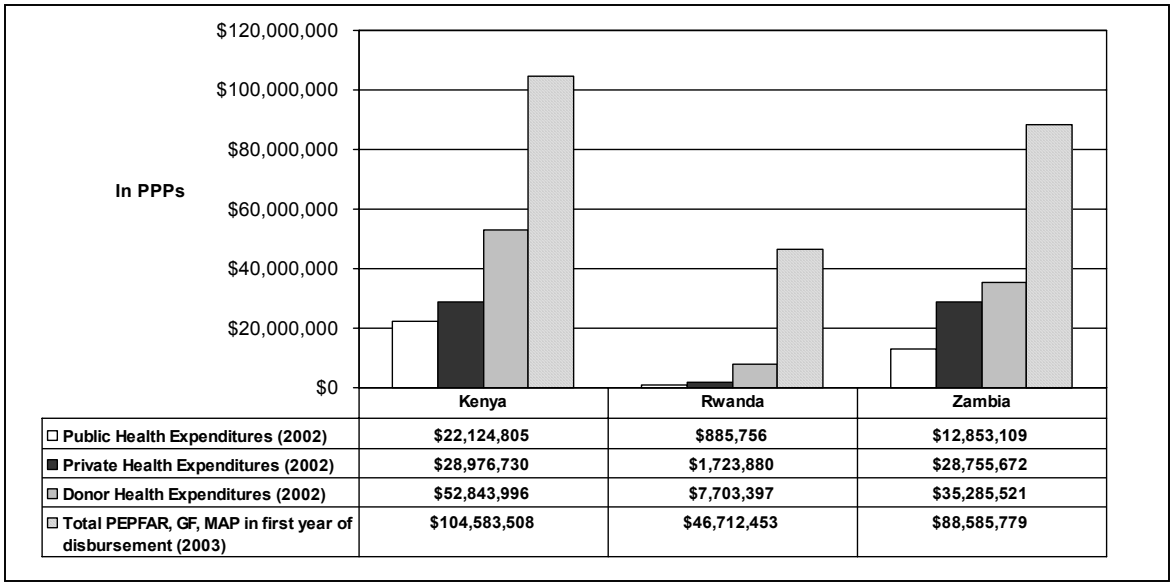
The NHA HIV/AIDS subaccount can be particularly useful for donor and country policymakers. While the strengthened commitment and influx of donor funding for HIV/AIDS is much needed in the fight against the epidemic, if not managed and allocated properly its effect on health outcomes will not be maximized. NHA subaccounts, if used on a regular basis, can assist in monitoring the disbursement of HIV/AIDS funds and provide an overall picture of progress toward financial equity goals. As shown in Annex B, the NHA framework has already been implemented in 93 percent of all PEPFAR countries, in 62 percent of MAP recipients, and 66 percent of Global Fund HIV/AIDS grantees. Therefore, financial tracking of HIV resources would be well served by continued support of the NHA framework.

To illustrate the utility of HIV/AIDS subaccounts, this chapter presents the 2002 subaccounts findings within the context of target indicators and areas of interest to donors and local policymakers.

4.1 Sustainability and Stewardship

Although sustainability and stewardship of the health sector have been long-standing concerns, their importance has been magnified with the recent surge in donor funding for HIV/AIDS. Figure 4.1 illustrates the sheer magnitude of these funds. In 2003, reported disbursements from PEPFAR, the Global Fund, and MAP alone accounted for a twofold increase in donor spending (from 2002 levels) in Kenya, sixfold in Rwanda, and threefold in Zambia. This widens the gap between donor and public contributions; if public financing stayed at 2002 levels, then donor funds in 2003 would be five times as high in Kenya, 53 times higher in Rwanda, and seven times higher in Zambia.

Figure 4.1: Comparison of HIV spending in 2002 to First Year of Disbursement by New Donor Initatives (2003)



	Kenya	Rwanda	Zambia
Public Health Expenditures (2002)	$22,124,805	$885,756	$12,853,109
Private Health Expenditures (2002)	$28,976,730	$1,723,880	$28,755,672
Donor Health Expenditures (2002)	$52,843,996	$7,703,397	$35,285,521
Total PEPFAR, GF, MAP in first year of disbursement (2003)	$104,583,508	$46,712,453	$88,585,779

Is the current resource envelope for HIV/AIDS in these countries sustainable? If donor aid decreases after this initial surge of interest, who will fill in the gap? As mentioned earlier, 2003 donor contributions represent a sizeable increase from 2002 levels. This raises concern about the ability of government or households to mobilize sufficient funds to maintain current spending levels. Failure to do so would likely result in cessation or significant downscaling of HIV/AIDS prevention and public health programs as well as discontinuation of treatment. This is not to say that donors should not large sums of monies for HIV/AIDS – rather the implication is that they need to strategize for the long-term to ensure the predictability of this level of funding because in all likelihood public funds will not be able to fill the gaps and, without significant restructuring of the private sector (where perhaps employers play an increasing role in financing), adverse equity effects can be expected.

4.2 Additionality

Another issue relating to the large influx of funds is a growing concern by donors that in order to be effective, their new funds should *complement* countries' existing resources for HIV/AIDS activities and not be used as opportunities to shift domestic resources to other sectors. In short, these external funds are intended to be "additional." This principle has been incorporated into various donor grant programs, including the Global Fund, MAP, Highly Indebted Poor Countries (HIPC) Debt Relief Initiative,[25] the OECD Development Assistance Committee, and others. With respect to the Global Fund in particular, the principle is mandated through the inclusion of an "additionality" clause in the contract agreement with the recipient country. Failure to comply with this clause could result in a cancellation of the grant.

What progress has been made to achieving the principle of additionality and how can additionality be measured? In a recent study of World Bank Country Directors for African recipients of MAP funds, 44 percent said that they were sure that MAP resources were not additional and 38 percent said that they were not sure (World Bank, 2005). In order to measure the progress, data are needed on the resource envelope before and after the surge of donor funding. The NHA tool can assist with provision of this data on a regular basis. Currently, the definition of additionality and its measurement is the subject of discussion in an ongoing working paper seeking to define indicators for monitoring purposes (Garg et al., 2005).

The HIV/AIDS subaccounts conducted in Kenya, Rwanda, and Zambia can provide useful baseline data on the pre-Global Fund, PEPFAR, and MAP financing for HIV/AIDS. Subsequent subaccounts could then be compared to the 2002 findings to assess local commitment to investment in HIV/AIDS. Table 4.1 shows the target indicators for tracking additionality as defined by the above-mentioned working paper. For each indicator, achievement of additionality is assessed by developing ratios of estimates for the "current" year against that of a "baseline" year. As can be seen from the table, data from the 2002 HIV/AIDS subaccounts can be used as baseline information for indicator computation. Table 4.2 shows actual computation of indicators drawing from Rwanda, the only country to have conducted an HIV/AIDS subaccount more than once.

[25] The HIPC initiative intends for debt reduction in its target countries to be 'additional' to existing foreign aid resources.

Table 4.1: Computation of Baseline Information for Additionality Indicators, FY 2002

Dimension of Additionality	Additionality Indicator	Critical Values	Kenya	Rwanda	Zambia
A. Are external resources for HIV increasing?	KEY: External resources expenditure in HIV/AIDS (current/baseline)	If >1 additionality met at this level If <1 then additionality may have been violated at this level.	$128,968,602	$46,269,333	$81,222,167
B. Is the overall resource envelope for HIV/AIDS increasing?	KEY: Overall expenditure (public+private+ROW) on HIV/AIDS (current/baseline)	If>1 implies additionality. However this indicator should be evaluated along with indicator XX (F). If F also >1 then there is a perverse effect of addtionality being met through a heavier burden on households.	$263,684,635	$61,943,730	$166,859,228.86
C. Have public expenditures for HIV increased?	KEY: Government expenditures on HIV/AIDS (current/baseline)	If the ratio > 1,additionality met at this level. If ratio < 1, then additionality **may** be violated. (See A.) If key indicator under A > 1, then public resources are fungible and additionality has been violated. If key indicator under A < 1, then overall commitment to HIV/AIDS is falling, and therefore additionality is upheld.	$53,996,771	$5,320,163	$29,585,998
D. Have government resources for HIV target interventions increased?	KEY: Government expenditure on ART (current/baseline) SUPPORTING: External expenditure on ART (current/baseline)	If ratio > 1, additionality is met at this level. If ratio < 1, then additionality **may** be violated. (See supporting indicator below.) If supporting indicator > 1, then public resources are fungible and additionality has been violated. If supporting indicator < 1, then overall commitment to treatment is falling, and additionality is upheld.	$0	$0	$686,283
E. Have government resources for HIV prevention increased?	KEY: Government expenditure on preventive care for HIV (current/baseline) SUPPORTING: External expenditure on preventive care for HIV (current/baseline)	If ratio > 1, then additionality is met at this level. If ratio < 1, then additionality **may** be violated. (See supporting indicator below.) If supporting indicator > 1, then public resources are fungible and additionality violated. If supporting indicator < 1, then overall commitment to prevention is falling, and additionality is upheld.	$35,582,763	$2,181,948	$298,832
F. Have OOP decreased for HIV/AIDS?	KEY: OOP expenditure for HIV/AIDS ($OOP/THE_{HIV/AIDS}$) (current/baseline)	If the ratio < 1, then additionality is met at this level. If ratio > 1, then additionality **is** violated. Households are bearing greater burden by paying higher proportion of the $THE_{HIV/AIDS}$	21.3%	14.7%	24.7%

Note: Unless otherwise indicated, all values are presented in PPPs
Source of indicators: Garg et al. 2006.

Table 4.2: Computation of Additionality Indicators based on Rwanda 2000 and 2002 Data

Dimension of Additionality	Additionality Indicator	Critical values	Rwanda (2000)	Rwanda (2002)	RATIO
A. Are external resources for HIV increasing?	KEY: External resources expenditure in HIV/AIDS (current/baseline)	If >1 additionality met at this level If <1 then additionality may have been violated at this level	$ 2,916,088	$ 7,703,397	2.6
B. Is the overall resource envelope for HIV/AIDS increasing?	KEY: Overall expenditure (public+private+ROW) on HIV/AIDS (current/baseline)	If>1 implies additionality. However this indicator should be evaluated along with indicator XX (F). If F also >1 then there is a perverse effect of addtionality being met through a heavier burden on households.	$ 5,891,152	$ 10,313,033	1.8
C. Have public expenditures for HIV increased?	KEY: Government expenditures on HIV/AIDS (current/baseline)	If the ratio > 1,additionality met at this level. If ratio < 1, then additionality may be violated. (See A.) If key indicator under A > 1, then public resources are fungible and additionality has been violated. If key indicator under A < 1, then overall commitment to HIV/AIDS is falling, and therefore additionality is upheld.	$ 469,523	$ 885,756	1.9
D. Have government resources for HIV target interventions increased?	KEY: Government expenditure on ART (current/baseline) SUPPORTING: External expenditure on ART (current/baseline)	If ratio > 1, additionality is met at this level. If ratio < 1, then additionality may be violated. (see supporting indicator below) If supporting indicator > 1, then public resources are fungible and additionality has been violated. If supporting indicator < 1, then overall commitment to treatment is falling, and additionality is upheld.	KEY: $ - SUPPORTING: $2,477	KEY: $ - SUPPORTING: $71,933	KEY: Cannot be computed due to inability to disaggregate ART expenditure from government records. SUPPORTING: 29.1
E. Have government resources for HIV prevention increased?	KEY: Government expenditure on preventive care for HIV (current/baseline) SUPPORTING: External expenditure on preventive care for HIV (current/baseline)	If ratio > 1, then additionality is met at this level. If ratio < 1, then additionality may be violated. (see supporting indicator below) If supporting indicator > 1, then public resources are fungible and additionality violated. If supporting indicator < 1, then overall commitment to prevention is falling, and additionality is upheld.	KEY: $ 264,026 SUPPORTING: $2,398,584	KEY: $ 363,273 SUPPORTING: $6,359,188	KEY: 1.4 SUPPORTING: 2.7
F.h Have OOP decreased for HIV/AIDS?	KEY: OOP expenditure for HIV/AIDS ($OOP/THE_{HIV/AIDS}$) (current/baseline)	If the ratio < 1, then additionality is met at this level. If ratio > 1, then additionality is violated. Households are bearing greater burden by paying higher proportion of the $THE_{HIV/AIDS}$	$ 2,365,461	$ 1,512,647	0.6

*2000 estimates are presented in 2002 constant dollars (and not in PPPs)

Since HIV/AIDS expenditure information in Rwanda is available for more than one year, the time-series data can be used to illustrate the additionality concept. As shown earlier, the resource envelope for HIV/AIDS has increased between 2000 and 2002. Although the increase was largely due to donor contributions, government spending in absolute terms also grew, doubling from $2.39/PLWHA in the year 2000 to $4.44/PLWHA in 2002. Thus in the years prior to the Global Fund, the Rwandan government was already exhibiting compliance with the additionality concept. However, it should be noted that government contribution was quite small to begin with and this should be considered when measuring additionality.

4.3 Using NHA to Measure Progress toward Targets: Three Examples

4.3.1 UNGASS

Following the adoption of the *Declaration of Commitment on HIV/AIDS* (Resolution A/RES/S-26/2) at the UN General Assembly Special Session (UNGASS) on HIV/AIDS, countries pledged to monitor the progress made towards achieving the Declaration's goals. To facilitate this process, UNAIDS and its partners published a set of core indicators on which data will be collected for subsequent reports and to inform the global debate. Countries are encouraged to report to UNAIDS on these indicators every two years.

With respect to financial indicators, UNAIDS has suggested the following indicator that also hints at the additionality principle: *Amount of national funds disbursed by governments in low- and middle-income countries.* In keeping with the concept of additionality, the indicator intends to be "a measure of economic 'commitment' to enhancing the national response to HIV/AIDS" (UNAIDS, 2003). The indicator can be tracked at the financing source level and its computation for Kenya, Rwanda, and Zambia are presented in row C of Table 4.1.

4.3.2 PEPFAR

PEPFAR is a five-year $15 billion global initiative to fight the HIV/AIDS epidemic. Because PEPFAR focuses on rapid and efficient disbursement of funds, it is critical that the disbursement process and its effects on the resource envelope be monitored. NHA can help in this regard; indeed, it already has been implemented at least once already in all 15 PEPFAR countries. Moreover, the PEPFAR targeted program areas can be mapped to the NHA classification scheme (as shown in Annex C). Table 4.3 shows the 2002 subaccount breakdown of spending by PEPFAR categories.

In 2002, most HIV/AIDS 'care' largely consisted of palliative care targeted principally at alleviating symptoms and opportunistic infections. VCT and ART services became more widespread in subsequent years. Table 4.3 provides baseline data against which future subaccounts estimates can be compared to determine whether, taken collectively, 'appropriate' shares of the resource envelope is targeting key PEPFAR areas of interest. Moreover, as donor targeting of particular programs for HIV/AIDS becomes more pronounced, future NHA efforts will be able to provide more programmatic detail on spending by targeted population groups. Thus, in addition to examination of spending 'by' target groups from household surveys, NHA will be able to track spending 'on' target groups from a programmatic perspective.

Table 4.3: HIV Spending by PEPFAR Program Areas in 2002

PEPFAR Categories	Kenya	Rwanda	Zambia
Prevention	**37.5%**	**58.5%**	**3.2%**
Behavior change (includes both abstinence programs and other behavior change programs)	37.5%	58.5%	3.2%
Medical transmission (including blood safety and injection safety)	0.01%	0.02%	
PMTCT	0.5%	6.8%	0.1%
Counseling and testing	3.1%	0.2%	0.1%
Treatment (ART)**	0.3%	3.9%	1.9%
Palliative care	46.7%	21.5%	94.2%
Orphans and vulnerable children	8.5%		
Capital formation (including "labs" as defined by PEPFAR)	0.0%	0.0%	0.1%
Strategic Information	0.4%		
Other: Policy and systems strengthening (capacity building)	3.0%	9.1%	0.5%

Source: Office of Global AIDS Coordinator (2004).

*Includes health and non-health HIV/AIDS expenditures

**Note, spending on PMTCT+ was not measured in 2002 because this service was not prevalent in Kenya, Rwanda, and Zambia during the time of estimation. So the PEPFAR treatment category, in this case, refers only to ART.

4.3.3 National Strategic Plans

Due to the flexibility and level of detail afforded by the HIV/AIDS subaccount framework, its classification categories can be mapped to target areas outlined in national strategic plans for fighting HIV/AIDS. Annexes D-F illustrate suggested mappings to strategic plans in Kenya, Rwanda, and Zambia.

Kenya

The Kenya National AIDS Strategic Plan (KNASP) for 2005-2010 (Ministry of Health, 2005) aims to provide a framework and context "within which such strategies, plans and *budgets* should be formulated, *monitored* and coordinated." To this end, it has outlined four priority areas described in Table 4.4. Although this five-year plan was created following the implementation of the 2002 subaccounts, the 2002 findings can serve as useful baseline data against which subsequent subaccounts can be compared. Table 4.4 presents the baseline data and targeted goals for the Plan's four strategic areas.

When compared to the FY 2002 baseline estimates, the goal for FY 2010 is to essentially increase the resource envelope for HIV/AIDS by 4.4 times. Within that envelope, the relative shares of spending will also need to be shifted. In 2002, the bulk of HIV/AIDS spending focused on preventive services. The goal for FY 2010 is to shift that emphasis to the 'improvement of quality of life' and the 'mitigation of socio-economic' impact. This would include a greater focus on treatment and care for PLWHAs. Finally, a sizeable increase will be needed for financing the target area of support services that raises the share from its current 1 percent level to 15 percent.

Table 4.4: 2002 Spending on Kenya's 2005-2010 HIV/AIDS Priority Areas

KNA SP 2005-2010 – Priority Areas	FY 2002 National Spending on Priority Areas*			FY 2010 KNASP Spending Target	
	US $	PPPs	% of THAE	US $	% of THAE
1) Prevention Includes, youth focused interventions, sex workers and clients, workplace, harm reduction programs, uniform services, other vulnerable pops, condom provision, STI management VCT, PMTCT, BCC, blood safety, PEP	$52,306,900	$127,657,791	41%	$142,150,127	25%
2) Improvement of quality of life Includes HBC, palliative care, diagnostic testing, treatment of OIs, OI prophylaxis, lab HAART, ART, training, nutritional support, protection of human rights	$47,825,804	$116,721,437	38%	$167,379,135	30%
3) Mitigation of socio-economic impact Includes mitigation policy, mitigation advocacy, livelihood and social security, mitigation programs, community empowerment, HR planning	$22,928,203	$55,957,509	18%	$171,959,288	30%
4) Provision of support services Includes overall financing and procurement, communication, coordination and networking, M&E, research, institutional capacity	$1,447,037	$3,531,570	1%	$84,312,977	15%
Other- expenditure not specified by any kind	$2,832,959	$6,913,988	2%	-	-
TOTAL	$127,340,903	$310,782,295	100%	$565,801,527	100%

Note: BCC = behavior change communication; PEP = post-exposure prophylaxis; HBC = home-based care; OI = opportunistic infection; HAART = highly active ART; HR = human resource/s; M&E = monitoring and evaluation
*Total HIV/AIDS Expenditure (THAE) estimate includes health and non-health HIV/AIDS spending.

Rwanda

The 2002-2006 national plan for monitoring and evaluation of HIV/AIDS activities in Rwanda (Government of Rwanda, Office of the President 2003) has five strategic components. Spending on those five components in 2002, prior to publication of the national plan, are summarized in Table 4.5. This data serves as baseline information and illustrates the importance of certain HIV/AIDS activities relative to others. As with Kenya, the pre-Plan emphasis was on prevention activities, followed by care and support for PLWHAs, and specific to Rwanda, the development of a multi-sectoral partnership for addressing HIV/AIDS. Note, in the year of estimation, non-health HIV/AIDS activities were few and so were not measured by the subaccounts. With the advent of Global Fund and PEPFAR support, it is anticipated that the relative share of the five components will change and that the emphasis will be placed on "comprehensive" care (with a focus on ART) and support for PLWHAs. In 2002, the main type of financed care was palliative and targeted at alleviating symptoms and opportunistic infections. Also, in order to meet the objectives of the M&E plan, spending on surveillance strengthening will need to be increased.

Table 4.5: 2002 Spending on Rwanda's 2002-2006 Strategic Components and Priority Areas for Monitoring and Evaluation of HIV/AIDS Services

Listing of Rwanda Strategic Components and Priority Areas (2002-2006)	2002 national spending on priority areas*		
	US $	PPPs	% of THE*
1) Prevention Includes 1) encouragement of low-risk behaviors by means of IEC/BCC, 2) strengthen early detection and treatment of STIs and TB, 3) promotion of voluntary, confidential and anonymous counseling and testing, 4) Prevention of risks of accidental infection, 5) promotion of condom use, 6) promotion of blood safety, 7) PMTCT, 8) development of transregional HIV prevention interventions aimed at truck drivers, refugees, and displaced persons.	6,762,125	40,615,723	66%
2) Strengthen Surveillance of Epidemic Includes 1) reporting of STI, AIDS, and TB cases, 2) organization of sero-surveillance of HIV and STIs, bacterio-surveillance of TB an surveillance of resistance among these microbes, 3) epidemiological studies, 4) socio-behavioral (KAP) studies and studies of economic impact of HIV	-	-	0%
3) Comprehensive care and support for persons infected and/or affected by HIV (incl. spouses, orphans, widows) Includes 1) training in management of HIV and dissemination of national guidelines, 2) development of a network for supply of medical and health equipment, ARVs generic drugs at national and provincial levels, 3) development of counseling and testing at health center level, 4) development of strategies for prophylaxis and treatment of OIs for ARV therapy, 5) development of ambulatory treatment centers, 6) development of community-based health centers, 7) organization of psychological, financial, and legal support for target population, 8) reinforcement of innovative strategies for involving PLWHAs	2,611,607	15,686,235	25%
4) Poverty and gender in battle against HIV* Includes 1) development of income-generating activities, 2) increased access for PLWHA and families, 3) increased access to socioeconomic opportunities for women and girls, 4) promotion of legal protection for women and children against rape, physical abuse, exploitation and subjugation	Not tracked	Not tracked	Not tracked
5) Promotion of multisectoral partnership and coordination Includes 1) strengthening of regional and international partnerships, 2) advocacy to mobilize support for HIV control, 3) strengthen of functional capacity of various entities in sectors involved in HIV/AIDS control, 4) research, 5) greater decentralization of HIV control bodies and intervention, 6) improvement of multisectoral coordination of intervention.	939,300	5,641,771	9%

Note: IEC = information, education and communication

* As non-health HIV/AIDS activities were not prevalent in the year 2002, the HIV/AIDS subaccounts did not track these expenditures.

Zambia

As with Kenya, the Zambia 2002-2005 HIV/AIDS strategic plan includes a projected costing of its specific objectives (SO) at the end of the three-year period. The Plan emphasizes the need for the National AIDS Council and its stakeholders to "link their budgeting processes to the Strategic Plan" and to "constantly monitor" its implementation through the production of performance reports that will inform subsequent planning efforts. If conducted regularly, HIV/AIDS subaccounts can help inform those performance reports (Government of Zambia, 2003).

To meet projected targets in the Plan, HIV resources need to increase more than sevenfold from 2002 spending levels (see Table 4.6). Moreover, resource allocation among the specific objectives will need to be substantially changed. In 2002, spending was largely on SO5, which addresses care, support, and treatment for HIV/AIDS infected persons. Very little was spent on prevention activities, such as those under SO1.[26] Finally, less than 1 percent of all HIV/AIDS expenditures was spent on the remaining SOs. The Strategic Plan's spending target is to divide the bulk of spending equally between prevention and activities for infected persons. Following this, the next largest share is targeted for care and support of orphans and vulnerable children and other affected populations.

Table 4.6: 2002 Spending on Zambia's SOs Listed in the 2002-205 HIV/AIDS Strategic Plan

Zambia National HIV/AIDS Strategic Plan 2002-2005 – SOs	2002 National Spending on SOs in HIV/AIDS Plan			2005 Zambia Spending Target	
	US $	PPPs	% of THAE	US $	% of THAE
1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors	$2,559,450	$5,891,485	3.33%	$195,918,000	35%
2) MTCT of HIV minimized	$42,635	$98,140	0.06%	$37,704,000	7%
3) Ensure safe transfusion and use of sharp instruments	$0*	$0	0.00%	$6,723,000	1%
4) Improve quality of life of all HIV/AIDS infected persons without symptoms	$42,635	$8,140	0.06%	$12,908,000	2%
5) To provide appropriate care, support and treatment to HIV/AIDS infected persons	73,895,936	$170,097,759	96.09%	$194,850,000	35%
6) To provide improved care and support services for the OVC and others affected	$0*	$0	0.00%	$69,475,000	12%
7) To improve HIV/AIDS information management and decision making	$0*	$0	0.00%	$13,300,000	2%
8) To assure impartial, transparent and effective program operations	$59,116	$826,633	0.47%	$27,824,000	5%
TOTAL	**$76,899,773**	**$177,012,156**	**100%**	**$558,702,000**	**100%**

* May be a reflection of data paucity in these categories

[26] This may be due to a limitation in data retrieval from the NGO survey.

4.4 Concluding Remarks

Given the potential level of detail that is afforded by the HIV/AIDS subaccounts framework and that it is already conducted in approximately two-thirds of all recipients of major HIV/AIDS grants, the 2002 findings from Kenya, Rwanda, and Zambia illustrate the utility of the framework in monitoring fund disbursement and in their potential for informing the planning process.

Because of its comprehensive nature and the ease with which NHA classifications can be mapped to target categories, the HIV subaccount allows for a tracking of the entire HIV/AIDS resource envelope from various stakeholder perspectives. In addition, the classification scheme also allows for international comparability and as such, national-level findings can be used for global monitoring purposes as well, such as by UNGASS, Global Fund, and PEPFAR. With the NHA tool rapidly becoming institutionalized in numerous countries, the subaccounts should be seen as the logical and natural financial monitoring tool for meeting donor and stakeholder needs.

5. Summary and Concluding Remarks

Findings from the 2002 HIV/AIDS subaccounts for Kenya, Rwanda, and Zambia show that the resource envelope for HIV/AIDS was quite sizeable even prior to the surge in donor funds. Health expenditures for HIV/AIDS represented approximately 1 percent of national GDP levels, this in countries where overall health care resources accounted for only 4-5 percent of the GDP. These percentages indicate the magnitude of expenditures even in 2002, when spending went primarily to treatment of opportunistic infections (mainly) and to programs for prevention and public health. At that time, costly ART was only a very small component of national HIV/AIDS expenditure. With the subsequent surge of donor funding and the shift of focus to ART, the HIV/AIDS resource envelope will likely increase quickly and extensively.

The main contributors of HIV funds in 2002 were donors, followed by households and lastly governments. In at least the short term, it is likely that donors will remain the predominant financier; national stakeholders hope that the reliance on households to finance curative care will decrease through increased subsidization of treatment services by donors and government.

5.1 Role of Donor Funding in HIV/AIDS Care and Prevention

The surge in the donor share of HIV expenditures starting in 2003 raises two main issues: 1) the need for predictability of donor funding levels in subsequent years and 2) the availability of sufficient resources for other priority diseases.

Regarding predictability, dependence on donor funding for HIV/AIDS will no doubt increase, since the Global Fund, PEPFAR, and MAP contributions in 2003 alone accounted for a five- to 53-fold increase over public funds. While this increase in funding for combating HIV is welcome, efforts should be made to ensure that such contribution levels continue for the long term. Placing an individual on ART is worthwhile if access to treatment can be assured for the duration of that person's life. Should donor contributions decrease, it is highly unlikely that the government and households would be able to fund a similar level of ART, jeopardizing treatment for many people. Indeed, if the burden of financing, especially for ART, shifts to households, there will most likely be a decrease in adherence to treatment; this in turn risks developing resistance to ART drugs (see box).

User Fees Jeopardize Adherence to Antiretroviral Therapy

In a presentation at the 2005 International Conference on AIDS and STIs in Africa (ICASA) (Abuja, Nigeria, December 2005), the NGO *Médecins sans Frontieres* (MSF) spoke about how the introduction of user fees for ART resulted in a significant "treatment interruption." For Nigerians who lacked funds to pay, 44 percent had multiple interruptions of ARV treatment or took insufficient dosages. In addition to decreased utilization of services, these patients had significant medical implications: when the fee was abolished and the patients were accepted into MSF's treatment program, these "treatment interrupters" had only half the immune system recovery of those receiving treatment for the first time. The patients also were more vulnerable to opportunistic infections such as pneumonia or TB. Even when placed back on a rigorous course of ART, the life-prolonging effects of treatment were significantly diminished.

Thus, it is critical that the issue of donor predictability be addressed to ensure sustained access to ART and to meet the ultimate goal of prolonging the lives of PLWHA. Currently financing mechanisms for ensuring donor predictability are being explored through Britain's International Finance Facility (IFF), created and sponsored by HM Treasury and the Department for International Development (DFID). The IFF's mandate is to facilitate achievement of the Millennium Development Goals by helping to guarantee "long-term, but conditional, funding" to the poorest countries by the richest countries. "On the basis of these long-term donor commitments, the Facility would leverage in additional money from the international capital markets" (HM Treasury and DFID, 2003).

The second issue is the availability of donor funding for other priority diseases. In Rwanda, the NHA subaccount showed that a third of all donor health funds were spent on HIV/AIDS and another third on reproductive health care. This left only one-third of donor health funds for all other health priorities, including malaria, the leading cause of morbidity and mortality. More than half of all donor health contributions in Kenya and three-quarters of them in Zambia were targeted for HIV/AIDS. If remaining donor funding does not suffice to address non-HIV priority areas, governments will face the dilemma of shifting government funds away from HIV/AIDS to finance these other pressing health care concerns, thereby violating the "additionality" principle of many large donor grants.

5.2 Role of PLWHA Funding in HIV/AIDS Care and Prevention

Although donor financing was significant in 2002, PLWHAs still paid a disproportionate share of HIV/AIDS expenses, contributing more than the government and covering almost half of curative care expenditures. PLWHAs spent 3–6 times more per HIV-positive individual than the general populations's per capita OOP spending on health care. In comparison to general OOP expenditure patterns, PLWHA spending patterns showed a shift of expenditures away from private providers to public ones in an effort to seek more affordable care. Subsequent subaccounts by countries will be needed to monitor the levels of OOP contributions to ensure that donor financing of ART does indeed alleviate this burden on PLWHA.

Examination of symptomatic PLWHA spending showed that women, who have higher HIV/AIDS prevalence rate than men in generalized epidemic settings, spent less than men for health care. This is a likely indication of poorer utilization rates. Indeed, research has shown that "lack of access to resources and inequitable decision-making power mean that when poor women face out-of-pocket costs such as user fees when seeking health care, the cost of care may become out of reach" (Nanda, 2002). Generally speaking, HIV-positive women access fewer services than men do, and/or they do so at a more advanced stage of illness. Principal reasons for this are cost, time, and general neglect of women's health care needs. Women often lack money and focus their time on catering to the needs of husbands and other family members (International Community of Women, 2004). Examination of PLWHA spending by geographical residence showed that urban residents spent more on health care compared to rural residents. This is most likely due to wealthier individuals living in urban areas, greater variety of providers in urban settings, and easier geographical access to health care. The targeted PLWHA surveys also showed that wealth is correlated with increased expenditure, again most likely due to increased utilization of services by the wealthy.

5.3 Role of Government Funding in HIV/AIDS Care and Prevention

Government financing of HIV/AIDS programs and care, although significant, was less than that contributed by donors and households. In comparison to donors, where average targeted spending on HIV/AIDS accounted for 54 percent of all donor health funds, governments contributed

approximately 12 percent of their health resources to HIV/AIDS. Like donors, government HIV/AIDS financing went primarily to programs and, to a lesser extent, to treatment. NHA found that, in addition to playing a relatively minor role in financing, the government did not necessarily play a leading role in allocating and managing HIV resources. Rather, direct donor transfers of funds to NGOs is an increasingly popular mechanism for paying providers. With multiple players managing funds, the government's role as steward of the health sector is lessened and there is need for increased coordination and collaboration among the financing agents in order to leverage activities, avoid redundancies, and work toward the goals in national AIDS strategic plans.

5.4 Utility of NHA

The NHA framework, already conducted on a regular basis in many countries greatly affected by the HIV/AIDS pandemic, can serve as a useful monitoring tool to meet a variety of stakeholder needs.

The classifications into which NHA disaggregates expenditures can be mapped to the programmatic categories used by donor initiatives such as PEPFAR, and by national strategic plans. Implementing the NHA subaccount on a regular basis can show the levels of investment in target activities. For example, Kenya's 2002 NHA expenditure estimates allowed comparison to 2002 estimated costs for each HIV strategic plan component as well as an understanding of how far or close the country is to meeting its investment targets.

The NHA subaccount also can help meet increasingly rigorous requirements for transparency and accountability in the use of HIV funds. Lack of comprehensive national-level data on the flow of HIV/AIDS resources increases the risk of misallocation or suspension of funding: The Global Fund recently withdrew its support to three recipient organizations in Ukraine, because they failed to meet implementation targets for HIV/AIDS treatment and prevention. This marks the first time that the Global Fund has halted disbursements to a grantee. In its announcement, the Global Fund emphasized that it "relies on local ownership and planning to ensure that new resources are directed to programs on the frontline of this global effort, reaching those most in need. The Global Fund has a performance-based approach to grant-making – where grants are only disbursed if progress has been measured and verified…to ensure that funds are used efficiently…" (Global Fund, 2004). Subsequent to this Global Fund grant withdrawal, the government of Ukraine sought to conduct an HIV/AIDS subaccount to help address the issue of accountability.

The NHA framework also can be used to monitor adherence to the additionality clause of many of the new donor grant mechanisms. An international working group is currently outlining the key indicators that can be computed, in large part, with NHA data from multiple years. As shown earlier, even prior to the Global Fund, public funding for HIV/AIDS activities in Rwanda was increasing and was in essence adhering to the principle of additionality.

In conclusion, the 2002 NHA HIV/AIDS subaccounts in Kenya, Rwanda, and Zamiba offer valuable baseline information from which to monitor future investment in and use of national resources for the fight against HIV/AIDS. In particular, because NHA tracks OOP spending, its framework can also help measure the impact of donor and public funds on alleviating the burden on PLWHA of their financing of care. Finally, the subaccounts can help policymakers plan and budget more realistically, based on actual past spending amounts. By helping to assess the strengths and weaknesses of current resource allocation arrangements, HIV/AIDS subaccounts should prove immensely valuable to national policy processes, both by donor and government stakeholders.

Annex A: Estimating the Adult Population by Stage of Disease in Rwanda

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1. Background

Estimating numbers of HIV infections per stage of HIV disease as defined by the WHO Disease Staging System for HIV Infection and Disease in Adults (see box below) will determine the maturity of the HIV/AIDS epidemic in the country and estimate progression rates from HIV infection to AIDS death.

"At the start of any HIV epidemic, there are virtually no AIDS cases in the first few years so that the HIV prevalence to AIDS case ratio is almost all HIV and no or few AIDS cases. As the HIV epidemic continues, almost all HIV infections will progress to AIDS and the HIV to AIDS case ratio will gradually decrease. In a hypothetical situation, where all HIV transmission is stopped, the HIV to AIDS case ratio will decrease to almost 1:1 because virtually all HIV infections eventually progress to AIDS."[a] For example, in young epidemics such as in East and Central Africa, a great percentage of the population is still in early stage of disease.

UNAIDS and WHO are using the Estimation and Projection Package (EPP) to estimate and project adult HIV prevalence from surveillance data in countries with generalized epidemics. The inputs to EPP are surveillance data from various sites and years showing HIV prevalence among pregnant women. UNAIDS imports the national prevalence projections produced by EPP into the AIDS Impact Model (AIM) to calculate data listed below. Estimates on an individual country's HIV/AIDS epidemic in terms of the following categories are usually available or can be made available using AIM[b] (public domain):

Adult HIV incidence: The percentage of uninfected adults who become infected in each year.

Adult HIV prevalence: The percentage of adults (age 15 to 49) who are infected with HIV.

AIDS age distribution: The number of people alive with AIDS, by age and sex. This information can be displayed as a table or a pyramid chart.

AIDS deaths: The annual number of deaths due to AIDS.

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[a] *WHO, Methods for estimation/projection of HIV infection and AIDS cases/deaths, annex 7, available at http://w3.whosea.org/hivaids/asia2_22.htm*

[b] *AIDS Impact Model (AIM) Available at http://www.futuresgroup.com/WhatWeDo.cfm?page=Software&ID=Spectrum*

Cumulative AIDS deaths: The cumulative number of AIDS deaths since the beginning of the projection.

HIV age distribution: The number of infected people, by age and sex. This information can be displayed as a table or a pyramid chart.

HIV/AIDS summary: A table with all the above indicators shown for a selection of years. All input assumptions are also shown on this table.

New AIDS cases: The annual number of new AIDS cases.

Number of people infected with HIV: The total number of people who are alive and infected with HIV with a breakdown for adults and children

Adults 15-49 summary: A table showing indicators for adults 15-49. It includes number infected, new infections, new AIDS cases and AIDS deaths.

Child summary: A table showing indicators for children under the age of 15. It includes number infected, new infections, AIDS cases and AIDS deaths.

2. Approach used to estimate percentage of the adult population living with HIV/AIDS at different stages of the disease

Step 1: Collect UNAIDS /WHO country data for the year of interest

Number infected with HIV: The total number of people who are alive and infected with HIV.

Adult HIV incidence: The percentage of uninfected adults who become infected in each year.

New AIDS cases: The annual number of new AIDS cases.

AIDS deaths: The annual number of deaths due to AIDS.

Step 2: Tailor your estimates to the region and maturity of HIV/AIDS epidemic

Estimating # of PLWHA adults in Stage 4 (AIDS cases)

In developing countries, average survival time after entering Stage 4 (onset of severe AIDS-characteristic illnesses) without effective anti-HIV therapy is about six months or less compared to 2-4 years in most developed countries.[c]

For the purpose of an NHA exercise in a developing country with limited access to ARVs, we can assume that PLHWA in Stage 4 is roughly equal to the number of new AIDS cases or – if that is not available – number of AIDS deaths.

[c] WHO. *Methods for estimation/projection of HIV infection and AIDS cases/deaths*, retrieved at http://w3.whosea.org/hivaids/asia2_16.htm#Annex%201

Estimating # of PLWHA adults in Stage 1 (symptomatic)

In developing countries, average length of time in WHO Stage 1 or US Centers for Disease Control and Prevention category 1 (asymptomatic stage or CD4> 500 cells/mm3) is about one year.[d]

For the purpose of NHA, we can assume that PLHWA in Stage 1 is roughly equal to the **number of new HIV infection in adult population, i.e., adult HIV incidence * adult population**

Estimating # of PLWHA adults in Stage 2 and 3

PLWHA adults in Stages 2 and 3 are equal to number infected with HIV minus PLWHA adults in Stage 1, and minus PLWHA adults in Stage 4.

According to the recent literature, "the median interval from HIV infection to the development of severe immune deficiency appears to be similar in all populations (i.e., in developed and developing countries) and is estimated to be about 7-8 years, with a reference to a study done in the ESA region (Uganda).[e] According to a recent study done by Johns Hopkins University, the median time from HIV-1 seroconversion to clinical AIDS in the Thai study participants was 7.4 years.[f] In the literature, the generalized time course of HIV infection and disease show that the progression to the HIV/AIDS disease is constant overtime during Stages 2 and 3 when CD4 between 500-2009 (see figure at end of this annex).[g]

For the purpose of the NHA HIV/AIDS subaccount, we can assume that in developing countries average length of time spend by a PLWHA in Stages 2 and 3 are equal. To extrapolate those # at the general population, the degree of maturity of the epidemic – and therefore the ratio between stage 2/3 -should be estimated using a country-by-country basis. Rough estimates will be applied to estimate this ratio, because of the lack of data or model available in the literature.

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[d] Centers for Disease Control and Prevention. April 24, 1998. Report of the NIH Panel to Define Principles of Therapy of HIV Infection and Guidelines for the Use of Antiretroviral Agents in HIV-infected Adults and Adolescents. *Morbidity and mortality weekly report (MMWR)* 47(RR-5)

[e] WHO. *Methods for estimation/projection of HIV infection and AIDS cases/deaths* retrieved at *http://w3.whosea.org/hivaids/asia2_16.htm#Annex%201 and* Morgan D, Mahe C, Mayanja B, Okongo JM, Lubega R, Whitworth JA. 2002. HIV-1 infection in rural Africa: is there a difference in median time to AIDS and survival compared with that in industrialized countries? *AIDS* 16:597–603.

[f] Chris Beyrer, Ram Rangsin, Joseph Chiu, Chirasak Khamboonruang, Narongrid Sirisopana, Sakol Eiumtrakul, Arthur E. Brown, Merlin Robb, Cholticha Roengyutikarn and Lauri E. Markowitz. May 2004. The Natural History of HIV-1 Infection in Young Thai Men After Seroconversion. *Journal of Acquired Immune Deficiency Syndrome*.

[g] Centers for Disease Control and Prevention. April 24, 1998. Report of the NIH Panel to Define Principles of Therapy of HIV Infection and Guidelines for the Use of Antiretroviral Agents in HIV-infected Adults and Adolescents. *Morbidity and mortality weekly report (MMWR)* 47(RR-5): Figure One.

WHO Disease Staging System for HIV Infection and Disease in Adults

Clinical Stage I:

1. Asymptomatic
2. Persistent generalized lymphadenopathy

Performance Scale 1: Asymptomatic, normal activity

Clinical Stage II:

1. Weight loss less than 10% body weight
2. Minor mucocutaneous manifestations (seborrhoeic dermatitis, prurigo, fungal nail infections, recurrent oral ulcerations, angular stomatitis)
3. Herpes zoster within the last 5 years
4. Recurrent upper respiratory tract infections, e.g., bacterial sinusitis

And/or Performance Scale 2: Symptomatic but normal activity

Clinical Stage III:

1. Weight loss more than 10% body weight
2. Unexplained chronic diarrhoea for more than 1 month
3. Unexplained prolonged fever, intermittent or constant, for more than 1 month
4. Oral candidiasis
5. Oral hairy leukoplakia
6. Pulmonary tuberculosis within the past year
7. Severe bacterial infections such as pneumonias, pyomyositis

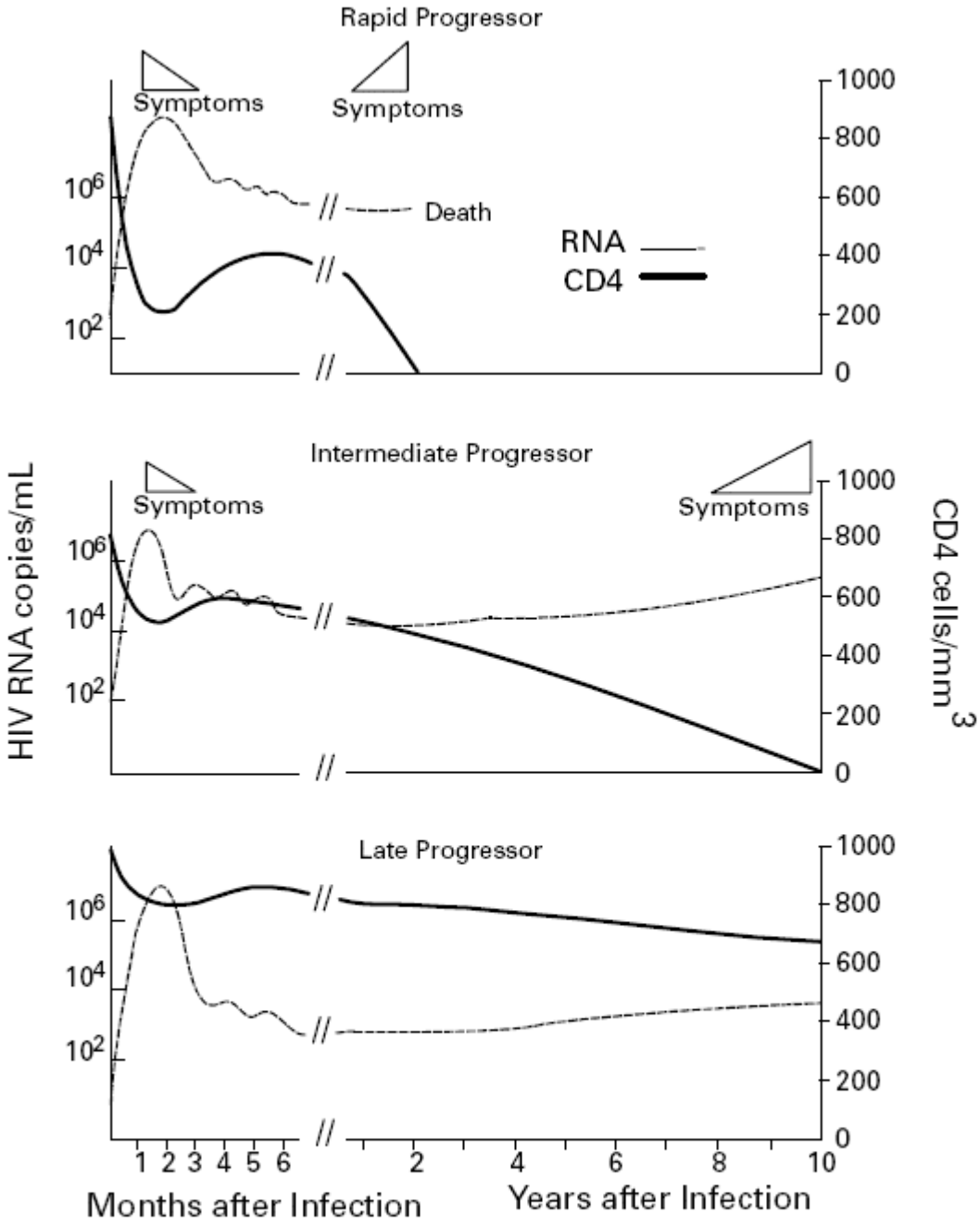
And/or Performance Scale 3: Bed-ridden for less than 50% of the day during the last month

Clinical Stage IV:

1. HIV wasting syndrome – weight loss of more than 10%, and either unexplained chronic diarrhoea for more than 1 month, or chronic weakness or unexplained prolonged fever for more than 1 month
2. *Pneumocystis carinii* pneumonia
3. *Toxoplasmosis of the brain*
4. Cryptosporidiosis with diarrhoea for more than 1 month
5. Extrapulmonary cryptococcosis
6. Cytomegalovirus (CMV) disease of an organ other than liver, spleen or lymph nodes
7. Herpes simplex virus (HSV) infection, mucocutaneous for more than 1 month, or visceral of any duration
8. Progressive multifocal leukoencephalopathy (PML)
9. Any disseminated endemic mycosis such as histoplasmosis, coccidioidomycosis
10. Candidiasis of the oesophagus, trachea, bronchi or lungs
11. Atypical mycobacteriosis, disseminated
12. Non-typhoid salmonella septicaemia
13. Extrapulmonary tuberculosis
14. Lymphoma
15. Kaposi's sarcoma
16. HIV encephalopathy – disabling cognitive and/or motor dysfunction interfering with activities of daily living, progressing slowly over weeks or months, in the absence of concurrent illness or condition other than HIV infection that could account for the findings

And/or Performance Scale 4: Bed-ridden for more than 50% of the day during the last month

FIGURE 1. Generalized time course of HIV infection and disease



Three different patterns of disease progression: rapid, intermediate, and late progression.

Annex B: Countries with Large Donor Assistance Grants and NHA Status

Country	MAP	Global Fund	PEPFAR	NHA Status
Algeria		√		√
Angola		√		
Argentina		√		√
Armenia		√		√
Azerbaijan		√		
Bangladesh		√		√
Belarus		√		
Belize		√		
Benin	√	√		√
Bolivia		√		√
Botswana		√	√	√
Bulgaria		√		√
Burkina Faso	√	√		√
Burundi	√	√		
Cambodia		√		
Cameroon	√	√		
Cape Verde	√			
CAR	√	√		
Chad		√		√[c]
Chile		√		√
China		√		√
Colombia		√		√
Comoros		√		
Congo, Democratic Rep.	√	√		
Congo, Republic of	√			
Costa Rica		√		√
Cote d'Ivoire		√		
Croatia		√		
Cuba		√		
Djibouti		√		√
Dominican Republic		√		√
Ecuador		√		√

[a] Column lists those countries that are recipients of Global Fund HIV/AIDS grants
[b] Check marks indicate that NHA has been implemented or is being implemented to date.
[c] Started NHA project but cannot confirm if it was completed.

Country	MAP	Global Fund	PEPFAR	NHA Status
El Salvador		√		√
Equatorial Guinea		√		
Eritrea	√	√	√	√
Estonia		√		√
Ethiopia	√	√	√	√
Gabon		√		
Gambia	√	√		√
Georgia		√		√
Ghana	√	√		√
Guatemala		√		√
Guinea		√		
Guinea- Bissau	√	√		
Guyana		√	√	√
Haiti		√	√	
Honduras		√		√
India		√		√
Indonesia		√		√
Iran		√		√
Jamaica		√		√
Jordan		√		√
Kazakhstan		√		√
Kenya	√	√	√	√
Kyrgyzstan		√		√
Lao PDR		√		
Lesotho		√		
Liberia		√		
Macedonia FYR		√		
Madagascar	√	√		√
Malawi	√	√		√
Mali	√	√		√
Mauritania	√			
Mongolia		√		√
Morocco		√		√
Mozambique		√	√	√
Myanmar		√		
Namibia		√	√	√
Nepal		√		√
Nicaragua		√		√
Niger	√	√		√
Nigeria	√	√	√	√
Pakistan		√		√
Papua New Guinea		√		
Peru		√		√
Philippines		√		√
Romania		√		
Russian Federation		√		√

Country	MAP	Global Fund	PEPFAR	NHA Status
Rwanda	√	√	√	√
Senegal	√	√		[d]
Serbia and Montenegro		√		√
Sierra Leone	√	√		
Somalia		√		
South Africa		√	√	√
Sudan		√		
Suriname		√		√
Swaziland		√		√
Tajikistan		√		
Tanzania	√	√	√	√
Thailand		√		√
Togo		√		√
Turkey		√		√
Uganda	√	√	√	√
Uzbekistan		√		In planning stage
Vietnam		√	√	√
Yemen		√		√
Zambia	√	√	√	√
Zimbabwe		√		√
Percentage of grantees that have or are in process of implementing the NHA framework	62%	66%	93%	

[d] Senegal's NHA has not yet started. Only existing study is a PhD.

Annex C: Mapping of PEPFAR Categories to the NHA Framework

Listing of NHA HIV Categories		Mapping to PEPFAR categories
HC.1	Curative care	
HC.1.1	Inpatient curative care	Palliative care (non-ART care)
HC.1.1.1	PMTCT at delivery	PMTCT
HC.1.3	Outpatient curative care	Palliative care (non-ART care)
HC.1.3.5	STI management	Palliative care (non-ART care)
HC.1.3.6	Treatment and monitoring of OIs (including TB)	Palliative care (non-ART care)
HC.1.3.7	ARV treatment	ART
HC.1.3.8	PMTCT treatment	PMTCT
HC1.3.9	OP care that cannot be disaggregated	Palliative care (non-ART care)
HC.4	Ancillary services	
HC.4.1	Clinical laboratory	Palliative care (non-ART care)[a]
HC.4.2	Diagnostic imaging	Palliative care (non-ART care)
HC.5.1.1+ HC.5.1.2	Pharmaceuticals	
HC.5.1.1.1 + HC.5.1.2.1	ARV drugs	ART
HC.5.1.1.2+ HC.5.1.2..2	OI drugs (TB)	Palliative care (non-ART care)
HC.5.1.9	Pharmaceuticals that cannot be disaggregated	Palliative care (non-ART care)
HC.5.1.3	Other medical non-durables (e.g. condoms)	Other behavior change
HC.6	Prevention and public health programs	
HC.6.1.1	PMTCT treatment	PMTCT
HC.6.2	School health services	*Behavior change (Abstinence and other behavior change)
HC.6.3	Prevention of communicable diseases	Prevention
HC.6.3.1	Voluntary counseling and testing (VCT)	Counseling and testing
HC.6.3.2	Blood safety	Medical transmission[b]

Note: Palliative care (non-ART care)=HC 1.1 + HC1.3(-HC1.3.7), HC5.1.1.2 (OI rugs) + HCR4.1 +AD1.1.3
* Behavior change = a merging of the PEPFAR categories "abstinence" and "other behavior change."
Source: Office of Global AIDS coordinator, US Department of State. 2004. *The President's Emergency Plan for AIDS Relief Indicators, Reporting Requirements, and Guidelines. Revised based on FY 2005 Country Operation Plans*. September 30, 2004. Draft.

[a] Due to difficulties in disaggregation, this amount could include clinical laboratory work associated with ART services. Note also, the NHA HC 4.1classification refers to those clinical lab expenses that occur outside a hospital/health center- i.e. those incurred in an independent lab. Clinical lab expenses at hospitals/ health centers are aggregated within outpatient care expenses.

[b] 'Needle exchange' in the PEPFAR context may fall under 'behavior change'. If it is possible to disaggregate needle exchange from blood safety, then it will be placed under behavior change. If not, then it is placed under medical transmission.

HC .6.3.3.	Post-exposure prophylaxis[c]	Prevention[d]
HC.6.3.4	Information, education, communication program (IEC)	*Behavior change (Abstinence and other behavior change)
HC.6.3.5	STI prevention program	*Behavior change (Abstinence and other behavior change)
HC.6.3.7	Condom distribution programs	Other behavior change
HC.6.3.8	Other prevention programs (incl. specific for TB) and that which cannot be disaggregated	*Behavior change (Abstinence and other behavior change)
HC.6.5	Monitoring and evaluation	Strategic Information
HC.7	Health admin & insurance	Other: policy and systems strengthening (capacity Building)
HC. Nsk	not specified by any kind	Other: policy and systems strengthening (capacity building)
HCR.1	Capital formation for health care provider institutions**	Capital formation (including labs as defined by PEPFAR)[e]
HCR.2	Education & training	Other: policy and systems strengthening (capacity building)
HCR.3	Research & development	Other: policy and systems strengthening (capacity building)
HCR.4.1	Food, hygiene and drinking water control (incl nutritional support)	Palliative care (non-ART care)[f]
AD.1	Mitigation	Palliative care (non-ART care)
AD.1.1.1	Support to widows	Palliative care (non-ART care)
AD.1.1.2	In-kind benefits to PLWHA	Palliative care (non-ART care)
AD.1.1.3	Psychosocial support to families [g]	Palliative care (non-ART care)
AD.1.2	Non-health services to orphans and vulnerable children	Orphans and vulnerable children
AD.1.2.1	School fees for AIDS orphans	Orphans and vulnerable children
AD.1.2.2	Psychosocial support to OVC	Orphans and vulnerable children[h]
AD.2	Policy advocacy (includes support to national strategic plan for HIV/AIDS (lobbying)	Other: Policy and systems strengthening (capacity building)
AD.3	Non-health IEC (includes social stigma reduction campaigns	Other: Policy and systems strengthening (capacity building)
AD.4	Empowerment and organization (includes legal services)	Divide between “Other policy and systems strengthening" and palliative care depending upon the amount going towards legal services[i]

[c] The NHA HC.6.3.3 classification of post-exposure prophylaxis can include 1) a short course of ARV drugs, 2) paramedical exams necessary to test sources for HIV, and 3) appropriate counseling.
[d] Since the PEPFAR M&E report classifies ART given for PMTCT under ‘PMTCT’ and not ‘Treatment’, the same logic is applied for keeping post-exposure prophylaxis within the ‘Prevention’ category.
[e] Because it is difficult to determine whether capital formation is targeted only for laboratories, a modified PEPFAR category has been created, namely “capital formation (including labs as defined by PEPFAR).”
[f] In the PEPFAR M&E report, “palliative care” includes nutritional support.
[g] Includes all non-medical services provided to outpatients to ensure the ongoing psychological and social problems of HIV infected individuals, their partners, families, and caregivers. This would include mental health and supportive services available at facility level or community level, follow-up counseling services to ensure psychosocial support and adherence to ARV treatment, in high HIV prevalence areas, activities provided to nurses, physicians, and other health care-related personnel to cope with emotional stress due to provision of care to a large number of HIV/AIDS cases.
[h] The PEPFAR M&E report specifies that “an HIV-positive OVC receiving palliative care services among other services within an OVC program should only be counted under OVC to avoid double counting under the total care count.” Given this specification, psychosocial care for OVCs should be included under OVC and not within palliative care.

Annex D: Mapping of NHA Classifications to Kenya's National Strategic Plan for HIV/AIDS (2005-2010)

Listing of NHA HIV Categories		Mapping to KNASP target areas
HC.1	Curative care	
HC.1.1	Inpatient curative care	COMBINATION OF PREVENTION[a] IMPROVEMENT OF QUALITY OF LIFE
HC.1.1.1	PMTCT at delivery	1) PREVENTION
HC.1.3	Outpatient curative care	COMBINATION OF PREVENTION AND IMPROVEMENT OF QUALITY OF LIFE
HC.1.3.5	STI management	1) PREVENTION
HC.1.3.6	Treatment and monitoring of OIs (including TB)	2) IMPROVEMENT OF QUALITY OF LIFE
HC.1.3.7	ARV treatment	2) IMPROVEMENT OF QUALITY OF LIFE
HC.1.3.8	PMTCT treatment	1) PREVENTION
HC1.3.9	OP care that cannot be disaggregated	2) IMPROVEMENT OF QUALITY OF LIFE[b]
HC.4	Ancillary services	
HC.4.1	Clinical laboratory	2) IMPROVEMENT OF QUALITY OF LIFE
HC.4.2	Diagnostic imaging	2) IMPROVEMENT OF QUALITY OF LIFE
HC.5.1.1+ HC.5.1.2	Pharmaceuticals	2) IMPROVEMENT OF QUALITY OF LIFE
HC.5.1.1.1 + HC.5.1.2.1	ARV drugs	2) IMPROVEMENT OF QUALITY OF LIFE
HC.5.1.1.2 + HC.5.1.2..2	OI drugs (TB)	2) IMPROVEMENT OF QUALITY OF LIFE
HC.5.1.9	Pharmaceuticals that cannot be disaggregated	2) IMPROVEMENT OF QUALITY OF LIFE
HC. 5.1.3	Other medical non-durables (e.g. condoms)	1) PREVENTION
HC.6	Prevention and public health programs	1) PREVENTION
HC.6.1.1	PMTCT treatment	1) PREVENTION
HC.6.2	School health services	1) PREVENTION
HC.6.3	Prevention of communicable diseases	1) PREVENTION
HC.6.3.1	Voluntary counseling and testing (VCT)	1) PREVENTION
HC.6.3.2	Blood safety	1) PREVENTION
HC .6.3.3.	Post-exposure prophylaxis	1) PREVENTION
HC.6.3.4	Information, education, communication program (IEC)	1) PREVENTION
HC.6.3.5	STI prevention program	1) PREVENTION

[a] Partial allocation to KNASP target area of 'prevention' due to possible administration of PMTCT services during deliveries.
[b] This is an assumption- that the remainder of OP care, which cannot be disaggregated, should be placed under KNASP target area of "Improvement of quality of life."

HC.6.3.7	Condom distribution programs	1) PREVENTION
HC.6.3.8	Other prevention programs (incl. specific for TB) and that which cannot be disaggregated	1) PREVENTION
HC.6.5	Monitoring and evaluation	4) PROVISION OF SUPPORT SERVICES
HC.7	Health admin & insurance	4) PROVISION OF SUPPORT SERVICES
HC. Nsk	not specified by any kind	OTHER
HCR.1	Capital formation for health care provider institutions**	4) PROVISION OF SUPPORT SERVICES
HCR.2	Education & training	4) PROVISION OF SUPPORT SERVICES
HCR.3	Research & development	4) PROVISION OF SUPPORT SERVICES

Annex E: Mapping of NHA Classifications to Rwanda's Monitoring and Evaluation Plan for HIV/AIDS (2002-2006)

Listing of NHA HIV Categories		Mapping to Rwanda Strategic Plan categories
HC.1	Curative care	
HC.1.1	Inpatient curative care	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HC.1.1.1	PMTCT at delivery	1) PREVENTION
HC.1.3	Outpatient curative care	
HC.1.3.5	STI management	1) PREVENTION[a]
HC.1.3.6	Treatment and monitoring of OIs (including TB)	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)[b]
HC.1.3.7	ARV treatment	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HC.1.3.8	PMTC treatment	1) PREVENTION
HC1.3.9	OP care that cannot be disaggregated	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HC.4	Ancillary services	
HC.4.1	Clinical laboratory	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HC.4.2	Diagnostic imaging	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HC.5.1.1+ HC.5.1.2	Pharmaceuticals	
HC.5.1.1.1 + HC.5.1.2.1	ARV drugs	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HC.5.1.1.2+ HC.5.1.2.2	OI drugs (TB)	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)[c]
HC.5.1.9	Pharmaceuticals that cannot be disaggregated	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)[d]

[a] This is placed under 'prevention' because in the M&E report, there is an indicator called "STI care and prevention" listed under the strategic component.
[b] This is placed under 'Improvement of Care', because the M&E report has another indicator called "diagnosis and treatment of OIs" listed under this strategic component.
[c] This is an assumption. Note, OI drugs aren't mentioned in the "care" category at all nor are they mentioned at the indicator level with the exception of TB prophylaxis.

HC. 5.1.3	Other medical non-durables (e.g. condoms)	1) PREVENTION
HC.6	Prevention and public health programs	1) PREVENTION
HC.6.1.1	PMTCT treatment	1) PREVENTION
HC.6.2	School health services	1) PREVENTION
HC.6.3	Prevention of communicable diseases	1) PREVENTION
HC.6.3.1	Voluntary counselling and testing (VCT)	1) PREVENTION
HC.6.3.2	Blood safety	1) PREVENTION
HC .6.3.3.	Post exposure prophylaxis	1) PREVENTION[e]
HC.6.3.4	Information, education, communication program (IEC)	1) PREVENTION
HC.6.3.5	STI prevention program	1) PREVENTION
HC.6.3.7	Condom distribution programs	1) PREVENTION
HC.6.3.8	Other prevention programs (incl. specific for TB) and that which cannot be disaggregated	1) PREVENTION
HC.6.5	Monitoring and evaluation	2) STRENGTHEN SURVEILLANCE OF EPIDEMIC
HC.7	Health admin & insurance	5) PROMOTION OF MULTISECTORAL PARTNERSHIP AND COORDINATION
HC. Nsk	not specified by any kind	OTHER
HCR.1	Capital formation for health care provider institutions**	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HCR.2	Education & training	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
HCR.3	Research & development	5) PROMOTION OF MULTISECTORAL PARTNERSHIP AND COORDINATION
HCR.4.1	Food, hygiene and drinking water control (incl nutritional support)	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
AD.1	Mitigation	
AD.1.1.1	Support to widows	4) POVERTY AND GENDER IN BATTLE AGAINST HIV
AD.1.1.2	In-kind benefits to PLWHA	4) POVERTY AND GENDER IN BATTLE AGAINST HIV
AD.1.1.3	Psychosocial support to families	4) POVERTY AND GENDER IN BATTLE AGAINST HIV
AD.1.2	Non-health services to orphans and vulnerable children	4) POVERTY AND GENDER IN BATTLE AGAINST HIV[f]
AD.1.2.1	School fees for AIDS orphans	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
AD.1.2.2	Psychosocial support to OVC	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)
AD.2	Policy advocacy (includes support to national strategic plan for HIV/AIDS (lobbying)	5) PROMOTION OF MULTISECTORAL PARTNERSHIP AND COORDINATION
AD.3	Non-health IEC (includes social stigma reduction campaigns	4) POVERTY AND GENDER IN BATTLE AGAINST HIV
AD.4	Empowerment and organization (includes legal services)	3) COMPREHENSIVE CARE AND SUPPORT FOR PERSONS INFECTED AND/OR AFFECTED BY HIV (INCLUDING SPOUSES, ORPHANS, AND WIDOWS)

[d] This is an assumption.
[e] Note, in the Rwanda M&E report, TB prophylaxis for HIV positive cases is an indicator under "improve care."
[f] This has been placed under the "poverty and gender in battle against HIV" category, because a number of indicators for orphans and vulnerable children are listed within this strategic component in the M&E report.

Annex F: Mapping of NHA Classifications to Zambia's Strategic Plan for HIV/AIDS 2002-2005

Listing of NHA HIV Categories		Mapping to Zambia Strategic Plan Specific Objectives
HC.1	Curative care	
HC.1.1	Inpatient curative care	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons[a]
HC.1.1.1	PMTCT- at delivery	2) MTCT of HIV minimized
HC.1.3	Outpatient curative care	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.1.3.5	STI management	1) Promote implementation of multi-sect oral behavior change campaigns and health seeking behaviors
HC.1.3.6	Treatment and monitoring of OIs (including TB)	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.1.3.7	ARV treatment	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.1.3.8	PMTCT treatment	2) MTCT of HIV minimized
HC1.3.9	OP care that cannot be disaggregated	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons[b]
HC.4	Ancillary services	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.4.1	Clinical laboratory	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.4.2	Diagnostic imaging	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.5.1.1+ HC.5.1.2	Pharmaceuticals	
HC.5.1.1.1 + HC.5.1.2.1	ARV drugs	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.5.1.1.2+ HC.5.1.2..2	OI drugs (TB)	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.5.1.9	Pharmaceuticals that cannot be disaggregated	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC. 5.1.3	Other medical non-durables (e.g. condoms)	1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors
HC.6	Prevention and public health programs	
HC.6.1.1	PMTCT treatment	2) MTCT of HIV minimized

[a] Expenditures on all IP care with the exception of PMTCT should fall under specific objective 5.
[b] This is an assumption- that the bulk of OP care which cannot be disaggregated should fall under specific objective 5.

HC.6.2	School health services	6) To provide improved care and support services for the OVC and others affected
HC.6.3	Prevention of communicable diseases	1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors
HC.6.3.1	Voluntary counseling and testing (VCT)	4) Improve quality of life of all HIV/AIDS infected persons without symptoms
HC.6.3.2	Blood safety	3) Ensure transfusion and use of sharp instruments safe[c]
HC .6.3.3.	Post exposure prophylaxis	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HC.6.3.4	Information, education, communication program (IEC)	1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors
HC.6.3.5	STI prevention program	1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors
HC.6.3.7	Condom distribution programs	1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors
HC.6.3.8	Other prevention programs (incl. specific for TB) and that which cannot be disaggregated	1) Promote implementation of multi-sectoral behavior change campaigns and health seeking behaviors[d]
HC.6.5	Monitoring and evaluation	7) To improve HIV/AIDS information management and decision making
HC.7	Health admin & insurance	8) To assure impartial, transparent and effective programme operations
HC. Nsk	Not specified by any kind	OTHER
HCR.1	Capital formation for health care provider institutions**	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
HCR.2	Education & training	Split between SO 5 and SO1
HCR.3	Research & development	7) To improve HIV/AIDS information management and decision making
HCR.4.1	Food, hygiene and drinking water control (incl nutritional support)	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
AD.1	Mitigation	
AD.1.1.1	Support to widows	6) To provide improved care and support services for the OVC and others affected
AD.1.1.2	In-kind benefits to PLWHA	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
AD.1.1.3	Psychosocial support to families	6) To provide improved care and support services for the OVC and others affected
AD.1.2	Non-health services to orphans and vulnerable children	6) To provide improved care and support services for the OVC and others affected
AD.1.2.1	School fees for AIDS orphans	6) To provide improved care and support services for the OVC and others affected
AD.1.2.2	Psychosocial support to OVC	6) To provide improved care and support services for the OVC and others affected
AD.2	Policy advocacy (includes support to national strategic plan for HIV/AIDS (lobbying)	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons
AD.3	Non-health IEC (includes social stigma reduction campaigns	4) Improve quality of life of all HIV/AIDS infected persons without symptoms
AD.4	Empowerment and organization (includes legal services)	5) To provide appropriate care, support and treatment to HIV/AIDS infected persons

[c] Note, needle exchange may be included in the blood safety category.
[d] This is an assumption- that the remaining preventive and public health program expenditures which cannot be disaggregated fall under specific objective 1.

Annex G: References

Ahmed, Sultan. 2003. *Purchasing Power Parity (PPP) for International Comparison of Poverty: Sources and Methods.* World Bank. http://siteresources.worldbank.org/ICPINT/Resources/poverty_PPP_Data_rev2.doc

Bautista, Sergio Antonio, Tania Dmytraczenko, Gilbert Kombe, and Stefano Bertozzi, Revised June 2003. *Costing of HIV/AIDS Treatment in Mexico.*Technical Report No. 020. Bethesda, MD: The Partners for Health Reform*plus* Project, Abt Associates Inc.

Centers for Disease Control and Prevention. April 24, 1998. Report of the NIH Panel to Define Principles of Therapy of HIV Infection and Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents. *Morbidity and mortality weekly report (MMWR)* 47(RR-5).

De S., T. Dmytraczenko, C. Chanfreau, M. Tien, and G. Kombe. 2004. *Methodological Guidelines for conducting a National Health Accounts subaccount for HIV/AIDS.* Bethesda, MD: The Partners for Health Reform*plus* Project, Abt Associates Inc.

Epstein, B. 2004 The Demographic Impact of HIV/AIDS. In *Macroeconomics of HIV/AIDS.* Washington, DC:International Monetary Fund.

Garg, C., T. Dmytraczenko, J. Izazola, V. Tangcharoensathien, T Edejer, and D. Evans. 2005. *Development of a framework to measure additionality using three country case studies.* Geneva: World Health Organization.

Global Fund to Fight AIDS, Tuberculosis and Malaria. 30 January 2004. *The Global Fund Acts to Secure Results for its Programs in Ukraine*. Press Release. The Global Fund Media Center. www.theglobalfund.org/en/media.

Global HIV Prevention Working Group. 2004. *HIV Prevention in the era of expanded treatment access.* www.gatesfoundation.org, www.kaisernetwork.org.

Government of Kenya, National AIDS Control Council. 2005. *Kenya National AIDS Strategic Plan 2005-2010 final draft.* Nairobi, Kenya.

Government of Kenya, United Nations. 2004. *Millennium development goals; Progress Report for Kenya 2003.* Nairobi, Kenya.

Government of the Republic of Zambia, UN. 2005. *Zambia Millennium Development Goals Report 2003*. Lusaka, Zambia

Government of the Republic of Zambia. 2003. *National HIV/AIDS Intervention Strategic Plan 2002-2005.* Lusaka, Zambia.

HM Treasury and Department for International Development. 2003. *International Finance Facility proposal.* www.hm-treasury.gov.uk/documents/international_issues/int_gnd_intfinance.cfm

International Community of Women Living with HIV/AIDS. 2004. *Access to care, treatment, and support (ACTS).* ICW Vision Paper 2.

International Monetary Fund. 2004. *Macroeconomics of HIV/AIDS.* Washington, DC.

International Monetary Fund. September 2005. *World Economic Outlook Database*. Washington, DC.

Kaiser Family Foundation, Royal African Society, Overseas Development Initiative. 2005. *The long-term financing implications of the HIV/AIDS pandemic: Building the international effort to deliver resources*. Meeting Summary. London, UK: Marlborough House. June 30.

Medecins Sans Frontieres (MSF). 2005. *Forcing patients to pay for AIDS care endangers treatment success*. Presentation at International Conference on AIDS and STIs in Africa, in Abuja, Nigeria. December 6.

Nanda, P. 2002. Gender Dimensions of User Fees: Implications for women's utilization of health care. *Reproductive Health Matters.*

OECD (Organization for Economic Cooperation and Development). 2000. *A System of Health Accounts*. Geneva.

Office of Global AIDS coordinator, US Department of State. 2004. *The President's Emergency Plan for AIDS Relief Indicators, Reporting Requirements, and Guidelines*. Revised based on FY 2005 Country Operation Plans. September 30, 2004. Draft.

Phiri, F. and M. Tien. 2004. *Zambia National Health Accounts 2002: Main Findings.* Bethesda, MD: The Partners for Health Reform*plus* Project, Abt Associates Inc.

Republic of Rwanda Ministry of Finance and Economic Planning Statistics Department. 2002. *Integrated Household Living Conditions Survey in Rwanda 2000-2001*. Kigali, Rwanda.

Republic of Rwanda, Ministry of Health. 2005. *Rwanda National Health Accounts 2002.* Kigali, Rwanda.

Republic of Rwanda, Office of the President of the Rwandan Republic. 2003. *National Plan for monitoring and evaluation of HIV/AIDS programs (2002-2006).* National AIDS Control Commission. Kigali, Rwanda.

UNAIDS. 2003. *Monitoring the declaration of commitment on HIV/AIDS; Guidelines on construction of core indicators.* United Nations General Assembly Special Session on HIV/AIDS. Geneva.

UNAIDS. 2004. *Report on the global AIDS epidemic; 4th global report.* Geneva.

UNAIDS. 2005. *AIDS in Africa: Three scenarios to 2025.* Geneva.

United Nations. 2004. *Millennium development goals; status report 2003.* Kigali, Rwanda.

USAID. 2004. *The President's Emergency Plan for AIDS Relief Indicators, Reporting Requirements and Guidelines.* Revised based on FY 2005 Country Operation Plans September 30, 2004. Draft. Washington DC.

USAID/Rwanda. 2004. *USAID/Rwanda Integrated Strategic Plan 2004-2009; HIV/AIDS Strategy.* Kigali, Rwanda.

World Bank. 2005. Appendix J: Survey of World Bank country directors for African countries participating in the multi-country AIDS programs. *Committing to results: improving the effectiveness of HIV/AIS assistance.* Washington, DC.

World Health Organization, World Bank, and USAID. 2003. *Guide to producing national health accounts; with special application for low-income and middle-income countries.* Geneva: Switzerland.

World Health Organization. 2000. *Human rights, women and HIV/AIDS.* Fact sheet No. 247. June 2000.