

The System-Wide Effects of the Global Fund to Fight AIDS, Tuberculosis and Malaria: A Conceptual Framework

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- ▲ *Delivery of quality services by health workers.*
- ▲ *Availability and appropriate use of health commodities.*

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Abstract

While the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) has an explicit focus on three diseases rather than on entire national health systems, certain operations of the Global Fund are designed to ensure a good fit between the disease-specific focus and health care systems. In addition, the GFATM may have system-wide effects due to the sheer magnitude of the resources it is distributing (particularly in low income countries) and its emphasis on efficient and rapid disbursement. These effects could be on equity, efficiency, access, quality, and sustainability of health systems, which in turn influence the utilization and coverage of non-focal services, and, ultimately, the burden of diseases from sources other than the focal diseases. The effects could be intentional or unintentional, and the unintentional effects could have positive or negative consequences for health system performance.

To help anticipate possible effects of the GFATM on the broader health system, and to provide a basis for monitoring and evaluating how the Global Fund disbursements affect national health care systems, this paper presents a conceptual framework that identifies the channels through which GFATM disbursements might have health system-wide effects. In doing so, it reviews the design, selection, and implementation processes associated with GFATM grant-making as well as the strategies and content of approved proposals, and discusses the potential effects each activity or strategy will have on the stewardship, resource development, financing, and service delivery functions of the health care system. The report concludes that it is of critical importance to monitor and evaluate the effects of the Global Fund on broader health systems, and identifies four aspects of systems that the Global Fund appears particularly likely to affect, namely: the policy environment, the public/private mix, human resources, and pharmaceuticals and commodities.

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Acronyms

| | |
|---------------------------|---|
| ART | Anti-retroviral Therapy |
| ARV | Anti-retrovirals |
| BCC | Behavior Change Communication |
| CCM | Country Coordinating Mechanism |
| CHW | Community Health Worker |
| DOH | Department of Health |
| DOTS | Directly Observed Treatment (for tuberculosis) |
| GAVI | Global Alliance for Vaccines and Immunization |
| GFATM | Global Fund to Fight AIDS, TB and Malaria |
| HAART | Highly Active Anti-Retroviral Therapy |
| HBC | Home-based Care |
| HIV/AIDS | Human Immunodeficiency Syndrome/Acquired Immune Deficiency Syndrome |
| HIS | Health Information System |
| HR | Human Resources |
| IEC | Information, Education, and Communication |
| ITN | Insecticide-treated Nets |
| KAP | Knowledge, Attitudes, and Practices |
| LFA | Local Funding Agent |
| MAP | Multi-country HIV/AIDS Program (World Bank) |
| M&E | Monitoring and Evaluation |
| MIS | Management Information System |
| MTCT | Mother to Child Transmission |
| NGO | Nongovernmental Organization |
| NVP | Nevaripine |
| OI | Opportunistic Infection |
| OR | Operational Research |
| OVC | Orphans and Vulnerable Children |
| PHR^{plus} | Partners for Health Reform ^{plus} |
| PLWHA | People Living with HIV/AIDS |
| PMTCT | Prevention of Mother to Child Transmission |
| PR | Principal Recipient |
| PRSP | Poverty Reduction Strategy Paper |
| SCC | Short-course Therapy |
| SWAp | Sector Wide Approach |
| SWEF | System-wide Effects of the Fund |
| TA | Technical Assistance |
| TB | Tuberculosis |
| TRP | Technical Review Panel |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| VCT | Voluntary Counseling and Treatment |
| WHO | World Health Organization |

Preface

This paper was prepared as a background paper for a meeting in Geneva (June 2-3, 2003) on the health care system-wide effects of the Global Fund. As a result of the Geneva meeting, a collaborative research network on the system-wide effects of the fund was established.

The System-wide Effects of the Fund (SWEF) network is a collaborative research network, composed of research organizations in the south and the north that seek to understand how monies being disbursed by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), as well as other significant sources of funding for HIV/AIDS, TB, and malaria (such as the World Bank's Multi-Country HIV/AIDS Program and the Presidential Initiative), affect the broader health care systems of recipient countries.

While it is equitable, just, and necessary for countries in the north to substantially increase funding to fight these diseases, it is unclear how best this money should be spent. Funding mechanisms such as the Global Fund may have a variety of direct and indirect effects upon health care systems that could be positive or negative. Furthermore, to be effective and sustainable in the long term, interventions will depend on having well-functioning health systems in place.

The SWEF network is committed to addressing these difficult policy questions in a timely, empirical, and objective manner that is sensitive to the complex policy environment within which initiatives such as the Global Fund are operating. The SWEF network strives to engage key stakeholders, at the national and global levels, in conceptualizing the research, interpreting study findings, and considering implications for policy.

Further details about the SWEF network are available at: <http://www.phrplus.org/swef.html>

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We benefited immensely from discussion of an earlier draft of this paper at a workshop on Monitoring and Evaluation of the System-wide Effects of the Global Fund to Fight AIDS, TB and Malaria, in Geneva in June 2003. We would like to thank all participants in this meeting for their thoughtful comments. Since that point in time, the development of the System-wide Effects of the Fund network has further fueled our thinking. Thanks to all the committed and engaged individuals involved in this.

Executive Summary

The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) has an explicit focus on three diseases rather than a system-wide focus; however, aspects of the operations of the fund are designed to ensure a good fit between the disease-specific focus and the broader health care system. In addition, the GFATM may have system-wide effects on a national health care system due to the sheer magnitude of the resources it is distributing, especially in low-income countries. Finally, the Global Fund's mode of operation, in particular its emphasis on efficient and rapid disbursement, marks a departure from traditional modes of providing development assistance, and this in itself may have a significant effect upon health care systems.

This paper presents a conceptual framework that identifies the channels through which disbursements under the GFATM might have broader effects on national health care systems. This conceptual framework is intended to serve as a basis for future monitoring and evaluation efforts.

The overarching conceptual framework suggests that the design and implementation processes the GFATM requires and the programmatic interventions it funds will not only have a direct impact on the targeted diseases but on the functioning of the broader health care system as well. In turn, effects upon health care system performance (equity, efficiency, access, quality, and sustainability) are likely to be observed. These broader system-wide effects will influence the utilization and coverage of nonfocal services, and, ultimately, the burden of diseases from sources other than the focal diseases. The effects GFATM-supported activities will have on the broader health care system could be intentional or unintentional, and the unintentional effects could have positive or negative consequences for health system performance. The system-wide effects that occur in-country will be affected by the nature of the country context, in particular, the macroeconomic, political, and development assistance context; government and health system capacity; and service delivery structures.

This paper reviews in some detail the design, selection, and implementation processes associated with Global Fund grantmaking, as well as the strategies and content of approved proposals. Countries are given considerable freedom in what they propose to the GFATM, as long as their proposal is perceived to be technically sound and in alignment with the resources requested and available. Accordingly, GFATM supports a diverse range of activities; however, it is possible to identify some common features of GFATM proposals. For example, GFATM-supported activities frequently do the following:

- ▲ Devote a substantial proportion of funding to the purchase of drugs and commodities (particularly anti-retrovirals and insecticide-treated nets)
- ▲ Invest in human resources, especially staff training
- ▲ Promote a greater role for the private sector in-service delivery
- ▲ Include the purchase of new equipment and renovation of facilities
- ▲ Emphasize the need to strengthen referral systems

This paper discusses the potential effects each of the GFATM-supported activities or strategies identified will have on the stewardship, resource development, financing, and service delivery functions of the health care system.

In terms of *stewardship*, it is hypothesized that GFATM support might intensify the incorporation of nontraditional actors, particularly private actors, in policy processes, bring about implicit changes in policies and priorities, and present regulatory challenges to government if growth in the private sector occurs.

In the area of *resource development*, human resource issues appear particularly important, given the shortage of skilled health workers in many low-income countries. Attempts to scale up the assault on the focal diseases could distract health workers from other priorities, lead to price increases or price differentials between those health workers working on focal diseases and those that are not, and cause shifts in the distribution of health workers that could potentially have negative implications for equity.

The *financing functions* of the health care system may be affected by the increased recurrent budget implications of capital investment supported by the Global Fund. There are also complex questions surrounding the principal of “additionality” that GFATM requires. Finally, while the GFATM aims to operate simplified and rapid disbursement mechanisms, the extent to which parallel budget and accounting systems will be established remains to be seen.

GFATM-supported activities are likely to affect *service delivery* in a number of ways. It seems likely that in some contexts GFATM support will shift the balance between public and private sectors, and could potentially lead to greater “verticalization” of service delivery. Vertical and parallel support systems, particularly pharmaceutical distribution systems, but also health information systems and management information systems, may also be developed. Several GFATM-supported strategies emphasize the need for improving referral systems.

This paper discusses how the different country contexts might mediate the effects of the GFATM on the functioning of broader health care systems.

In conclusion, there are four aspects of the health care system that the Global Fund is likely to affect in many different settings. The following have been identified as priorities for monitoring and evaluating the Global Fund:

- ▲ Effects on the policy environment
- ▲ Effects on the public/private mix
- ▲ Effects on human resources
- ▲ Effects on pharmaceuticals and commodities

Such effects could be measured at a number of different points, including the Global Fund’s impact on processes within health systems, the performance of health systems, the utilization and coverage of nonfocal diseases, and final outcomes in terms of morbidity and mortality due to nonfocal diseases.

Given the disparate strategies countries have adopted regarding their health systems and the difficulty of attributing observed effects to GFATM-supported activities, monitoring and evaluating the system-wide effects of the GFATM is unlikely to be a straightforward process. However, it seems to be an important and necessary initiative to ensure that the large amounts of money GFATM spends will have the maximum positive effects possible.

1. Background and Objectives

1.1 Background

In the past decade, there has been a rising concern that the poorest nations are being overwhelmed by a heavy and ever-increasing burden of disease. Conditions of poverty have made their populations much more vulnerable to communicable diseases and restricted their governments from financing appropriate steps to prevent the spread of these diseases or treat their effects. Three major communicable diseases – HIV/AIDS, tuberculosis (TB), and malaria – are responsible for a very large and growing share of all the causes of illnesses and deaths among the world’s poor. At the same time these three diseases have been growing in importance, the relatively meager financial resources applied to their prevention and treatment have been too inadequate to have much meaningful impact.

The recent establishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) was designed to mount a major effort to raise and distribute the huge sums of money needed to attack these deadly diseases. Since the establishment of the GFATM in 2000, grants totaling about \$ 3.6 billion have been approved to fund program interventions (over a five-year period) in 85 countries.

While the GFATM has stated its commitment to use its funds to support programs that address the three diseases “in ways that contribute to the strengthening of health systems,” the Fund’s primary goal is to “focus its resources on increasing coverage of critical and cost-effective interventions against the three diseases.”¹ Because the Fund’s grantmaking will therefore greatly expand the resources available to programs targeting the three diseases, it should have substantial impact on morbidity and mortality caused by these diseases. However, it can also be expected to indirectly affect various elements of the broader system for delivering health and medical care within a country, or impact the general capacity of the system to address the wider range of health problems. These system-wide effects could be both positive and negative. In any case, they are likely to be significant, especially in view of the relatively large amounts of money that the GFATM is granting.

To be sustainable in the long run, any interventions supported by the GFATM will ultimately have to depend, to some degree, on improvements in national health systems of support – the organizational, managerial, and financial resources generally available for (and applied to) health. “Scaling up” the initial interventions to much larger programs will be difficult to achieve and maintain without concomitant improvements in the health care systems supporting those programs, regardless of the amount of external assistance made available.² It is therefore critical for the GFATM to monitor and evaluate how its funded interventions are interacting with national health systems. Such monitoring and evaluation activities should try to identify where and how existing country systems could be strengthened in support of the

¹ www.globalfundatm.org/overview, “Scope,” accessed April 25, 2003.

² For many recipients of GFATM funds, the programs funded will most likely not be fully sustainable without some level of continuing external assistance.

interventions that target the three diseases, as well as identify ways to mitigate any potential negative system-wide effects of resource flows directed to the three diseases.³

This paper presents a conceptual framework mapping the potential system-wide effects of interventions funded by the Global Fund. This framework is intended to serve as a foundation for future monitoring and evaluation efforts. After articulating its objectives and providing a brief overview of the GFATM in Section 2, the paper presents the conceptual framework for analyzing the impact in Section 3. Section 4 presents the first two elements in the conceptual framework, namely the design and implementation processes the Global Fund uses and a summary of GFATM-supported programs and strategies. Section 5 explores the mechanisms channeling or mediating the impacts of funded interventions on the health care system. Finally, Section 6 draws conclusions.

1.2 Objectives

The objective of this paper is to develop a conceptual framework that identifies the channels through which disbursements under the GFATM might have broader effects on national health care systems.

While GFATM-funded interventions may affect the delivery of other priority health care services, this is not the explicit focus of concern. Nonetheless, by focusing on how the GFATM affects the health care system as a whole, the work should identify implications for other priority services. Similarly, this paper does not directly address how the development (or lack of development) of health care systems affects the ability of grant recipients to implement their proposed work plans in a timely manner. It is likely that the future monitoring and evaluative work would provide information relevant to this question.

³ Similar observations were made about the operations of the Global Alliance for Vaccines and Immunization (GAVI) and their relevance as a model for the GFATM in Brughia, Starling, and Walt (2002).

2. The Global Fund and its Role in Health Care Systems

2.1 Objectives of GFATM

The principal purpose of the GFATM is to attract, manage, and disburse additional resources that will make a sustainable and significant contribution to the reduction of infections, illness, and deaths from the three diseases, thereby mitigating the impact they cause in countries in need.⁴

The principles underlying the GFATM state that it will do the following:

- ▲ Be a financial instrument, not an implementing entity
- ▲ Base its work on programs that reflect national ownership
- ▲ Ensure that the programs that it funds will
 - △ use efficient and effective disbursement mechanisms which minimize transaction costs (and require only “light” reporting),
 - △ operate in a transparent and accountable manner, and
 - △ be based on clearly defined responsibilities.

The GFATM is the latest example of a relatively new approach to providing development assistance in the health sector. Like the Global Alliance for Vaccines and Immunization (GAVI), the GFATM gives particular emphasis to the following:

- ▲ The use of public/private partnerships, both in fundraising and governance activities, as well as in the recipient’s programmatic activities in the use of donated funds
- ▲ The achievement of results, by committing itself to support strategies that focus on clear and measurable results
- ▲ Evaluation of proposals by an independent technical review panel that submits recommendations to the GFATM for funding decisions
- ▲ Efficient processes for programming and utilizing resources

⁴ The programs and activities funded by the GFATM are also expected to contribute to reducing poverty in recipient countries and to advancing the achievement of the Millennium Goals.

2.2 Summary of GFATM Activities to Date

The GFATM has completed two rounds of grants and is currently (October 2003) in the process of awarding a third round.⁵ The request for the third round was for proposals that “support the scale up of effective existing programs and innovative projects that meet the Fund’s criteria (described below) and that have a clear demonstration of how the resources sought from the Global Fund will achieve additional results in partnership with existing programs.”⁶

During the first two rounds, GFATM awarded grants for 160 disease-specific programs in 85 countries. These awards committed GFATM to provide almost \$1.5 billion for the first two years of the programs. While the total of the awards represented a total commitment of \$3.58 billion over five years, continuation of funding after the second year is contingent on satisfactory performance during the first two years, as well as on the availability of GFATM funds.

For many countries, particularly low-income, the amounts pledged under the GFATM represent significant amounts compared with other funds already earmarked for the three focal diseases (Table 1). The high ratios in Table 1 reflect not only the significance of the Global Fund as a funding source, but also the fact that only limited amounts of funds in-country are currently earmarked for specific diseases. Table 1 also suggests that in some low-income countries the amounts the Global Fund is disbursing are relatively large, even when compared with national health care budgets.

Table 1. GFATM Expenditure as a Percentage of Total Funding Earmarked for the Disease and Total Public Health Spending in Selected Countries*

| | Ethiopia | Ghana | India** | Nicaragua | South Africa | Thailand | Uganda |
|---|----------|--------|---------|-----------|--------------|----------|--------|
| GFATM spending on HIV/AIDS as % all earmarked HIV spending | 319.4% | n/a | 27.8% | 33.3% | 69.4%*** | 72.9% | 132.5% |
| GFATM spending on TB as % all earmarked TB spending | 28.1% | n/a | 38.3% | 145.3% | n/a | n/a | 200.0% |
| GFATM spending on malaria as % all earmarked malaria spending | 252.3% | 164.3% | n/a | 1000.0% | n/a | 5.9% | 276.2% |
| Total GF spending as % total public health spending† | 36.7% | 3.9% | 0.6% | 2.8% | 0.4% | 0.7% | 18.7% |

Source: Country proposals to the GFATM (based largely on 2002 data, 2001 for South Africa and Nicaragua)

* The sample of countries presented here and discussed further in Section 4.2.2 is based largely on convenience. Four countries (Ghana, South Africa, Thailand, and Uganda) were included in the analysis because they will be present at the Geneva meeting. Furthermore, this group of countries includes some regional diversity and a mix of low- and middle-income countries. India and Nicaragua represent fairly substantial investments by the fund in South Asia and Latin America, respectively. Ethiopia and Zambia were included as they represent low-income countries in sub-Saharan Africa that perhaps stand to gain most from the GFATM but also face substantial capacity constraints. Zambia is omitted from this table, as data were not available.

** The figures for India represent spending by central government and not necessarily by states. State governments are the primary source of funding for much curative care in India.

*** For South Africa, HIV/AIDS and TB amounts are combined.

† In some instances, this amount includes external donor funds that flow through government, which in some cases substantially outweigh government’s own contribution.

⁵ For the first round of grants, the call was issued on February 4, 2002, with proposals due by March 10, 2002, and awards decided at the second meeting of the Board of the Fund on April 22-24, 2002. For the second round, the call was issued on July 2, 2002, with proposals due by September 27, 2002, and awards decided at the third board meeting on October 10-11, 2002.

⁶ From “Call for Proposals, Third Round,” (GFATM, March 13, 2003). The first two calls for proposals used essentially this same language.

Figure 1 shows the distribution of the funds by disease targeted, and Figure 2 illustrates the distribution of funds by geographic region of the world. Of those awards made, programs to combat HIV/AIDS will receive the majority of funding during the first two years (56 percent). A majority of funds will go to Africa (62 percent).

Figure 1. Percentage of Approved Two-year Commitments by Disease, Rounds 1 & 2

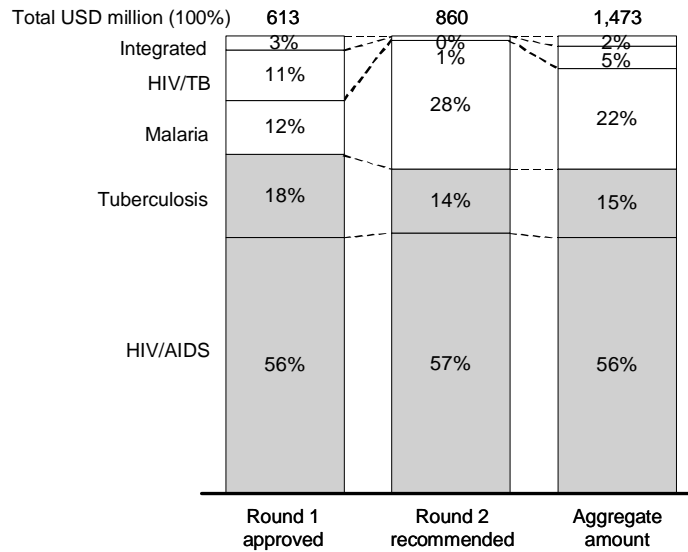
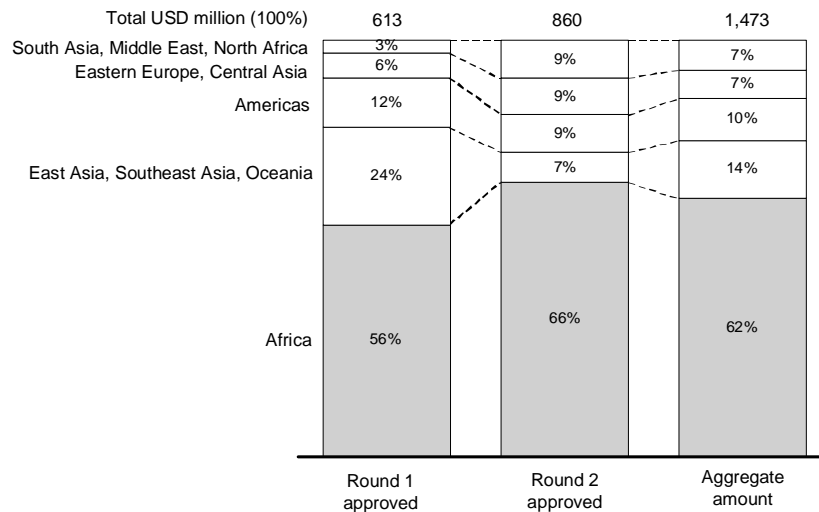


Figure 2. Percentage of Two-year Approved Commitments by Region, Rounds 1 & 2



2.3 GFATM Policy and Guidelines viz a viz “Systems Strengthening”

Support for “systems strengthening” is explicitly mentioned as one area that is eligible for GFATM funding. In the Guidelines for Proposals, for example, an explanation of “What is covered?” states that

“A proposal must address one or more of the three diseases (HIV/AIDS, tuberculosis, or malaria) and may also address system-wide/cross-cutting aspects of these diseases in ways that will contribute to strengthening health systems.”

It later explains these “system-wide/cross-cutting aspects” by stating that

“...(they) may include system development activities that may benefit the fight against at least two of the diseases such as human capacity development, infrastructure development, etc. It is not limited to health sector-related activities and may also target other sectors such as education, the workplace, social services, etc.”

It is made clear, however, that such funding must create substantive support in a plausible way to the principal components of the project that do receive the bulk of the funds. In addition, proposal forms require applicants to consider how the activities proposed relate to the broader health care system. For example, item 28 of the guidelines asks applicants to “describe how the component adds to or complements activities already undertaken by the government, external donors, the private sector or other relevant partner.”

2.4 Summary

While the GFATM has an explicit focus on three primary diseases rather than a system-wide focus, there are aspects of the operations of the fund that are designed to ensure a good fit between the disease-specific focus and the broader health care system. It is also likely that the Global Fund will give rise to system-wide effects due to the sheer magnitude of the resources it is distributing, especially in comparison to amounts designated in health budgets in low-income countries. Finally, the Global Fund’s mode of operation, in particular the emphasis upon efficient and rapid disbursement, marks a rather radical departure from traditional modes of providing development assistance, and this in itself may have a significant effect on health care systems.

3. Conceptual Framework for Analyzing System-wide Impacts

3.1 Definition of Health Systems as Context for GFATM-funded Interventions

There are numerous ways to define national health systems and to describe their characteristics and boundaries. The breadth of any definition should serve the purpose to which it is to be applied. In this case, the purpose is to define the context for GFATM-supported interventions. That is, the definition should assist an effort to identify and measure the effects on broader initiatives to improve health (and the “system” components of such efforts) of targeted interventions.

The World Health Organization (WHO) defines health systems in the following manner: “health systems are defined as comprising all the organizations, institutions and resources that are devoted to producing health actions.” (WHO, 2000) “Health actions” include anything that has as a primary purpose improving or maintaining health, and thus encompass both curative and preventive health care services.

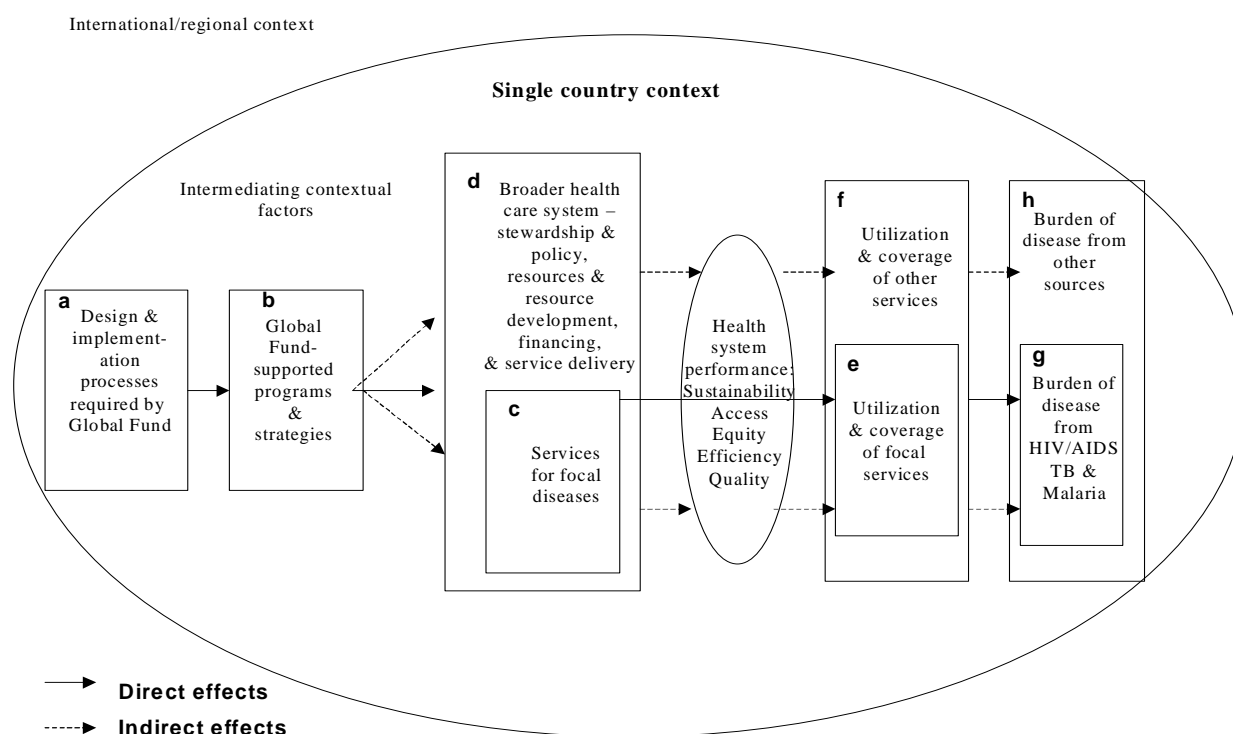
Although an effort to protect the public’s health and provide some access to personal, curative care services is often government sponsored, the coverage and quality of such public sector care is often uneven. In many countries, the private (often informal or traditional) sector is an important source of treatment and drugs, financed by individuals’ out-of-pocket expenditures, and it must be considered part of the national health system.

The four vital functions of health systems are service provision, resource development, financing, and stewardship (Murray and Frenk, 2000). These functions are necessary in order to ensure that the physical inputs into health care systems are appropriately combined to meet system-wide goals. The primary physical inputs are human resources, drugs and other supplies, and physical plant and equipment.

3.2 Overview of Analytical Framework

Figure 3 presents an overview of the relationship between GFATM-supported interventions and the broader health care system. After a brief description of the framework, detailed descriptions of each component are given.

Figure 3. Overview of Analytical Framework



Focusing first on what happens within the national borders of a country, it is hypothesized that the design and implementation processes the GFATM requires (Box a in Figure 3) influence the overall programmatic direction and magnitude of resources granted. Box b indicates the programs and strategies that actually received GFATM funding. Neither the design and implementation process, nor the programs and strategies selected for Global Fund support, occur within a vacuum. They will be influenced by a variety of intermediating contextual factors such as the overall level of economic development in the country, the capacity of government to manage increases in resources, and existing service delivery structures. In many recipient countries, substantial additional funding for HIV/AIDS, TB, and malaria is being received from other sources such as the Multi-Country HIV/AIDS Program (MAP), the Clinton Foundation, and, in the future, the Presidential Initiative. These sources of funds and activities are likely to interact with GFATM funding and GFATM-supported activities.

The programmatic interventions funded by the GFATM have a direct impact on the services offered to combat the targeted disease(s) (Box c), but are also likely to have indirect effects on the broader health care system and services offered other than for the diseases of focus (Box d). Following the WHO framework, it is suggested that the broader health care system effects be classified according to the four basic functions of health care systems (WHO, 2000):

- ▲ Stewardship and Policy – including overall system design, performance assessment, priority setting, intersectoral advocacy, and consumer protection
- ▲ Resources and Resource Development – including the planning, development, and management of human resources, drugs and supplies, infrastructure, and equipment

- ▲ Financing – encompassing revenue collection, fund pooling, and purchasing
- ▲ Service Delivery – including the overall organization of service delivery and the various support systems required to make services actually happen

The indirect effects upon the broader health care system may be intentional (for example, a GFATM-supported intervention could intend to strengthen laboratory capacity to support identification of the focal diseases, but it could also benefit the system as a whole) or unintended (for example, training of counselors for the focal diseases may reduce the pool of counselors available for nonfocal diseases). A further question arises concerning the organizational arrangements for implementing the GFATM-supported activities (Box b) and the extent to which they mesh or fit with the organization of the broader health system. For example, are the GFATM-supported interventions pursued in a decentralized manner, and is this in keeping with the way in which the broader health care system operates?

As a consequence of the effects of the Global Fund on the health care system, it is anticipated that changes in overall health system performance will occur. Five dimensions of health system performance are identified: accessibility, sustainability, quality, efficiency, and equity. The effects on the performance of the health care system could be positive or negative.

The GFATM's investment in the services for focal diseases will likely positively affect the utilization of health care services for AIDS, TB, and malaria, as well as the coverage of preventive services for these diseases (Box e). In turn, this increase in utilization and coverage is anticipated to have beneficial impacts on morbidity and mortality from these diseases (Box g).⁷

The indirect effects of the GFATM's investments on broader health system performance will most likely be in service utilization and coverage for nonfocal diseases. For example, the additional laboratory equipment and staffing that the GFATM investment will provide may increase the accessibility of laboratory services and the capacity of the health care system to test, identify, and treat a range of diseases (not just the diseases of focus). As another example, a reduction in the number of counselors available for nonfocal diseases (caused by their attraction to work on the focal diseases) may reduce accessibility of such services and lead to a reduction in the number of patients treated for nonfocal conditions. This phenomenon is reflected in Box f. The system-wide effects of the Global Fund may be positive or negative in nature, and may lead to an increase or a reduction in the utilization and coverage of services for conditions other than AIDS, TB, and malaria. Whatever these effects may be, they will ultimately impact the morbidity and mortality rates of other diseases (Box h).

Figure 3 also indicates that the effects of GFATM disbursements may not be circumscribed by national borders. For example, the fund encourages regional groupings to apply (which could focus on enhancing capacity to develop new drugs or commodities, or on joint purchasing to reduce pharmaceutical prices). There also may be effects relating to labor migration between countries, or to trading of drugs across national borders.

Figure 3 provides a first rough outline as to how GFATM-supported activities may affect national health care systems. Section 4 of this paper discusses in more detail the first two elements of the conceptual framework, namely the design and implementation processes of the Global Fund and the programs and strategies that it supports. Section 5 identifies the precise mechanisms through which system-wide effects are likely to occur. Section 6 offers a more in-depth look at the pointers towards possible elements of monitoring and evaluation approaches that Figure 3 addresses.

⁷ This set of relationships is spelled out in the Global Fund's draft Monitoring and Evaluation Strategy.

4. The Process and Content of GFATM-supported Activities

4.1 Design, Selection, and Implementation Processes of the GFATM (Box a)

The structures and processes the GFATM developed to govern the design and selection of projects to be funded represent new approaches to development assistance. They are designed to expedite the transfer of fiscal resources and stimulate innovative approaches to program design and implementation. These processes are described in some detail below, because it is thought that the process through which proposals are developed, selected, and implemented will have implications for the broader health system of recipient countries.

4.1.1 Eligibility and Applications Requirements

Interested parties should submit applications using the GFATM's application form and following the Guidelines for Proposals associated with it. With each round of applications, the form and the guidelines have been revised based on the experiences of the previous round. The requirements listed below are the most current for the third round of applications, which were to be submitted by May 31, 2003.

Proposals are eligible for consideration if they come from individual countries that qualify (applying both a national income criterion⁸ and a burden-of-disease criterion⁹) or from groups of countries wishing to submit regional proposals. Proposals will be accepted from national, regional, or subnational coordinating mechanisms or from individual organizations. The country coordinating mechanism (CCM) is intended to encourage applicants to collaborate in developing the proposals – to integrate the interests and participation of many different stakeholders and to promote partnership development and multisectoral approaches. In general, a CCM is intended to be a broad-based coalition, often sponsored by a particular government agency, mostly ministries of health. Grant proposals from individual organizations are to be accepted only where it can be shown that a CCM could not be formed because of “exceptional circumstances.”

4.1.2 Evaluation and Selection Processes

Once the Global Fund Secretariat considers a proposal to be eligible for consideration, the proposal is included in those to be reviewed by the independent Technical Review Panel (TRP). For the first round

⁸ High-income countries are not eligible; upper middle-income countries may qualify if their burden-of-disease for a focal disease warrants and the project design focuses on the poor; lower middle-income and low-income countries are eligible. (Income classifications according to World Bank definitions.)

⁹ Burden-of-disease for one or more of the three targeted diseases: HIV/AIDS, tuberculosis, and malaria.

of proposals, the TRP included four experts in malaria, four in TB, seven in HIV/AIDS, and seven in “cross-cutting” areas of relevance for program implementation in resource-poor settings.

Proposals are evaluated on the basis of multiple dimensions. The Guidelines for Proposals of March 2003 stated “successful proposals should in general demonstrate the following characteristics:” (GFATM, 2003, p. 26)

- ▲ Political commitment,
- ▲ Complementarity and additionality,
- ▲ Absorptive capacity,
- ▲ Soundness of approach,
- ▲ Feasibility with respect to implementation plan and management,
- ▲ Potential for programmatic sustainability, and
- ▲ Evaluation and analysis.

Since the GFATM does not provide technical assistance to applicants to help them design acceptable proposals, its principal instrument for influencing the design and content of proposals it receives is the Guidelines for Proposals. These have become increasingly detailed over time, although the GFATM has resisted making them very prescriptive, as it wishes to encourage applicants to be innovative.

4.1.3 Post-selection Processes

After completing its review process, the TRP forwards its recommendations to the Board of the Fund, which refers them to the Funding Committee for a vote of approval. All proposals must submit a detailed first-year work plan to the Secretariat for approval before the first disbursement of funds can be authorized.

Disbursed funds are channeled to the Principal Recipient (PR) – a local entity nominated by the CCM and approved by the GFATM to be legally responsible for grant receipts. The PR may or may not be the primary implementer, but by signing the grant agreement with the GFATM, it becomes accountable for proposal implementation.

In order for the GFATM to exercise in-country oversight of the PR(s), the Secretariat hires an independent organization from within the country that will act as the Local Funding Agent (LFA).¹⁰ The LFA acts as the Secretariat’s representative, assessing the capacity of the PR(s) to be legally responsible for grant funds and program implementation. The LFA is responsible for verifying reported data on financial and programmatic progress. Actual disbursement of GFATM funds to the PRs is performed by the World Bank.

¹⁰ LFAs hired to date include PriceWaterhouseCoopers, KPMG, United Nations Office for Project Services (UNOPS), and Crown Agents.

4.2 Programs and Strategies Supported by the GFATM (Box b)

The proposal guidelines offer the following illustrative activities that the Global Fund may support:

- ▲ Availability of health services, recruitment and deployment of health personnel and community health workers
- ▲ Capacity building: recruitment, training, and supervision of personnel and community workers
- ▲ Behavior change and outreach and community-based programs, including care for the sick and orphans
- ▲ Provision of critical health products (including drugs) to prevent and treat the three diseases and to strengthen comprehensive commodity management systems at country level
- ▲ Operational research, including epidemiological surveillance and behavioral research in the context of program implementation

It is clear, however, that the country itself is free to suggest any sound proposal suitable to the country setting and in alignment with the resources available and requested.

Even a cursory review of the approved proposals demonstrates a huge diversity in the range of activities the Global Fund supports. The diversity of objectives and activities makes it difficult to summarize the content of the range of approved proposals. The Global Fund has conducted some basic analysis of approved proposals, and key points from this analysis are summarized below.¹¹ In addition, this paper provides a more detailed analysis of the approved strategies and activities that were proposed by a small sample of countries (see Annex B).

4.2.1 Overview of Strategies and Funding Profiles of Approved Proposals

Table 2 presents two-year funding commitments for round 2 projects by expenditure item. Combined, drugs and commodities account for the majority of expenditures (about 47 percent of all planned expenditures across all projects). The drug expenditure is particularly high for HIV/AIDS projects. This is partly driven by fairly substantial amounts of money allocated for the purchase of anti-retroviral (ARV) drugs. The Global Fund's own estimates demonstrate an 8.2-fold increase in the use of highly active anti-retroviral treatment (HAART) in sub-Saharan Africa (based on rounds 1 and 2) and a 1.6-fold increase in the rest of the developing world (by the time of the completion of the approved projects). Malaria projects account for a substantial expenditure in commodities; many of these commodities are insecticide-treated bed nets (ITNs). The Global Fund's own data again illustrate the significance of this investment. It is estimated that by the end of round 1 and 2 projects, the Global Fund will have supported the purchase of 30 million ITNs. UNICEF, which is currently the largest procurer of nets, purchased 4 million nets in Africa in 2002.

The next major category of expenditures highlighted in Table 2 is related to human resources, which encompasses both training and planning, as well as other human resource expenditures. A total of about 22 percent of the Global Fund's expenditures will go to this area.

¹¹ The Global Fund to Fight AIDS, TB and Malaria, Update on Rounds 1 and 2, Presentation.

Table 2. Two-year Commitments by Expenditure Item (Round 2 Only)

| | Drugs | Commodities/ Products | Training/ Planning | Infrastructure/ Equipment | Human Resources | M&E | Admin | Other | Total (US \$ m) | N ¹² |
|--------------|-------|-----------------------|--------------------|---------------------------|-----------------|-----|-------|-------|-----------------|-----------------|
| All projects | 22% | 25% | 13% | 14% | 9% | 5% | 6% | 6% | 866m | 97 |
| HIV/AIDS | 26% | 24% | 13% | 13% | 9% | 5% | 6% | 6% | 494m | 42 |
| TB | 17% | 18% | 13% | 24% | 8% | 6% | 7% | 7% | 121m | 26 |
| Malaria | 21% | 34% | 10% | 11% | 9% | 5% | 5% | 5% | 242m | 28 |

Source: GFATM data

The average percentage of expenditure, by expenditure item, varies substantially from one country project to another. For example, while 75 percent of the five-year total for the Thai HIV/AIDS round 2 proposal goes to drugs, only 13 percent of the Botswana HIV/AIDS proposal is devoted to pharmaceuticals. Instead, Botswana plans to devote a relatively high 46 percent of its five-year budget to HIV/AIDS training and planning, while Thailand applies only 8 percent to that area. To a considerable extent, the amount that countries request from the Global Fund will depend on and complement what is already funded in-country and depend on their identification of the funding gaps.

The Global Fund has also analyzed round 2 proposals by the types of interventions that are being used to address the three different diseases. Figures 4, 5, and 6 illustrate what percentage of approved country proposals are using the various program strategies and approaches listed. As can be seen from Figure 4, the most common strategies for HIV/AIDS programs are, on the one hand, prevention via behavior change communication and condom promotion and distribution, and, on the other hand, treatment, particularly through the expansion of HAART programs. For TB, 100 percent of the approved proposals employ directly observed treatment (DOTS) as one of their program strategies. For malaria projects, the greatest emphasis appears to be on the purchase and social marketing of ITNs.

¹² There is one approved proposal (Afghanistan) that integrates HIV/AIDS, TB and Malaria.

Figure 4. Percentage of HIV/AIDS Proposals Using Listed Strategy (Rd 2 only)

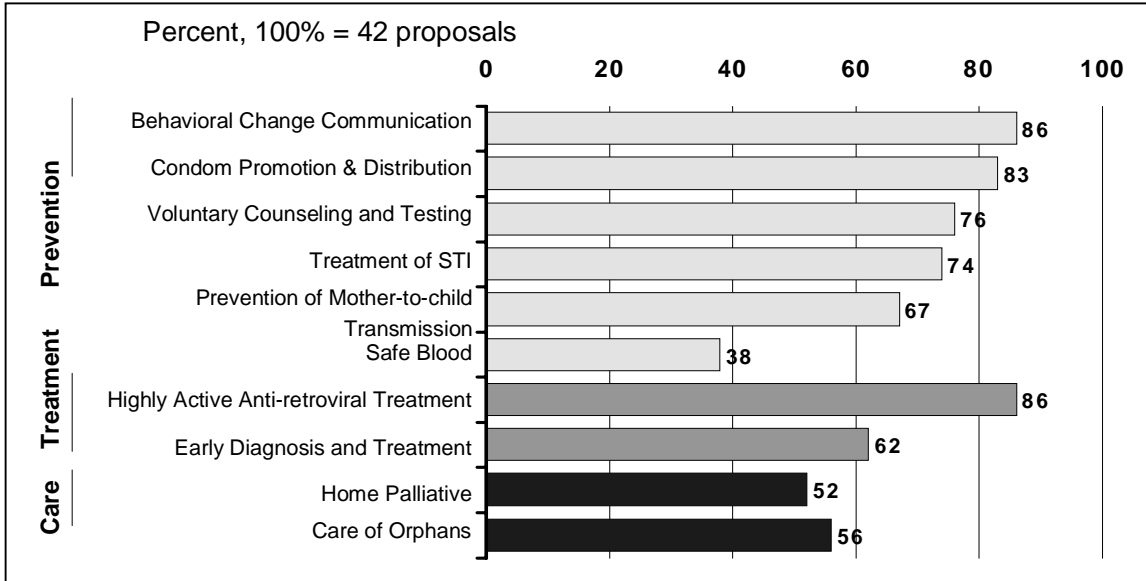


Figure 5. Percentage of Tuberculosis Proposals Using Listed Strategy (Rd 2 only)

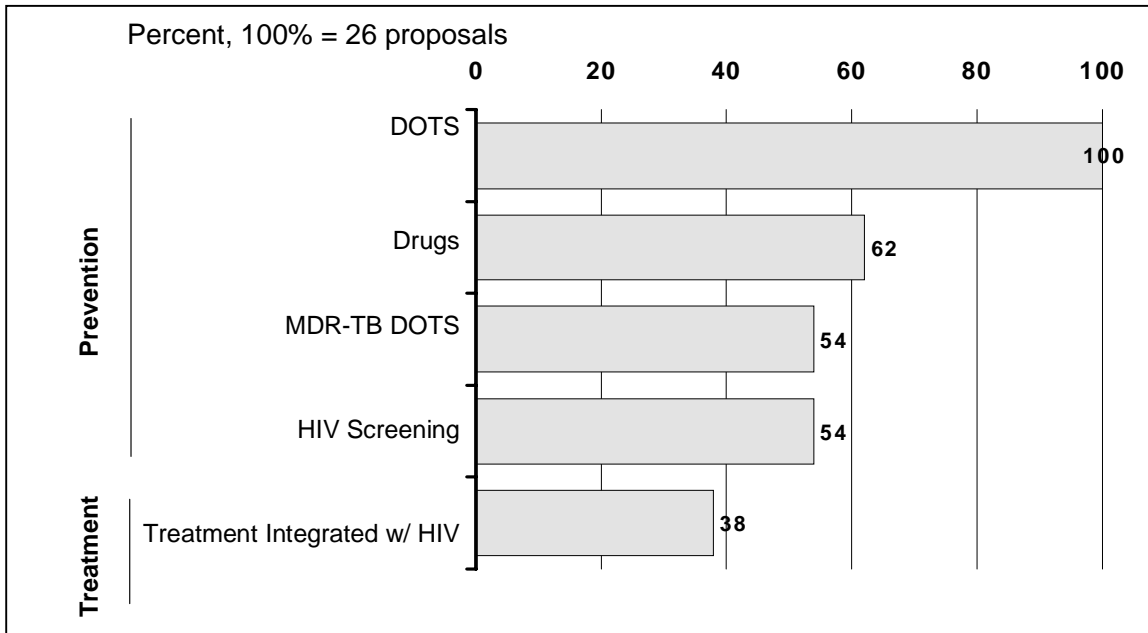
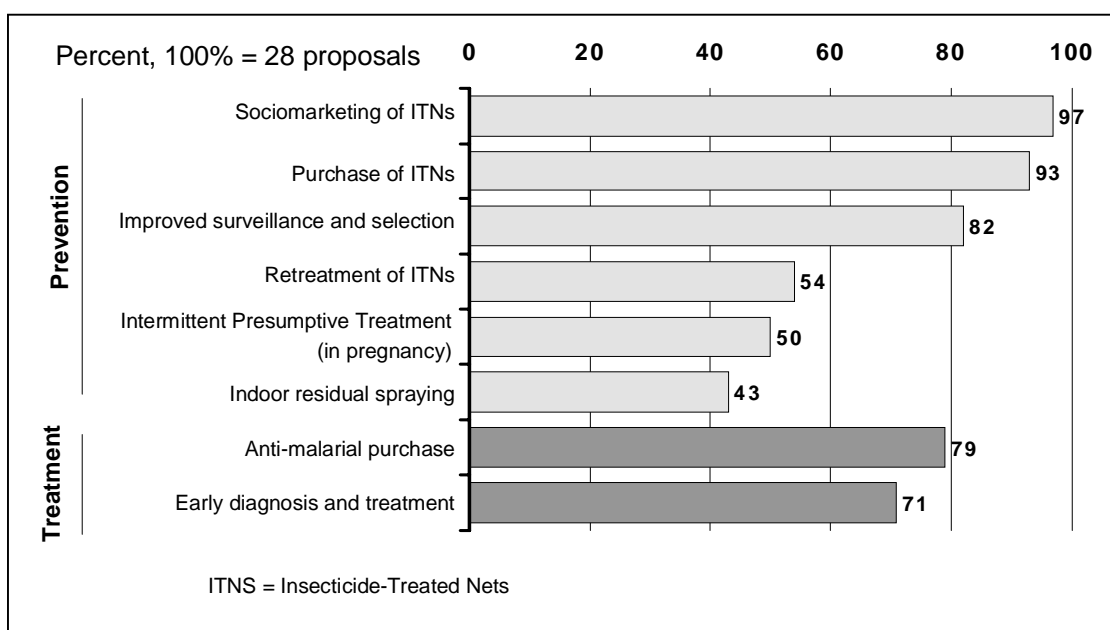


Figure 6. Percentage of Malaria Proposals Using Listed Strategy (Rd 2 Only)



4.2.2 Detailed Analysis of Selected Proposals

Unfortunately, the program strategies the Global Fund uses to analyze proposals it receives do not reveal the likely system-wide effects. For example, even if it is known that 100 percent of the approved TB proposals are using DOTS, it is not clear whether the requested funds will be used primarily for training in DOTS, establishing new facilities from which to administer DOTS, or developing new policies around DOTS. Nor is it known what proportion of DOTS will be delivered via the public or private sector. The authors conducted a more in-depth system-focused analysis of strategies adopted in a small sample of countries. The discussion in this section focuses on the proposals that were approved for Ethiopia, Ghana, India, Nicaragua, South Africa, Thailand, Uganda, and Zambia. All of these countries have more than one approved proposal (see Annex A), and several have more than one proposal addressing the same component. Logically, it would seem that in terms of considering the system-wide effects of the Global Fund, the unit of analysis should be the country rather than the individual proposal. While the published proposals indicate the broad type of activities that the GFATM will support, it is not always clear exactly how the activities will be implemented. Work plans, which generally are not available, would need to be inspected for this to become clear.

Annex B summarizes, from a health system perspective, the main type of interventions being supported under each of the proposals. It is immediately evident that the GFATM-supported activities touch upon many different aspects of the health care system, from policy development, to new infrastructure, to research studies, to human resource development, to information systems. Since a number of different proposals have been approved in any one country, the GFATM is supporting a diverse range of activities in any one context.

The analysis summarized in Annex B confirms some of the earlier financial analysis. Nearly all of the proposals include drug purchasing. Of the eight countries studied in-depth, only three (India, Thailand, and Zambia) identified a need to strengthen drug procurement, supply, or distribution systems. In some cases, such as Zambia, the measures identified were vague (“strengthen drug and logistics management”). The only other activities noted that related to pharmaceutical systems were the development or strengthening of drug quality control systems in Zambia and Thailand and the monitoring of drug resistance for anti-malaria drugs in Ghana and Thailand and ARVs in India.

An in-depth review also confirms the importance of training within the proposals. Again, the vast majority of proposals included training elements. The cadres of staff being trained varied widely, and included nurses, doctors, community workers, relatives of sick persons, lab technicians, trainers, and program managers. Most of the training was targeted at existing staff, but some training (largely for volunteer workers) was for new staff. Of the eight proposals studied in-depth, only South Africa explicitly included other measures to address human resource issues, such as worker retention and motivation. The South African proposals included an audit of existing human resources, a projection of human resource needs, and measures to address health workers’ attitudes, such as a “health worker excellence campaign.” Proposals also included the purchase of new equipment (particularly lab equipment, but also vehicles for transportation), renovation of facilities, and occasionally the development of new facilities.

The in-depth review highlighted a number of other issues. First, many proposals had explicit elements focused on strengthening the role of the private sector in service delivery. For example, strengthening the role of the private sector was a key component of ITN distribution strategies in Uganda, behavior change and communication strategies in South Africa, DOTS/TB care and ITN distribution in Ghana, and HIV/AIDS prevention and care in Zambia. In some cases, the focus on the private sector reflected recognition of the role that the private sector was already playing and the need to support care in the private sector. In other instances, the private sector was viewed more as a potential mechanism to help expand coverage rapidly. While many proposals included training for private sector actors, there was much less attention to regulation or quality control in the private sector. The only reference to regulatory activities was with respect to pharmaceuticals noted above.

Several proposals also gave considerable emphasis to the need to strengthen referral systems. This was seen in the TB proposals for Uganda, Ghana, and Thailand and the HIV proposals in Ethiopia, South Africa, and Thailand. This is clearly an activity that could potentially contribute to positive system-wide effects. Strengthening supervisory mechanisms was also a strategy employed on a fairly widespread basis.

A further interesting element in the proposals was the emphasis on voluntary labor. Volunteers were to be used to provide home-based care, malaria control, and net treatment and distribution in a range of countries.

Many of the proposals included some research element. Some proposals named specific studies or methodologies such as knowledge, attitude, and practices studies; district-level situation analyses; tuberculin studies; or sentinel sites, whereas others simply referred to a need to enhance research capacity or conduct operational research and evaluation.

Finally, few proposals explicitly discussed issues regarding the financing of services to be offered using Global Fund support and whether service users would be required to contribute to the cost of care or not.

5. GFATM-funded Interventions: Mechanisms Channeling or Mediating Their Impacts on the System

5.1 Types of System-wide Impacts of GFATM (Box d)

This section builds on the review of country proposals to speculate on the system-wide effects the GFATM will likely have. The four primary functions of health care systems (stewardship, resource development, financing, and service delivery) are used to provide an organizing framework for the discussion.

5.1.1 Stewardship Effects

Government functions that are typically considered part of stewardship include overall system design, performance assessment, priority setting, intersectoral advocacy, and consumer protection. Embedded within the GFATM-supported proposals are many activities that are designed to strengthen government in this stewardship role. For example, funded proposals include activities to strengthen information flows to enhance policymaking capacity and policy workshops to promote stakeholder consultation as part of policy development. However, GFATM activities within a country might also pose challenges for government in its stewardship role. These challenges relate largely to potentially sudden and dramatic increases in the scope and complexity of the health sector associated with GFATM intervention.

The following stewardship areas are particularly likely to experience change as a result of GFATM-funded activities:

- ▲ *Incorporation of nontraditional actors, particularly private actors, in policy processes.* CCMs play a key role in coordinating the development and submission of proposals. Although CCMs are frequently headed by a staff member of the Ministry of Health, they are intended to encompass a variety of nongovernmental actors. As such, they may bring a broader range of players into the policy process. Moreover, the way that the GFATM operates may de-emphasize the role of some of the traditionally powerful actors (such as Ministry of Finance). Many proposals require strengthened coordination and consultation by government with private sector actors; some explicitly mention the development of new organizational entities to strengthen public/private coordination.
- ▲ *Implicit changes in policy and priorities.* In some instances, Global Fund monies will provide a significant increase in resources, and there is a danger that the way in which this large amount of money is spent triggers de facto policy reforms without proper policy dialogue. For example, if GFATM proposals were heavily reliant on service delivery through private sector providers, this may trigger privatization processes despite the lack of a

clear government intent to do so. Similarly the large amount of money flowing to the three focal diseases may trigger implicit changes in spending priorities without there necessarily being a clear agreement at the policy level to do so.

- ▲ *Regulatory challenges.* Certain proposals envisage a substantially enhanced role for private sector health care providers or pharmacies, and include elements that channel resources (such as training and pharmaceuticals) to these providers. In many countries, the government's ability to regulate and ensure adequate quality of care in the private sector is very limited, and GFATM intervention may provide an even greater challenge to government. Similarly, many proposals envisage considerably increasing the supply of drugs and health commodities in-country. There is a danger that such supplies leak from the public sector or the formal private sector into the black market. Governments may face regulatory challenges in terms of preventing such leakages and ameliorating their effects if they do occur.

5.1.2 Resources and Resource Development

The primary resources used within health systems are human resources, drugs and supplies, and infrastructure and equipment. Virtually every GFATM proposal addresses resource issues in one way or another. GFATM activities may affect the overall quantity, quality, and/or allocation of resources. A very high proportion of proposals include some kind of training for health staff that is designed to improve the quality of human resources available. A considerable number of proposals also anticipate increasing the absolute numbers of health staff through basic training courses. Far fewer proposals appear to address issues of staff retention and motivation. As the data presented in Section 4.2.1 illustrated, a substantial proportion of GFATM money is being allocated to the purchase of new drugs and supplies. Many proposals also envisage upgrading available infrastructure for clinics and/or laboratories and improving the range of equipment available at such facilities.

Many of the effects the GFATM has on the overall quantity and quality of resources are likely to be direct and intended. However, it is also important to monitor and evaluate the indirect and unintended effects. Many of these effects relate to the allocation and distribution of resources. There are multiple distributional dimensions of interest, the most obvious being how resources are distributed between the focal diseases and other health services. There may be concerns about how scarce resources, and particularly those that are relatively fixed in the short term such as trained personnel, allocate their time between the focal diseases and other services.

Raising prices may be another response to the increased demand for relatively scarce resources, which could mean that skilled local consultants or scarce health staff may be able to increase how much they charge. For public sector staff, where pay is relatively rigid and standardized, it is possible that GFATM-supported activities could be more attractive by being more generous with per diems for training or outreach activities. Another alternative response to increased demand is to substitute lower quality or substandard products (such as less skilled local consultants). There is a danger that substituting lower quality resources may compromise the expected outcome. In addition, even with price increases, there may not be a sufficient supply of some needed inputs, resulting in a suboptimal mix of available inputs and possible bottlenecks inhibiting the timely production of services.

There may also be questions regarding distribution of resources according to geographic and socioeconomic criteria. For example, given the health system constraints in many low-income countries, newly initiated ARV programs will necessarily be operated from existing tertiary or provincial hospitals. These sites for new ARV programs may manage to attract a disproportionate share of skilled medical

staff, equipment, and drugs while serving relatively more affluent populations, thus giving rise to equity concerns.

5.1.3 Financing

The financing functions of a health system encompass revenue collection, fund pooling, and purchasing. The activities of the Global Fund potentially raise issues across all three of these functions.

First, in terms of revenue collection, many of the new investments GFATM supports will require future recurrent budgetary funding in order to be maintained and sustained. This applies to a whole range of investments, from the need to fund operating costs of newly established health care facilities, to the need to fund employment for newly trained health care staff, to the need to maintain access to lifelong ARV therapy for those who have started such therapy. Consequently, GFATM-supported investments may place added stress on the recurrent budget requirements and revenue collection capacity of countries' health care systems in the future. This issue is particularly difficult for countries to deal with given the uncertainty surrounding future funding of the GFATM. Certain activities that could be funded with GFATM support (such as strengthening of supply and distribution systems) are likely to have more limited recurrent cost implications than others (such as the purchase of vehicles).

One potential strategy to improve the sustainability prospects for GFATM-supported activities would be to ask service users to contribute to the costs. The extent to which countries plan to do this is unclear. If, however, new services such as HAART have some cost-sharing element, then a further set of questions about how these health financing changes will impact household economics arises.

Second, while there is a very strong requirement that the GFATM funds be considered additional to funds from other sources,¹³ there are many ways other funding sources may offset the Global Fund's contribution and divert resources elsewhere. It is also possible, especially in health systems with limited capacity, that it will be difficult to maintain the principle of "additionality" simply because the health sector may face difficulties in effectively using the new resources made available to it. In any event, it may prove difficult to determine whether the requirement of additionality has been met, if only because there are several different ways to define it even within the boundaries of the GFATM's general definition.

Third, there is a question concerning the extent to which resource mobilization and accumulation activities are consistent or even common across different sources as compared to creating parallel financing systems. One of the GFATM's operating principles is that it will "*establish a simplified, rapid, innovative process with efficient and effective disbursement mechanisms, minimizing transaction costs.*" However, in practice, this may be a challenging task, particularly given the magnitude of Global Fund resources being allocated to countries.

Finally, with respect to the third financing function of purchasing, several of the Global Fund proposals place heavy emphasis on contracting with private providers, particularly nongovernmental organizations (NGOs), for services. This may introduce government to a new approach to purchasing.

¹³ GFATM Guidelines for Proposals state that "funds from the Global Fund should not replace existing national and international resources" (p. 9).

5.1.4 Service Delivery

The service delivery system encompasses the overall organization of service delivery and the various support systems required to make services actually happen, such as drug distribution and supply systems, health management information systems (MIS), and supervisory and quality assurance systems. A review of the proposals suggests that Global Fund activities might affect service delivery in a number of ways. Particularly predominant is a concern about the extent to which Global Fund activities might serve to promote a better integrated health care system versus a more fragmented one. The following examples present the various effects of integrated versus vertical service delivery systems:

- ▲ *Links and integration across service delivery points.* Several of the proposals funded by GFATM include elements to enhance integration of different aspects of the health care system. As noted elsewhere, “An effective response to the HIV/AIDS epidemic requires an adequate and appropriate response from all parts and levels of the health care system, acting in concert with each other, and playing mutually supportive and synergistic roles so as to maximize impact and efficiency.” (McCoy et al., 2002.) While GFATM-supported activities to promote integration and improve coordination are focused on the target diseases, they may well have beneficial spillover effects that will improve other services.
- ▲ *Organization of service delivery: decentralization and public/private roles.* The Global Fund has challenged countries to think about how they might absorb relatively large amounts of funding in order to scale up services rapidly. Several of the proposals examined approached this problem by contracting with, or by providing lump sums of money to, decentralized and relatively autonomous organizations. In many cases, such recipient organizations are private. Thus, if implemented as envisaged, these strategies could fundamentally change the nature of the organization of service delivery by promoting a more decentralized and potentially more privatized health care system. Other proposals, however, have approached the challenge in different ways, and some, for example, propose the distribution of subsidized commodities via public health facilities or outlets (this is true of some ITN proposals). Again, if implemented as envisaged, such initiatives may crowd out the private sector and increase the size of the public sector relative to the private. While different proposals have different strategies and different likely effects, it appears to be important to monitor and evaluate these.
- ▲ *Verticalization of service delivery.* Although the Global Fund itself focuses on three specific diseases, countries may choose whether to approach these diseases via parallel vertical systems or more integrated systems. If a vertical approach is used for the three specific diseases, then it may undermine an integrated approach for other interventions, leading to an overall verticalization of the sector. Even in countries where health care systems are currently quite integrated, the pressure to rapidly absorb large amounts of money targeted at specific disease may tend to produce a more vertically oriented approach. Evidence suggests that vertical approaches are more straightforward to plan and can absorb funding more reliably and quickly, although they also tend to be duplicative and less cost-effective than integrated programs, and can over time undermine government capacity (Brown, 2001).
- ▲ *Development of support systems.* If pharmaceutical supply and distribution systems, health information systems (HIS), or MIS for the focal diseases are not developed parallel and separately, but rather are integrated into existing systems, then GFATM-supported activities are likely to benefit logistic systems more broadly. However, given the envisaged large expenditures on pharmaceuticals and supplies, there is a possibility that countries will seek to establish vertical systems to ensure that these commodities can be purchased and distributed in a timely and efficient manner. While the establishment of vertical support

systems may help achieve short-term objectives, there is a danger that they will undermine the health system as a whole.

5.2 Contextual Factors Mediating the System-wide Effects of the Global Fund

The previous section outlined a range of possible effects that might occur and impact the broader health care system as a consequence of investments by the Global Fund. Whether or not these effects occur will depend not only on the strategies the countries pursue, but also on the aspects of the context within which they are pursued. It is important to understand the relevant aspects of context so that lessons from one country context can be transferred appropriately to other contexts. This section describes and discusses three main aspects of context: the macroeconomic and policymaking context; government and health system capacity; and existing service delivery structures.

5.2.1 Macroeconomic, Political, and Development Assistance Context

Several of the effects discussed in the previous section affect the health care policymaking process. In particular, the GFATM might affect the role of different stakeholders in health and priorities within the health sector. Whether or not these effects occur is likely to be influenced by current policymaking practices. In particular, any effects may depend on the extent to which there is a relatively open, consultative, policymaking approach versus a more closed one, and on the legitimacy and strength of existing policymaking processes. If policymaking processes are already open and inclusive, then the emphasis the GFATM places on the CCM and on broad consultation may not bring about major changes. However, in a more closed policy environment, an open approach to policy development might mark a significant departure. Similarly, in environments where there are clearly defined and legitimate policy processes already established, it is likely to be easier for the Global Fund to work within nationally agreed priorities. However, if priorities are not clear or are disputed, then it would seem increasingly likely that Global Fund activities would distort or work outside of the agreed policy frameworks. In this regard, the role of donors in policymaking and the forms of policymaking [such as whether sector-wide approaches (SWAs) are established in the country] may be pertinent.

The broader development assistance environment is important in understanding the likely effects of the Global Fund from another perspective. The extent to which the GFATM's planning, implementation, and reporting procedures are in alignment with practices for other development assistance mechanisms, including both forms of direct budgetary support [SWAs and Poverty Reduction Strategy Papers (PRSPs)] and funding targeted at the focal diseases (MAP, Presidential Initiative), will affect the ease with which government can absorb additional responsibilities related to the Global Fund.

The extent to which the government is transparent and free of corruption might also influence the success of GFATM strategies adopted and the broader system-wide effects. For example, in a context where graft is widespread and accepted, regulatory functions are unlikely to work well, drug leakage is more likely to occur, contracts with private providers are unlikely to be awarded on the basis of merit and price, and access to services, particularly high-value services such as ARVs, will probably be influenced by patients' ability to pay bribes.

A critical dimension of the broader macroeconomic context is the extent to which there is sufficient local funding available to meet the recurrent cost obligations of investments made by the Global Fund. In addition to the availability of resources, there is the question of whether there is sufficient government political commitment to make those resources available to the health sector.

5.2.2 Government and Health System Capacity

Capacity in this context means the ability to perform appropriate tasks effectively, efficiently, and sustainably (Grindle and Hildebrand, 1995). Elements of internal organizational capacity are often said to include organizational resources (such as human and capital resources) and organizational systems (such as logistical systems), management/leadership, and financial resources (Larbi, 1999). In many low-income countries, government and health system capacity are quite limited (Mills et al., 2001) and, consequently, potential recipients may face difficulties in absorbing increases in aid (Clemens and Radelet, 2003). While GFATM support can, at least over time, remove capacity constraints that are primarily financial in nature, there are certain capacity issues that are difficult to address through increased funding (Hanson, 2001).

In the short term, even with increased funding, limited skilled human resources, weak logistical systems, poorly organized supervision systems, and limited regulatory capacity would all increase the chances that some of the negative, unanticipated effects associated with Global Fund operations may occur. For example, in situations where there is already an acute shortage of skilled human resources, placing more demands on this same group of people may result in their neglecting other duties. Similarly, if pharmaceutical supply and distribution systems are already weak and have difficulty meeting existing demands, then trying to channel more supplies through these same systems is likely to be problematic and may lead to untimely drug delivery and to the leakage of drugs to the private/informal sector. If government regulators are already known to be corrupt and inept, then increasing their responsibilities (by promoting private sector growth) would likely lead to poor quality and potentially unethical practices in the private sector.

Many of these capacity constraints can be addressed over time through enhanced funding. Thus, if the lack of human resources is appreciated to be a constraint, investment in more training facilities might progressively ameliorate the constraint. Similarly, purchasing technical advice to strengthen drug and logistic systems might enhance the prospects of drugs being handled well. Increasing pay for inspectors to perform government regulatory functions might reduce their incentive to seek bribes. However, in some instances, deeply entrenched management cultures are difficult to address through money alone. Thus, for example, if senior health staff view the health care system primarily as a source of employment and if there are deep-rooted systems of patronage,¹⁴ then taking the steps to increase salaries and/or provide training may have little impact on the availability of high-quality health staff.

5.2.3 Service Delivery Structures

Section 5.1.4 suggested a number of ways in which GFATM-supported activities might affect the overall health care service delivery structure. However, the extent of this impact will probably depend on the existing service delivery structure.

Since the 1970s there has been a general trend in many countries towards greater integration of services and a focus on a fully integrated district health system, yet many countries still have elements of vertical programs. The extent to which existing health care systems are organized along vertical lines (with programs having their own lines of command, staff, and supplies that operate parallel to the general health care system) will most likely affect the extent of verticality in GFATM programs. In a context

¹⁴ See Aitken, J.M. (1994) for a description of patronage and employment issues in the Nepali health care system.

where priority services have traditionally been approached through vertically oriented programs, it is likely that the GFATM's focal activities also will be pursued in this manner. The implied large amounts of money flowing through vertical systems will tend to "verticalize" and detract from the core health care system even further. In contrast, in a health care system that is largely integrated, it will be difficult (both politically and physically) to conduct GFATM activities in a vertical manner.

The mix of public and private sectors that exist in a country also could mediate the effects of GFATM-supported activities, although there is unlikely to be a clear linear relationship in such situations. For example, in countries that have a very limited, nascent private sector, a GFATM-supported program that focused exclusively on the public sector could potentially crowd the private sector out of health care altogether. Alternatively, in countries that have substantial and relatively unregulated private sectors, channeling Global Fund resources to private providers might exacerbate problems of inappropriate growth and behavior within the private sector. A similar set of complex and somewhat unpredictable effects may occur around the issue of decentralization. For example, if Global Fund resources were focused on decentralized levels in a context that is already rather decentralized, they may critically tip the balance in favor of decentralized approaches.

While it is difficult to forecast the role that such service delivery factors may have on the final system-wide effects of the Global Fund, it would appear to be important to consider these contextual dimensions in any monitoring and evaluation efforts.

Table 3 summarizes the possible planned and unanticipated system-wide effects of GFATM-supported activities and identifies the relevant dimensions of the context for each effect. While planned effects are entirely positive, unanticipated effects may be positive, negative, or even neutral.

Table 3. Planned and Unanticipated System-wide Effects Resulting from GFATM-supported Activities

| Function | Planned Effects | Unanticipated Effects | Relevant Contextual Issues |
|-----------------------------------|--|--|--|
| Stewardship | Incorporation of nontraditional actors into policy development | Implicit changes in priorities and policies due to GFATM programs | Current openness of policymaking |
| | Regulatory challenges due to private sector growth and/or leakages of drugs and supplies | Regulatory challenges due to private sector growth and/or leakages of drugs and supplies | Extent of graft and corruption Government regulatory capacity |
| Resources and Resource Generation | Improved quality of health personnel through training | Reduced availability of health personnel for other diseases as absent due to training | Adequacy of staffing |
| | Improved quality of physical resources (infrastructure, transport, equipment, etc.) | Price increases for scarce inputs (e.g., local consultants) Payment of generous per diems, etc. (may increase staff motivation overall, or reduce staff willingness to work on nonfocal diseases) Use of lower quality inputs for nonfocal diseases Inappropriate mix of inputs creates bottlenecks in the system | Existing capacity within health care system |
| Financing | Development of demonstration sites/focused intensive programs | Attracts scarce resources from underserved (possibly remote, rural) areas | |
| | | Recurrent cost implications of GFATM interventions reduces government funding available for nonfocal interventions | Macroeconomic situation, government commitment to health |
| Service Delivery | Enhanced integration and improved referral systems | Funding shifts out of health sector into other sectors Development of parallel budgeting, accounting, and auditing systems | Government (and other donor) commitment to health |
| | Changing public/private roles | Changing central versus decentralized roles Verticalization of service delivery Development of parallel logistics systems Strengthening of existing logistics systems | Form of existing health care system |

6. Conclusions and Implications for Future Monitoring and Evaluation

This paper has mapped out how GFATM-supported activities in any specific country may affect the broader health care system, speculated on the effects most likely to occur, and addressed the factors that will influence how strong these various effects are. It is apparent that multiple types of effects may occur, that they may be both intended and unintended, and that they may have positive and negative consequences for overall health system performance. Given the diversity of GFATM-supported strategies and activities, it is unlikely that a uniform pattern will exist across countries. However, there appears to be certain aspects of the health care system that the Global Fund is likely to affect in many different settings. These include the following:

- ▲ ***Policy environment*** – Global Fund proposal and planning processes are designed to enhance the range of actors involved in informing policy and implementing disease-control activities. Moreover, the development and implementation of GFATM-supported activities interfaces with other planning and aid frameworks such as SWAs and PRSPs, as well as other new financing mechanisms.
- ▲ ***Public/private mix*** – The Global Fund explicitly welcomes innovative approaches to expanding service coverage and approaches that draw private sector actors into the health care system; accordingly, a greater role for private sector actors may evolve.
- ▲ ***Human resources*** – Many Global Fund proposals include training activities for health workers, and some address issues of staff retention and motivation. Where health workers are in short supply, GFATM-supported activities may overburden capacity. In addition, GFATM-supported activities may affect the skills, motivation, and distribution of health workers, and may cause shifts in the distribution of health workers from nonfocal disease programs/functions.
- ▲ ***Pharmaceuticals and commodities*** – Approximately 50 percent of Global Fund money already committed will procure pharmaceuticals and commodities. This injection of funding may affect procurement, supply and distribution systems, and the quality and prices of drugs and other commodities such as ITNs.

Given the unpredictable consequences Global Fund support will have on the broader health system, timely monitoring is important to alert decision makers to potential problems before such problems become too entrenched and to identify strategies that have positive effects across the health care system. The Global Fund is still at a relatively early point in its operations, and it is clear that the full range of system-wide effects discussed in this paper are unlikely to occur within the first few months of the initiation of a country's GFATM-supported activities. While on the one hand it is important not to rush to judgment about the effects GFATM-supported activities will have on health care systems, it is also important to start monitoring initiatives shortly and to conduct baseline surveys prior to the effects being felt.

As Figure 3 suggests, GFATM's system-wide effects can be measured at a number of different levels. Specifically, measurement could examine the following:

- ▲ ***Effects on processes within the health care system*** – This approach would focus on mapping and quantifying the likely effects discussed in Section 5.1. For example, to what extent are shifts in policies or priorities observed, to what extent do health staff neglect other duties due to their involvement in GFATM-supported activities, and to what extent are logistic and information systems made to operate better due to Global Fund-supported activities?
- ▲ ***Effects on health system performance including equity, efficiency, access, quality, and sustainability*** – This would address the next level of effects, namely how the changes in processes identified above influence system performance, especially with respect to nonfocal services.
- ▲ ***Effects on health service utilization and coverage for the nonfocal diseases*** – This approach would focus on measuring changes in the utilization of health services other than for the diseases of focus, or on coverage of other types of preventive services. Certain tracer services for which data are relatively readily available (such as immunization coverage and use of antenatal care services) could be used to focus the study.
- ▲ ***Effects on final outcomes*** – While it is postulated that the system-wide effects caused by the Global Fund will ultimately result in changes in health status, it is probably not feasible to measure these changes and attribute them with any degree of certainty to Global Fund interventions.

Even for the most proximal of effects (effects on health care system processes), the question of attribution is a difficult one. An evaluation of the system-wide effects should compare the results of a health care system that has received GFATM support with one that has not; the counterfactual, in this situation, is very difficult to establish. This is particularly the case in countries with high HIV/AIDS burden where health care systems are increasingly overstretched. A further challenge to researching GFATM system-wide effects is defining the scope of the intervention. It is clear that in many cases Global Fund support will be intimately linked to support from other sources (such as SWAps, MAP, or the Presidential Initiative). Decisions regarding how to delineate the intervention of interest will need to be made on a case-by-case basis.

Research on the GFATM's system-wide effects will not constitute a neat evaluation study and is likely to face substantial methodological challenges. Nonetheless, the questions raised by the Global Fund's disbursement of large amounts of money, using development assistance approaches quite different from those typically employed, are important ones – for the Global Fund itself, for country recipients, and for the broader research community concerned with achieving the Millennium Development Goals.

Annex A. Proposals Reviewed In-depth

| Country | Component | Submitted by | Round | Two-year approved amount (US\$) | Five-year approved amount (US\$) |
|--------------|---------------|-------------------|-------|---------------------------------|----------------------------------|
| Ethiopia | TB | CCM | 1 | 11.1 | 10.9 |
| | HIV/AIDS | CCM | 2 | 55.4 | 139.4 |
| | Malaria | CCM | 2 | 37.9 | 76.9 |
| Ghana | TB | CCM | 1 | 2.3 | 5.7 check |
| | HIV/AIDS | CCM | 1 | 2.8 | 14.2 |
| | Malaria | CCM | 2 | 4.6 | 9.4 |
| India | TB | CCM | 1 | 5.6 | 8.8 |
| | HIV/AIDS | CCM | 2 | 26.1 | 100.0 |
| | TB | CCM | 2 | 12.8 | 29.1 |
| Nicaragua | HIV/AIDS | CCM | 2 | 4.0 | 10.4 |
| | TB | CCM | 2 | 3.4 | 5.6 |
| | Malaria | CCM | 2 | 1.2 | 2.9 |
| South Africa | HIV/AIDS & TB | Kwazulu Natal CCM | 1 | 26.7 | 71.9 |
| | HIV/AIDS | CCM | 1 | 24.8 | 93.3 |
| | HIV/AIDS & TB | CCM | 2 | 6.8 | 25.1 |
| Thailand | HIV/AIDS | CCM | 1 | 30.9 | 109.5 |
| | TB | CCM | 1 | 6.9 | 13.5 |
| | HIV/AIDS | CCM | 2 | 20.2 | 81.3 |
| | Malaria | CCM | 2 | 2.3 | 5.3 |
| Uganda | HIV | CCM | 1 | 36.3 | 51.9 |
| | Malaria | CCM | 2 | 23.2 | 35.8 |
| | TB | CCM | 2 | 6.8 | 9.0 |
| Zambia | Malaria | CCM | 1 | 17.8 | 39.3 |
| | HIV/AIDS | CCM | 1 | 42.3 | 92.8 |
| | TB | CCM | 1 | 27.3 | 59.8 |

Source: GFATM website, summary of approved proposals

Annex B. Summary of Strategies Affecting Health Systems

Thailand – Summary of Strategies Affecting Health Systems

| | Malaria (Round 2) | HIV/AIDS (2) | HIV/AIDS (1) | TB (1) |
|----------------------------|--|--|--|--|
| Stewardship/policy | | District level anti-discriminatory | Improve Social Security Coverage of HIV/AIDS | |
| Standard setting | Guidelines on Dx and mgt for village malaria posts | Develop manuals and guidelines | Policy guidelines for opportunistic infections Definition of package of care including ARVs | |
| Surveys/research | KAP Situation analysis | | Evaluation of ART program | Operational Research |
| Regulation | | | | |
| HR – basic training | Malaria volunteer training | Training relatives in HBC Training teachers | | |
| HR continuous ed | Training provincial health staff | Public hosp staff in counseling | | Capacity building (vague) |
| Facilities new | Malaria posts (at villages) | | | Expand TB services available at border areas |
| Facilities repair | | Improve hospital infrastructure | | |
| Equipment | | | | |
| New organizational entity | Special response team at province | | | |
| Reorganization of entities | | Improve patient flow and referral systems | Integrate ART into health care system Increase access to condoms | Strengthen referral systems |
| Logistical systems drugs | Supply & quality control | | ART procurement systems | |
| Logistical systems ITNs | Improve procurement and distribution | | | |
| Info systems HIS | Malaria epidemic early warning | | | TB surveillance |
| Info systems MIS | | | | |
| Financing | Cost sharing for ITNs | | | |

Uganda – Summary of Strategies Affecting Health Systems

| | Malaria (2) | TB (2) |
|---------------------------------|---|--|
| Stewardship/policy | | |
| Standard setting | Guidelines on indoor residual spraying developed | |
| Surveys/research | Strengthen research capacity | OR on access to VCT for TB Situation analysis of district health |
| Regulation | Enhance capacity to monitor drug quality | Establish quality control mechanisms for lab tests |
| Information/education | | Community mobilization & education Advocacy for district officials |
| HR – basic training | | |
| HR continuous ed | Train spray personnel Train communities in net treatment & voucher system Train health workers, drug seller and distributors in treatment | Training for health staff in DOTS and HIS for TB |
| Facilities new | Establish facilities for maintenance of spray equipment | |
| Facilities repair | | |
| Equipment | | Upgrade lab equipment |
| New organizational entity | | |
| Reorganization of entities | Strengthen supervision of drug distributors | Review referral systems Strengthen supervision of labs and community TB activities Improve integration of TB, HIV and STDs |
| New service delivery strategies | Promote private sector delivery of ITNs (NGO & for-profit) Promote public/private partnerships | |
| Logistical systems drugs | Procurement of malaria drugs | Procurement and distribution of TB drugs and lab reagent and supplies (note: not really systems strengthening) |
| Logistical systems ITNs | | |
| Info systems HIS | | HIS strengthening especially for TB |
| Info systems MIS | | |
| Financing | Voucher system for subsidizing ITNs | |

Note: HIV/IDS (1) information was not available at time of publication.

Ghana – Summary of Strategies Affecting Health Systems

| | TB (1) | HIV/AIDS (1) | Malaria |
|---------------------------------|--|---|--|
| Stewardship/policy | Activate national TB Advisory committee | | Institutionalize the anti-malarial drug policy review process – to agree on new first line drugs |
| Standard setting | | | Development of guidelines on intermittent presumptive treatment (IPT) of pregnant women |
| Surveys/research | Conduct operations research Tuberculin survey | | Establish more sentinel sites to investigate drug resistance Monitor insecticide resistance |
| Regulation | | | |
| Information/education | TB health communication program | Community sensitization for PMTCT Community mobilization for HBC | IEC on ITNs IEC on malaria symptoms and treatment |
| HR – basic training | | | |
| HR continuous ed | Training for private sector providers and private sector lab facilities Strengthen program management capacity (training & conferences) | Training for counselors, doctors, supervisors, nurses, and lab technicians from public and private organizations on VCT, PMTCT, and ART | Training for health staff in IPT |
| Facilities new | | | |
| Facilities repair | Renovate DOTS centers | Refurbishment of sites for VCT | |
| Equipment | Vehicles and motorbikes (for supervision) | Purchase of new equipment for testing | |
| New organizational entity | | | |
| Reorganization of entities | Establish public/private referral systems, improve coordination between public and private sectors | | |
| New service delivery strategies | Promote private sector role in DOTS and TB services: build public/private partnerships | | |
| Logistical systems drugs | | Procurement of drugs (not systems strengthening) | |
| Logistical systems ITNs | | | Procure and distribute ITNS using networks of NGOs and CBOs |
| Info systems HIS | Stationery for surveillance | | |
| Info systems MIS | | | |
| Financing | Establish incentive program for private sector DOTS implementers | | |

Ethiopia – Summary of Strategies Affecting Health Systems

| | TB (1) | HIV/AIDS (2) | Malaria (2) |
|---------------------------------|---|--|---|
| Stewardship/policy | | | |
| Standard setting | | | |
| Surveys/research | Operational research addressing issues of TB/HIV control | OR and surveillance | |
| Regulation | | | |
| Information/education | Mass media IEC plus community involvement | IEC/BCC and condom distribution | Public education through social marketing on ITN benefits |
| HR – basic training | | Lab technologists; train demobilized soldiers in HBC | |
| HR continuous ed | | Training in VCT, lab techs, and clinical management of STIs/OI and administration of NVP/ARV/PMTCT; training in program supervision; training in home-based care | Refresher training in ITN program implementation; train CHWs and mother coordinators in early detection and treatment |
| Facilities new | | Training infrastructure | |
| Facilities repair | | | |
| Equipment | Vehicles; lab equipment & supplies for diagnosis and treatment | Lab equipment to test for safe blood | |
| New organizational entity | | | |
| Reorganization of entities | Develop collaborative activities in facilities with VCT services | | |
| New service delivery strategies | Comprehensive continuum of care, preventive plus SCC treatment; community involvement in DOTS and IEC | Expand home-based care and OVC; improve/scale up clinical management of ART in hospitals | Expand weather stations and program for early detection of epidemics |
| Logistical systems drugs | Procurement, storage, distribution of anti-TB drugs | Procurement, storage, distribution of ARV drugs | |
| Logistical systems ITNs | | | Purchase and distribute 3.1 million ITNs |
| Info systems HIS | | | |
| Info systems MIS | | Improve data collection, analysis, and reporting M&E | |
| Financing | | | |

Zambia – Summary of Strategies Affecting Health Systems

| | HIV/AIDS (1) | TB (1) |
|---------------------------------|--|--|
| Stewardship/policy | Support rapid disbursement of funds to faith-based orgs | |
| Standard setting | | |
| Surveys/research | Strengthen capacity for M&E, operations research | |
| Regulation | | |
| Information/education | IEC/BCC/condom distrib. | |
| HR – basic training | | |
| HR continuous ed | Expand HR capacity in prevention, care, support | Training in DOTS at facilities run by religious institutions; improve supervisory capacity |
| Facilities new | | |
| Facilities repair | | |
| Equipment | Testing equipment to ensure safe blood supply | Lab equipment for testing |
| New organizational entity | | |
| Reorganization of entities | | |
| New service delivery strategies | Improve access to ART to PLWHA | |
| Expand existing programs | Expand existing VCT/PMTCT; expand home-based care; expand support programs for PLWHA | Expand DOTS availability; expand initiative linking VCT with TB case finding and treatment |
| Logistical systems drugs | | |
| Logistical systems ITNs | | |
| Info systems HIS | | |
| Info systems MIS | | |
| Financing | | |
| | | |

South Africa – Summary of Strategies Affecting Health Systems

| | HIV/AIDS & TB (1) Note: Proposal provides very limited details on activities | HIV/AIDS (1) | HIV/AIDS & TB (2) |
|---------------------------------|---|--|---|
| Stewardship | Strengthen cooperation between public and private sectors | | Enhance managerial and technical capacity of DOH (training, TA, etc.) Improve public/private collaboration through national, provincial, and district committees |
| Policy | | | |
| Standard setting | | | Clinical guideline development |
| Surveys/research | | | Review of TB/HIV management in different (public and private) facilities Studies to develop evidence base for clinical guidelines |
| Regulation | | | |
| Information/education | | Mass media and social mobilization support for HIV/AIDS messages, e.g., TV shows | Develop and disseminate advocacy materials |
| HR – basic training | | | |
| HR continuous ed | Clinical training | | Training in management and planning Training in clinical management |
| Other HR | | Address health worker attitudes / “Health worker excellence campaign” | Audit of HR and project HR needs |
| Facilities new | | | |
| Facilities repair | | Upgrade clinic facilities for young people | Upgrade MDR TB centers |
| Equipment | | | |
| New organizational entity | | Development of NGO/volunteer units to support VCT and counseling in clinics | |
| Reorganization of entities | Improve continuum of care and referral systems | Strengthen referral networks especially between public and NGO facilities | Enhance managerial capacity including development of demonstration districts |
| New service delivery strategies | | | |
| Logistical systems drugs | | | |
| Logistical systems ITNs | | | |
| Info systems HIS | | | |
| Info systems MIS | | | |
| Financing | | | |
| Other strategies noted | | Targets youth | Demonstration districts |

Nicaragua – Summary of Strategies Affecting Health Systems

| | HIV/AIDS (2) | TB (2) | Malaria (2) |
|---------------------------------|--|--|---|
| Stewardship/policy | Continue annual HIV/AIDS plans Promote involvement of private businesses and finance in HIV/AIDS prevention | | Strengthen municipal health committees on malaria Establish inter-agency malaria committee Harmonize epidemiological monitoring with authorities of neighboring countries |
| Standard setting | Update clinical guidelines Establish standards on workplace risks | | |
| Surveys/research | Sentinel surveillance studies KAP studies Studies of impact of social context upon HIV/AIDS transmission | | KAP study Evaluation of short treatment plans Study of acceptance/impact of ITNs Monitoring of resistance, GIS for malaria surveillance |
| Regulation | | | |
| Information/education | IEC campaigns | IEC on recognition of TB symptoms | IEC campaigns |
| HR – basic training | | | |
| HR continuous ed | Training in clinical guidelines, training in HAART, and epidemiological surveillance | Training of local government and community leaders regarding DOTS Training for health staff Development of manuals on DOTS | Training health workers in clinical guidelines, training of lab staff, training of malaria volunteers |
| Facilities new | | | |
| Facilities repair | | | |
| Equipment | New equipment for health facilities | New equipment for labs and hospitals | New equipment for malaria diagnosis New transport for collection of information and supplies Basic supplies for volunteers |
| New organizational entity | | | Creation and/or consolidation of entomological units |
| Reorganization of entities | | | |
| New service delivery strategies | | Strengthen supervision Conduct more evaluation meetings Conduct home visits for nonattendees | Risk-stratified vector control Strengthen supervision of volunteers |
| Logistical systems drugs | Drug procurement (nothing on systems) | Drug procurement (nothing on systems) | Purchase of ITNs |
| Logistical systems ITNs | | | |
| Info systems HIS | | | |
| Info systems MIS | | | |
| Financing | | | |

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