Health System Capacities in Developing Countries and Global Health Initiatives On Communicable Diseases

Background paper prepared for the
International Task Force on Global Public Goods

Uma Lele, Ronald Ridker, and Jagadish Upadhyay

April 22, 2005

ABBREVIATIONS AND ACRONYMS

All currency amounts are in US dollars

ACT	Artemisinin-based combination therapy
AIDS	Acquired immune deficiency syndrome
ARV	Antiretroviral
CCM	Country coordinating mechanism (for GFATM)
CGIAR	Consultative Group on International Agricultural Research
DALY	Disability-adjusted life year
DANIDA	Danish International Development Agency
DFID	Department for International Development
DGF	Development Grant Facility (World Bank)
DOTS	WHO-recommended Directly Observed Treatment—Short Course Strategy
EPI	Expanded program of immunization
FY	Fiscal year
GAVI	Global Alliance for Vaccines and Immunization
GDF	Global TB Drug Facility
GFATM	Global Fund to Fight AIDS, TB, and Malaria
GPG	Global public good
GPPs	Global programs and partnerships
HIPC	Heavily-indebted poor country
HIV	Human immunodeficiency virus
HNP	Health, Nutrition, and Population (World Bank)
IAVI	International AIDS Vaccine Initiative
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFF	International Financing Facility
IFFIm	International Financing Facility program for Immunization
IPR	Intellectual property rights
IPT	Intermittent preventive treatment
ITN	Insecticide treated net
ILO	International Labor Organization
IMF	International Monetary Fund
ITM	Insecticide treated material
LSHTM	London School of Hygiene and Tropical Medicine
M&E	Monitoring and evaluation
MAP	Multi-country HIV/AIDS Program (supported by the World Bank)
MDG	Millennium Development Goal
MDR-TB	Multi-drug resistant tuberculosis
MMV	Medicines for Malaria Venture
MSF	Medicines sans Frontières
NGO	Nongovernmental organization
ODA	Official development assistance
OED	Operations Evaluation Department (World Bank)
PATS	Partnership Approval and Tracking System (World Bank)
PEPFAR	President's Emergency Plan for HIV/AIDS Relief
PLWHA	Person(s) living with HIV/AIDS
PPAR	Project performance assessment report
PRSP	Poverty reduction strategy paper
RBM	Roll Back Malaria
RNTCP	Revised National TB Control Program (Government of India)
SDC	Swiss Development Corporation
SSP	Sector strategy paper (World Bank)
STAC	Scientific and Technical Advisory Committee (TDR)
STI/STD	Sexually transmitted infection/disease
SWAP	Sectorwide approach
TAG	Technical advisory group (Stop TB Partnership and WHO)
TAP	Treatment Acceleration Program (World Bank)
TB	Tuberculosis
TDR	Special Program for Research and Training in Tropical Diseases
TRIPS	Trade-related aspects of intellectual property rights
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
UNDCP	United Nations Drug Control Program
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session, in particular for AIDS in June 2001
UNICEF	United Nations Children's Fund
WDR	World Development Report (World Bank)
WHO	World Health Organization
WTO	World Trade Organization

ACKNOWLEDGEMENTS

This paper is a collaborative effort by Uma Lele, Ronald Ridker, and Jagadish Upadhyay. Major substantive inputs were also provided by Richard Skolnik and many others. Uma Lele is Senior Advisor to the World Bank's Operations Evaluation Department, and the other co-authors are consultants to the Secretariat of the International Task Force on Global Public Goods. The views expressed in this paper are those of the authors and do not necessarily represent the views of the World Bank, its Operations Evaluation Department, or the International Task Force on Global Public Goods.

Uma Lele provided overall management and brought to bear inputs from a review by the World Bank's Operations Evaluation Department entitled *Global Health Programs, Millennium Development Goals, and the World Bank's Role*. She also carried out visits to Kenya and Malawi in August 2004 together with Sammy Oinyaku and Felix Salaniponi respectively and a visit to India in December 2004, interviewing government officials, donors, international organizations, researchers, and individuals engaged with one or more of the seven global health programs covered by the present study. Ronald Ridker and Uma Lele conducted interviews with the staff of Global Fund for AIDS, Tuberculosis, and Malaria; UNAIDS, and the World Health Organization, among others, in Geneva. Ronald Ridker prepared a background paper on the Global Fund. Jagadish Upadhyay carried out the case study of the seven global programs in China, with substantive inputs from Dr. Zhang Ben of the Chinese Ministry of Health. Richard Skolnik conducted case studies on Roll Back Malaria and Global Alliance for Vaccines and Immunization (GAVI) operations in India. Due to his previous work with the Stop TB Partnership and the Global Fund, Richard Skolnik recused himself from specific consideration of matters pertaining to these organizations, but he contributed to the development of the conceptual framework and reviewed a variety of inputs into the paper. Shreelata Rao Sheshadri prepared the case studies of the Global Fund and Stop TB in India. Fawzia Rasheed of WHO contributed substantively on the activities of the WHO. Yianni Konstantopoulos and Jozefina Cutura provided research assistance. Maisha Hyman provided administrative support, and Rachel Weaving and Lisa Block served as the editors.

The team benefited from the perspectives of many individuals engaged in the seven global programs, international organizations, and authorities in developing countries that the team consulted while preparing this paper. These individuals, listed in Annex A, generously offered their time, information, and insights. The team also appreciates comments on the earlier draft of this paper from Gregory Ingram, Director General, Operations Evaluation, World Bank; Sven Sandstrom, Executive Director of the Secretariat of the International Task Force on Global Public Goods; and Elodie Montétagaud and other members of the ITFGPG secretariat. Helpful comments were received from members of the World Bank Human Development Network, including Jacques Baudouy, Olusoji Adeyi, Tawhid Nawaz, Eduard Bos, and Keith Hansen of the Bank's Africa Region; from the Global Fund, from Brad Herbert and Nicole Delaney; from various WHO departments, coordinated by Ian Smith with the help of Fawzia Rasheed; and from GAVI, from Kate Wintersgill.

Despite these many contributions, remaining weaknesses in the paper are the responsibility of the authors.

CONTENTS

FIGURES

TABLES

BOXES

DEFINITIONS AND RELATED ISSUES

Public goods are distinguished from private goods by non-rivalry and non-excludability. Non-rivalry means that many people can consume, use, or enjoy a public good at the same time: one person's consumption does not reduce the benefits that others can derive from consuming the same good at the same time. Non-excludability means that it is difficult to exclude from consumption those who do not pay for, or otherwise contribute to, the cost of supplying the good.

Global public goods are distinguished from national and local public goods by their reach. Their public characteristics of non-rivalry and non-excludability spill across national boundaries. People in more than one country can benefit from the provision of a global public good, whether or not they contributed to the cost of supplying the good. For national and local public goods, however, only those who live in a given country or in a given locality can benefit from the provision of these goods.

Merit goods are goods whose value derives not simply from the economic norm of consumer sovereignty, but from some alternative norm that overrides rational choice by individual persons or, in the case of foreign assistance, individual nations. The concept of merit (or demerit) goods should not be confused with that of public goods, since it transcends the distinction between public and private goods (based on non-rivalry and non-excludability). When donors direct development assistance to certain uses, rather than providing pure, untied assistance to developing countries, they are implicitly attaching merit to their own preferences, whether the assistance is tied to the provision of public or private goods (Musgrave 1987).

In the health sector, there is considerable ambiguity on what constitutes a public good, and even more ambiguity about what constitutes a global public good, since the definition also depends on the level of development, technological options, and social choices. The fight against communicable diseases, for example, requires important investments in global public goods, beyond the means or incentives of any single government and beyond the sum total of national-level programs in activities such as global surveillance, information and knowledge that international institutions such as WHO perform, but that are developed at the national level and aggregated (WHO 2001). Similarly, scientific knowledge, which enables the production of medicines and vaccines, is a global public good. So are the international trade rules that determine prices at which drugs and vaccines are available to developing countries.

Treatment and cure of TB and malaria are essential for the control of those diseases. Some argue that the global spillovers of malaria, for example across continents, are smaller than those of TB, although the incidence of malaria is a huge developmental issue and its control is a definite local and regional public good.

With respect to HIV/AIDS, both prevention and treatment have increasingly been considered global public goods, on the grounds that treatment will increase life span, facilitate HIV prevention, and strengthen the overall health sector, and can be funded by external assistance that may not be available for other expenditures. Treatment, goes the argument, will therefore help to reduce the impact of the AIDS pandemic on national, and eventually global, economic growth. But the sustainability of investments in treatment is the key issue. Unlike treatment for TB and malaria, treatment for HIV/AIDS needs to be life-long—with commensurate financial implications. To the extent that free or subsidized treatment through public intervention is provided on ethical, humanitarian, or equity grounds, it is of course a merit good. The likely effects of treatment on

facilitating prevention and containing spread are also complex, and relevant evidence is limited for developing countries. The prevention of mother-to-child transmission through treatment of HIV-positive pregnant women, of transmission through sexual contact or exchange of body fluids, and of transmission through exchange of needles clearly has public-good aspects. Selectively targeted treatment will therefore entail negative spillovers, and it also has public good aspects.

However, critics of large-scale public coverage of treatment argue that in a situation of constrained financial, human, and management resources, treatment may also cause a false sense of security, encourage risky sexual behavior among some of those infected, increase the resistance of the disease to treatment, increase expectations, and public sector financial, human, and institutional commitments to the delivery of treatment—all to the detriment of prevention, to other health issues needing attention, and to the needs of the rest of the economy. In poor countries, given the inherently unpredictable nature of aid, rapid expansion of treatment will increase aid dependence on a long-term basis. Therefore, some argue that programs involving treatment should always include a major component devoted to prevention and should be entered into only if long-term sustainable funding is very likely (Over et al. 2004).

Public intervention in *immunization* is considered a public good on three grounds: (1) it reduces the risk of spread of disease; without public intervention, the full course of vaccinations cannot be provided; (2) some related interventions (such as vector control, education on the need for immunization, research on immunizations, and information) are pure public goods; and (3) it advances equity, since immunization-preventable diseases disproportionately affect the poor. While most of the non-informational services that are involved are private (rival and exclusionary), there are substantial social externalities associated with immunization. For example, the polio vaccine is unique because it exhibits both characteristics of public goods. The oral polio vaccine allows the attenuated virus to multiply in the child's intestine and be released in much larger quantities in excreta. The attenuated virus competes in the environment with the circulating wild virus that is responsible for polio, making benefits both non-rival and non-exclusionary and therefore a public good (Hammer 1996).

EXECUTIVE SUMMARY

Nearly 14.5 million people die annually from preventable communicable diseases, according to the World Health Organization. Tens of millions more have their lives impaired by these diseases on a daily basis. More than 90 percent of the world's communicable disease burden, and 90 percent of the related deaths, occur in the poorest populations of developing countries. Some 500 million cases of malaria occur each year. Drug resistance is on the rise both for malaria and for tuberculosis. TB is rising in many African countries, with AIDS as the main driver of the epidemic, and in Russia, as a result of the breakdown in public health services and of social and economic challenges. HIV is spreading rapidly to rural areas and affecting increasingly higher proportions of women.

The dramatic worsening of the disease burden, and the recognition of the global health, economic development, and security risks posed by these threats, have caused rapid and far-reaching changes in the global health sector, with many potentially positive results. Four important trends are:

- the placement of global health, concurrently with the environment, on a "war footing," as a major global concern and an integral part of the Millennium Development Goals;
- the growing share of development aid being directed to health, while overall aid levels have increased little;
- the increased programming of health aid through new global health programs outside the key traditional international organizations such as the World Bank and World Health Organization; and
- the focus of global health efforts on a few communicable diseases with cross-border spillovers, even though the health systems of developing countries must concurrently address a whole range of nationally and locally important health challenges, in situations of extreme resource scarcity.

Some of the new global programs such as the Global Fund for Aids, TB, and Malaria (GFATM) or the Special Program for Research and Training in Tropical Diseases (TDR) are themselves financing mechanisms; others such as the Global Alliance for Vaccines and Immunization (GAVI) are attached to financing mechanisms. Most are mobilizing new global expertise and knowledge for problem-solving from a variety of fields, and through advocacy they have increased global and national awareness of communicable disease issues at the highest political levels. Indeed, the Global Fund and (with the help of the Vaccine Fund) GAVI are now bigger sources of finance in communicable diseases and child immunization than is the World Bank.

The donors to these programs may see GFATM and GAVI/the Vaccine Fund as all-purpose assistance partners, and may not perceive the major implications of the new programs for existing agencies. The new programs have challenged the financing and policy/advisory activities of the World Bank, while increasing the demand for technical inputs from the World Health Organization and UNICEF, and they have expanded the roles of other UN agencies such as the International Labor Organization in spreading disease-specific

information and knowledge in the workplace. Though the traditional institutions have changed their responses, the resources at their disposal nowhere match the growth in demand or the needs that the new financing programs have stimulated. The programs have also placed tremendous pressure on the health delivery systems of developing countries, by requiring them to respond to challenges at all levels in unprecedented ways and to accommodate global priorities in the context of extremely limited national capacity and resources.

The International Task Force on Global Public Goods, for which this background paper was prepared, asked the study team to analyze:

- the effectiveness of international health programs in building the capacity of national health systems to prevent communicable diseases, and
- the coherence across international health programs, given the importance of avoiding wasteful duplication and exploiting economies of scale and scope, especially in view of the limited resources at the disposal of developing countries.[1]

It is important to stress at the outset that this paper does not address health sector capacities to meet all health sector needs, but only those related to communicable diseases.

The paper assesses seven international health programs addressing communicable diseases: three programs with financing—the Special Program for Tropical Disease Research (TDR); the Global Alliance for Vaccines and Immunization (GAVI); and the Global Fund for AIDS, Tuberculosis, and Malaria (GFATM)—and four programs for advocacy, broadly defined—the Global Forum for Health Research, UNAIDS, Stop TB, and Roll Back Malaria.[2] These seven were selected for analysis because they represent considerable diversity in age, scope, and approaches to global collective action (Table 1.1 in Section 1 below).

For evidence, this paper draws on existing evaluations and on four country case studies undertaken for this study—describing experiences with global health programs in China, India, Kenya, and Malawi—in addition to reviews of reports and interviews with a range of stakeholders. Together, the four case study countries account for half the world's low- and middle-income populations and represent a diverse range of health system capacities. The details of the methodology used, and much of the evidence from past evaluations of six of the seven global programs, were presented in OED (2004) and are not repeated here; our subsequent field work in the countries has largely reinforced the conclusions of that review. GFATM was not reviewed in the OED study because it was too new at the time, but with its substantial funding, GFATM has fundamentally transformed the health aid scene. Hence this paper provides more evidence on the operations of the Global Fund and its interactions with

[1] The paper follows terms of reference provided by the Secretariat, but is an outgrowth of a recent review by the World Bank's Operations Evaluation Department: *Global Health Programs, Millennium Development Goals, and the World Bank's Role* (OED 2004).

[2] The term "advocacy" as used in this paper refers to activities undertaken to create reform conditions in developing countries, to distinguish them from investments to provide public goods, although programs also "advocate" increased investments in specific activities. Some commentators have argued that the term "advocacy" does not do justice to the range of activities of the global health programs discussed.

other organizations than it does on the other six programs. The World Bank was used as the comparator with GFATM because the Bank is the only organization that makes available systematic information on its operations on a comparable basis to that of GFATM. For lack of time and resources, the paper does not review the activities of bilateral donors, but where the activities of donor agencies such as the UK Department for International Development (DFID) or the US Agency for International Development (USAID) in communicable diseases were relevant, they were taken into account in reviewing country situations.

EFFECTIVENESS OF THE GLOBAL PROGRAMS IN BUILDING NATIONAL CAPACITIES

To control or prevent communicable diseases requires:

- Sound technical approaches based on research and development, including technologies and products relevant to local circumstances.
- Political commitment.
- Financing to ensure that scientific, institutional, and other capacity exists within countries to carry out program activities, to evaluate their results, and to adapt solutions to ensure their long-term sustainability. Increased financing is necessary but not sufficient. A key challenge is to deploy financing to alleviate the most binding constraints.
- Often, inputs from other sectors such as agriculture, water supply and sanitation, education, and community participation.

Perhaps by necessity, much of the recent emphasis in global health interventions has shifted away from general preventive measures designed to improve well being—through promoting such elements as better nutrition, education, public health, a clean water supply, and family planning—and towards the prevention and treatment of specific communicable diseases. The shift to disease-specific measures is often associated with global programs. These programs have introduced new technology for addressing communicable diseases on a scale not known before, along with a strong emphasis on deployment of vaccines and drugs. They have invoked the 40-year old debate about the merits of mass campaigns versus general health services programs, although a consensus has now emerged that each approach has its own merits and weaknesses and the two need to be seen as mutually complementary.

Some of the potential positive impacts of disease-specific programming include: increased political awareness of specific diseases; augmented financial resources to combat the diseases; aid coordination around the disease-specific approach; development of disease-specific strategies; mobilization of cutting-edge technical knowledge from diverse sources; efforts to address issues of disease-specific global drug supply, distribution, and pricing; promoting global networking among professionals; development of technical guidelines and performance indicators; improved surveillance; support for epidemiological and operational research; disease-specific planning and implementation, monitoring and evaluation, education, and training of professionals; and the development of incentive systems.

Negative impacts include competition among different disease-specific programs for the same resources; a lack of effort to develop single-purpose staff into multipurpose health

workers; a failure to build up the capacity of developing country health systems to the point where they can sustain the achievements of the disease-specific campaigns; fragmentation of multipurpose health services; distorted allocation of scarce human and financial resources and distorted incentive systems; and lack of evidence on the cost effectiveness of different disease-specific approaches.

It is not surprising that the goals of all seven global programs, focusing as they do on communicable diseases of high priority to the global community, are highly relevant to the problems of preventing or controlling communicable diseases. Yet developing countries must reconcile global priorities with local needs in a situation of extreme resource scarcity. These countries can incur high transaction costs as a result of the lack of coherence between disease-specific global programs and the other activities of traditional international organizations in the health field, which combine disease-specific with system-wide interventions to strengthen general health systems.

Disease prevention and control is part of the public health agenda, rather than a separate one. While successful disease-specific programs help build capacity for control or eradication of specific diseases, they do not always take account of some of the generic, system-level issues that need support. Those issues include human capital development, overall drug and vaccine procurement and distribution systems, and the development of laboratory capacity that can serve more than one disease. Indeed, in several cases, a focus on controlling and eradicating specific diseases inadvertently entails “robbing Peter to pay Paul”, siphoning resources away from the rest of the health system.

The biggest toll in this respect is in human resource development. Shortages of well-trained doctors, nurses, and health administrators are the principal bottleneck to more rapid progress in fighting communicable diseases, and these shortages cannot be overcome from within programs to control specific diseases (except perhaps at the expense of other important health programs).

At the country level, the synergy among the various global health programs, and between them and the activities of the traditional international organizations, remains weak and the various sources of assistance are not well coordinated. Often the lost opportunities and the resulting costs to developing countries are hidden and qualitative, not easily measured, and not even sufficiently articulated by them as yet.

Additionally, the requirements of the global programs for preparing proposals, procuring supplies, or for institutional arrangements differ dramatically from program to program. Each often calls for the establishment of new structures and procedures that do not draw on existing ones. To make expeditious and efficient use of the additional funds offered by the programs calls for knowledge, expertise, and skills that are typically in extremely short supply in developing countries.

Because the disease-specific global programs by and large cannot be sustained without the support of the health system infrastructure, most developing countries urgently need help in building the capacities of their health systems. The World Health Organization offers the

most potential to provide technical assistance to health systems on a global scale, but WHO's regular budget has been flat. WHO has increased its reliance on temporary extra-budgetary resources from donors to fund activities on an ad hoc basis, but it cannot meet the growing demands. The World Bank has rapidly increased its financial assistance for communicable diseases, particularly HIV/AIDS and TB, but its assistance for the development of overall health sector capacity has grown only slowly. Overall, a larger share of support for health in developing countries has been provided in support of communicable disease control—in part in response to the growing need, but also because of the strong external advocacy in support of efforts against specific diseases.

The disease-by-disease approach makes it difficult for developing countries to realize potential economies of scale and integrate disease-specific approaches into their overall systems, even though some of the infrastructure and capacities needed to achieve control and prevention are common across multiple diseases.

A better integration of the international disease control programs with health system development capacities is needed. Such a system-wide focus would help to ensure the needed balance in developing primary, secondary, and tertiary services; upgrading facilities for training of health personnel, research, and surveillance; improving the financial and logistical aspects of sector management; and strengthening capacities to plan and evaluate disease-specific and health system-wide policies and strategies.

COHERENCE ACROSS THE GLOBAL PROGRAMS

Whereas some individual programs have been quite successful in achieving their objectives, and even in building disease-specific capacity, synergy among the programs could be improved in three dimensions:

- First, at both the national and the global health system level, economies of scale and scope, in dealing simultaneously with more than one disease, could be better exploited.
- Second, coherence between the activities of global programs and those of key international institutions, such as the World Bank and WHO, could be increased as they are each global program partners and constitute pivotal elements of the global health architecture.
- Third, complementary policies, strategies, and investments—in such areas as research and development, country capacity, prevention and treatment, drug procurement and distribution, and pricing and subsidies—are needed to enhance the effectiveness of the disease-specific global programs, and to help achieve greater coherence between the work of traditional international organizations and that of the new financing mechanisms such as the Global Fund.

To be able to deliver quality assistance, the advocacy programs such as UNAIDS, Roll Back Malaria, and Stop TB must work with agencies that provide financing and technical assistance. The financing mechanisms such as GFATM and GAVI, for their part, are not purely financing mechanisms, nor are they able to perform traditional developmental

functions. These global programs do not have large enough administrative budgets to be able to deliver the needed capacity building aspects of assistance on a long-term predictable basis. They do not have WHO's advantages in surveillance, ability to develop disease-specific guidelines and standards, or technical assistance, or those of the World Bank in providing advice at the sector level to countries on health policies and strategies, nor do they fully exploit those agencies' advantages. (Nor are those advantages acknowledged by many of the donors that contribute to global programs.) Indeed, in field visits and interviews with donors, the team noted a weak strategic link between the country-level assistance of bilateral donors and their contributions to global programs. The roles of donors in global program funding and in their country assistance are in need of independent objective assessment, adjustment, and consolidation. There is currently unnecessary duplication, overlap, gaps, and confusion in donor assistance at the two levels.

PROGRESS AGAINST SPECIFIC DISEASES

Some diseases have been more easily controlled than others, and the successful experiences potentially offer lessons for other diseases.

Tuberculosis (TB)

Effective implementation of the strategy known as DOTS ("directly observed treatment—short course") has made tuberculosis control an example of great success against a communicable disease. The strategy, endorsed by WHO, moves from a clinical approach to TB to a public health approach that is built on and seeks to improve the primary care foundation for sustainable treatment programs. It entails research and the provision of timely access to TB drugs at little or no cost to the patients, investment at the country level, quality technical assistance, training, and monitoring and evaluating results.

The Stop TB partnership has mobilized the use of the DOTS package by all relevant partners to achieve control in some large countries, most notably China and India, using vertically organized managerial and support functions for integrated delivery systems. The good results have engendered ownership of DOTS among the different aid partners that support the TB program. In China and India, the successful DOTS strategies enjoy a relatively good balance among primary, secondary, and tertiary services, and between research and surveillance. But even in these two countries, with their relatively strong national health systems, the disease-specific and health system-wide infrastructure policies and strategies have some way to go to improve their integration.

The TB control program is technically easier to implement than the multisectoral approach that is needed to control HIV/AIDS or malaria. In China and India, success depended partly on pre-existing strong partnerships between government and WHO, and the World Bank has also played a role. With WHO, the partnership achieved global consensus around the technical control package and developed technical strategies to respond to HIV/TB and multi-drug-resistant TB, leading to successes in a diverse range of countries. The

partnership's strong consensus-building around science and strategy, as well as its defined measures of performance, may offer a model for some other programs.

The problem of TB is growing in scope and complexity due to drug-resistant strains of the disease, financing barriers, and a host of other factors. In several countries, cure rates are substantially below the global average of 82 percent. The severity of the TB/HIV co-epidemics and the threat of drug resistance pose a challenge for TB control. Since its founding, Stop TB has given special attention to creating strategies and responses on TB/HIV and multi-drug resistant TB. But the implementation of collaborative TB/HIV activities at the country level is slow in relation to the accelerated pace of the HIV/AIDS epidemic, and TB and HIV/AIDS programs need to collaborate more strongly in the field.

Originally, Stop TB estimated that costs for TB control would be $1.8 billion annually over a five year period, and identified an annual funding gap of $0.8 billion. That estimated annual gap has since increased to $2.2 billon. Securing long-term financing for the Global Drug Facility is also crucial.

Malaria

Malaria control is less of a success story, particularly in Africa, which has four fifths of malaria related deaths. The standard prescription for malaria control is the promotion of insecticide-treated nets, intermittent preventive treatment of pregnant women, and artemisinin-based combination therapy (ACT) to address drug resistance to chloroquine. But malaria thrives in diverse conditions. A recent review by the World Bank of experience in Brazil, Eritrea, and India showed that because these three countries do not have the problem of drug resistance they could deviate considerably from the standard prescription. In all three countries, a strong vertical program of control at the national level entailed strong surveillance, a focus on malaria-endemic regions, and effective decentralized multisectoral strategies at the local level, stressing the importance of national technical capacities to adapt location specific solutions. Roll Back Malaria has had a limited role in the successful control of malaria in Brazil and India although it has played a major role by ensuring that funding for malaria control is included in the Global Fund. In Africa, the problem of widespread resistance to traditional drugs has led to the need for ACT. This therapy, as recommended by WHO, is several times more costly than chloroquine, and in Africa the supply of drugs is unreliable and national capacities for targeted interventions are much more limited than in Brazil or India.

HIV/AIDS

The prevention of HIV/AIDS calls for fundamental changes in human behavior, including sexual practices. Information campaigns made possible by increased international aid have attempted to slow the increase in the number of HIV-positive cases. But except in a few countries such as Brazil, Thailand, and Uganda, and in parts of India, monitoring and evaluation have not been strong enough to yield a clear verdict on the effects of these campaigns.

Treatment can manage but not cure the disease. It is justified on developmental, economic, humanitarian, and ethical grounds. But its impact on HIV/AIDS prevention is unclear and controversial.

Disease-specific strategies against HIV/AIDS need greater attention. They are not well focused on high-risk groups. National AIDS councils, community participation, and multisectoral approaches are in place and evolving, but there is no systematic evidence on how well they are working. It is generally accepted that monitoring and evaluation and donor coordination are weak. Countries where the disease is being rolled back, such as Brazil, Thailand, and Uganda, are few, and developing-country stakeholders suggest that there is more scope to learn transferable lessons within and across countries than is currently being exploited. All these features call for global programs to be focused on action at the country level. Moreover, a strong monitoring and evaluation system is essential as a source of lessons for improving the quality and composition of assistance against HIV/AIDS.

UNAIDS, with co-sponsorship by nine UN organizations and the World Bank, is designed to achieve global and country-level consensus on fighting HIV/AIDS as a multisectoral challenge rather than simply as a health issue. Given the multiplicity of actors that have played a role in political and financial mobilization in support of HIV/AIDS, it is difficult to attribute responsibility for results achieved. But the UNAIDS partnership can be credited with having been highly effective in political mobilization at the global level, to promote increased World Bank lending in HIV/AIDS and the establishment of the Global Fund for AIDS, TB, and Malaria. The UNAIDS secretariat will need to continue its leadership in the partnership and activism at the global level, but it now also needs to find a way to advocate more effectively at the country and even the local level. In this regard, UNAIDS performance seems variable across the four case-study countries.

The Global Fund for AIDS, Tuberculosis, and Malaria (GFATM) has substantially increased the availability of resources, becoming a much larger player than the World Bank in financing for the three diseases. Both GFATM and the Bank have focused their financial assistance on small poor countries in greatest need of assistance, but the country case studies suggest that, at least at this early stage, additional resources may be more effectively used by large and middle-income countries that have stronger institutional capacity for implementation. This is a hypothesis that would need more systematic empirical exploration.

The case studies also suggest that GFATM has achieved strong country ownership by putting countries in the driver's seat of strategies for disease control and prevention. World Bank staff acknowledge that GFATM has diversified stakeholder participation more widely and more quickly than has the Bank, by opening up participation in its country coordinating mechanisms (CCMs), and by providing direct access to its financial resources to all stakeholders in the countries, rather than to governments alone. However, the lion's share of the GFATM resources still goes to government organizations and the Fund's CCMs are still dominated by government ministries, even though they are intended to have broad representation. The capacity of non-governmental organizations to prepare and implement sound projects for GFATM is weak and any strategies to bolster it are as yet unclear.

GFATM has spawned a huge demand for technical assistance, which is being met by organizations such as WHO and UNAIDS. Together, WHO, UNAIDS, and to a lesser extent, USAID are frequently represented in the CCMs. The World Bank has only a very small presence in the CCMs, perhaps reflecting the weak coordination between GFATM and the Bank both at the strategic institutional level and at the level of individual countries.

GFATM's arrival has compounded the aid coordination challenge. It has led to considerable duplication in institutional arrangements, for example between national AIDS councils—which are meant to have multisectoral government representation—and the CCMs, raising transaction costs for countries in accessing resources and for the international organizations such as WHO and UNAIDS that support them. Country authorities conveyed to the investigators for this paper that they have found difficulty with GFATM's complex and changing grant preparation, approval, and disbursement procedures. Absorptive capacity problems seem to be slowing down the implementation of other donor programs, particularly in the small countries with greatest need, and some donors indicated to the study team that they are reassessing their future commitments of resources to the health sector, depending on progress in implementation.

Another weakness is the insufficient links between GFATM-funded programs and the disease control strategies of other donors, particularly in small countries where national health system capacities are weak. Countries argue that this reflects GFATM's Geneva-based organization, its modest presence at the country level, donors' lack of cohesive well integrated disease control strategies, and a focus on disease treatment that several stakeholders in the countries have suggested is diverting attention from prevention. Besides the lack of long-term certainty about external resources for scaling up treatment, countries are anxious about the fiscal/financial and the political and ethical implications of uncertainty.

Looking ahead, authorities in some developing countries have begun to take charge of coordinating disease programs across donors in their countries and even to use sectorwide approaches. Some of the latter bring donors together disease by disease, as with TB in India, while others cover assistance to the health sector as a whole, as in Malawi. GFATM itself stresses the need for increased coherence among key international organizations, at both the global and country level, to ensure that the increased financing helps to build a quality pipeline of investments and the national development capacities of its grant recipients.

IMMUNIZATION

The Global Alliance for Vaccines and Immunization (GAVI) has committed more than $1 billion to 71 countries for immunization and is also financing work to develop new vaccines. A measure of its success is that among children born in 2001-2003, the Fund is estimated to have prevented 670,000 deaths from a range of important childhood diseases. Apart from augmenting the supply of funding and technical assistance in support of immunization, GAVI has made important contributions in two areas: (i) the introduction of new and improved vaccines, such as for hepatitis B, and (ii) an effort to stimulate the market for new

multivalent vaccines by guaranteeing funding, while helping to improve the details of the delivery system.

Though one of its declared objectives was to expand the coverage of ongoing immunization programs in developing countries, the Alliance has been focusing on promoting new multivalent vaccines, whose unit costs are many times those of the cheaper, older, single vaccines typically used in poor countries.

Financial viability remains the biggest challenge for the programs that GAVI has assisted. GAVI has informed countries that it is phasing out in 2006; its partners have launched a global campaign through the International Financing Facility to mobilize funding specifically for a program on immunization known as IFFIm.

HEALTH RESEARCH

Investments in international surveillance and health research including, for example, for microbial resistance, have high payoffs and have expanded at the global level, but coordination, prioritization, and global and country links among research efforts and funding at the national level are still weak.

DRUG PROCUREMENT AND SUPPLIES

Most disease control programs would be sustainable if additional external grant funding were available on a consistent, long-term, predictable basis. But even with reduced prices, the outcomes of many of the disease-specific drug and vaccine delivery approaches promoted by the global programs may be sustained only if considerably more funding becomes available. Beyond the arrangements for specific diseases, there is considerable scope for establishing similar infrastructure at the country level for drug and vaccine procurement and distribution arrangements.

HUMAN RESOURCES

Shortages of well-trained doctors, nurses, and health administrators are the principal bottleneck to more rapid progress in fighting communicable diseases. These shortages cannot be overcome from within specific disease control programs—except perhaps at the expense of other important health programs.

There are no simple common fixes for these problems. Issues that need to be addressed, in addition to the most obvious one of the appropriate budget allocation for the health sector, include civil service regulations and salary reforms, housing in rural areas, agreements with receiving countries to help sending countries recover the costs of training emigrants, and donor policies towards the financing of the recurrent costs of public programs on a long-term

basis. Donors should consider funding training programs on a large scale, as they did in the agricultural sector when food shortages threatened many developing countries in the 1970s.

CONCLUSIONS AND RECOMMENDATIONS

Global health programs need to shift away from a tendency for crisis management to a greater focus on longer-term strategic planning and implementation. The crisis mentality, stimulated in part by very effective advocacy programs, has resulted in a justifiable shift in resources towards treatment of communicable diseases. But it has been based on estimates of need rather than of absorptive capacity, and that has resulted in inefficient use of resources and neglect of critical components such as prevention, system capacity building (reflected most dramatically in shortages of professional health workers), surveillance, research, monitoring and evaluation, and the role of non-health sectors, all of which affect health outcomes. The crisis mentality has also resulted in a proliferation of uncoordinated agencies and programs that increase transaction costs and further reduce the effectiveness of foreign assistance. These problems are particularly severe in small, low-income countries that depend heavily on aid. Without a change to a longer-term approach, disappointment with results will eventually lead to donor fatigue that will threaten the sustainability of global health programs.

These conclusions lead to the following recommendations.

- ***Develop an effective mechanism for greater coherence and coordination at both the strategic and the country operational level***, especially among the three core organizations—WHO, the World Bank, and GFATM—but also other related partners and funders. There is a natural division of labor between the core organizations, with WHO setting standards and providing technical assistance, the World Bank providing assistance for system-wide policy planning and capacity building, and GFATM providing large-scale funding. The global system cannot work well without active and effective collaboration between all three at both the global and the country levels. Some agency must take the lead to make this happen, as well as to ensure that the other anchor functions are satisfactorily provided. Given the roles it now plays, WHO would seem to be the logical agency to do this.

- ***Increase the core funding of WHO*** (as opposed to funding from extra-budgetary sources that are ad hoc and of questionable sustainability), so that WHO can properly serve as an anchor institution and satisfy the growing technical assistance needs of developing countries.

- ***The World Bank needs to become more proactive in building country-level health system capacities and coordinating the activities of bilateral donors in this field.*** As the only agency with significant operational capacity in all sectors, the World Bank has a relative advantage in assessing the appropriate balance between disease-specific and overall health system approaches, bringing into play non-health sectors, viewing health in a macroeconomic context, and helping design and support country-specific capacity

building programs relevant to the health sector. It is also in the best position to provide leadership at the country level in coordinating bilateral donor programs for building health system capacity.

- ***The Global Fund needs to continue evolving towards becoming a true funding agency***. Building on the steps it has already taken in this direction in some countries, GFATM should scale up its support for country-wide disease-specific strategies supported by other donors, without weakening its laudable outcome-based approach to funding.

- ***Improve the balance between disease-specific and sectorwide programs, between treatment and prevention, and among the roles of public, private, and community organizations***. The most serious imbalance arises from the relative neglect of system-wide programming and capacity building efforts, especially in small, poor countries, where it is hurting health programs for non-communicable diseases. Donors and international organizations have a special responsibility to help these countries develop the capacity to correct these imbalances.

- ***Sharpen the focus of some programs and consolidate others.*** Agencies that focus mainly on advocacy, for example UNAIDS, have been more successful at the global than at the country level; they need to consider ways to work more successfully at the country and local level. In the research field, TDR and the Global Forum need to consider merging to achieve a critical mass of impact.

- ***Establish programs aimed at overcoming shortages of skilled and motivated professionals for the health system as a whole.*** This will require policies and programs that cut across various disease-specific programs. Donors need to be willing to ramp up investments in health training and research institutes and to assist governments in funding adequate salaries for public health workers.

- ***Substantially enhance monitoring and evaluation, research, and data gathering capacity at both the global and the country level.*** Apart from critical humanitarian and development considerations, one of the reasons for emphasizing treatment is that available strategies and technologies for prevention are few, complex, and difficult to implement and to evaluate for impact. Operationally useful lessons need to be derived from the few success cases in preventing the spread of HIV/AIDS and TB. Operations research is also needed, using randomized experimental designs to test different strategies for inducing behavioral change. Medical R&D is needed to develop vaccines for communicable diseases, new and more effective barrier methods, and ways to contain the growth of drug resistance. Funding for such research and related data-gathering and surveillance activities is much lower than benefit-cost estimates suggest is appropriate. Innovative mechanisms to induce private sector investments in these areas should be considered and piloted. Any analysis and policy discussion must take account of factors that are outside the health sector but affect the incidence of communicable diseases. Much of the needed capacity should be created in developing countries. Many issues—for example, the appropriate choice among different drug formulations and ways to

change behavior—are country-specific. Sooner or later, all new products must be tested in the settings where they are to be used.

1. INTRODUCTION

1. There is a growing movement to link international development finance to the achievement of measurable goals. Examples include the Millennium Summit in New York (2000), the International Conference on Financing for Development in Monterrey (2002), the World Summit on Sustainable Development in Johannesburg (2002), and the British Government's Treasury/DFID initiative for the creation of an International Financing Facility.[3] Collectively, these initiatives reflect the need and desire of the international development community to forge collaborative approaches to change the way the issues of global inequalities and stagnating aid levels are addressed, and to do so in pursuit of concrete development goals. The resulting consensus has led to the adoption and frequent reaffirmation of the Millennium Development Goals (MDGs).[4]

2. Building on this consensus, the International Task Force on Global Public Goods, formed jointly by the Governments of France and Sweden, is addressing how to enhance the provision of international public goods. The Task Force is premised on the assumption that global public goods, as distinct from development assistance, (i) are important to both developed and developing countries; (ii) typically cannot, or will not, be adequately provided by individual countries or entities acting alone, and, hence (iii) are best addressed collectively on a multilateral basis.

3. Control of communicable diseases is one of the key public goods and services that have substantial international spillover effects. The Task Force takes the view that as a global public good, the control of communicable diseases "is primarily about the prevention of adverse international spillovers (of the spread of infectious diseases)" rather than about "the promotion of good health in all countries, desirable though that is from an ethical and developmental perspective."[5]

4. This commissioned background paper has been prepared for the Secretariat. The Task Force asked the study team to assess:

- the effectiveness of international health programs in building the capacity of national health systems to prevent communicable diseases; and

[3] Proposed by the UK Treasury and DFID to overcome budgetary limits and the lack of ability of OECD countries to provide assured long-term funding, the International Financing Facility is expected to package donor aid commitments and issue debt in the capital markets, on the basis of which funding can be enlarged and made more stable and predictable.

[4] Millennium Development Goals 4, 5, and 6 are directly related to combating communicable diseases. Goal 8 is a means to an end at the global level of using partnerships to promote improved health, and goals 1, 3, and 7 are indirectly related to Goals 4, 5 and 6. <http://www.developmentgoals.org/> See also Annex C, Table C.4.

[5] *Meeting Global Challenges: International Cooperation in the National Interest. Towards an Action Plan for Increasing the Provision and Impact of Global Public Goods.* Draft Working Paper Prepared by the Secretariat of the International Task Force on Global Public Goods, 14 January 2005, page 5.

- the coherence across international health programs, given the importance of avoiding wasteful duplication and exploiting economies of scale and scope, especially in view of the limited resources at the disposal of developing countries.

5. Given the limited time and resources the paper does not claim to be comprehensive and does not address in detail some of the key issues related to the building of general health system capacities, such as human resource development. The study team reviewed documents, literature, and related activities of key donors implementing similar programs. Team members interviewed government officials, donors, NGOs, representatives of the private sector, researchers/policy analysts, and people affected by the diseases in each of the four case study countries, as well as officials of the Global Fund for AIDS, Tuberculosis, and Malaria; the World Health Organization (WHO); and programs housed in WHO, UNAIDS, the Global Alliance for Vaccines and Immunization, the Global Forum, and the World Bank.

6. The paper follows terms of reference provided by the Secretariat, but is an outgrowth of a recent review by the World Bank's Operations Evaluation Department: *Global Health Programs, Millennium Development Goals, and the World Bank's Role* (OED 2004). Two distinguishing features of the present paper are: first, the case studies of two large countries—China and India—and two small countries—Kenya and Malawi—which were undertaken to enhance understanding of how global programs operate in countries with widely different capacity constraints. Together the four countries account for nearly half of the world's low and middle-income populations. The second distinguishing feature is a review of the Global Fund, which was not reviewed in the OED study because it was too new at the time. This paper contains more evidence on the operations of the Global Fund than on those of the other six programs. The World Bank was used as the comparator for GFATM because it is the only organization providing systematic information on its operations on a comparable basis to that of GFATM.[6] On those programs, much of the evidence from past evaluations was presented in the OED study and is not repeated here, because subsequent field work in the countries has largely reinforced the conclusions of that study.

7. The remainder of this introductory section outlines the challenge posed by communicable diseases and some key features of the health sector in developing countries. Against the background of recent developments in the global health sector, it introduces the seven global health programs evaluated. It concludes with a note on the method and approach used for the study. Section 2 assesses the effects of the global programs on the health capacities of developing countries. Sections 3 to 6 describe progress against individual communicable diseases and in vaccination and immunization, reviewing the contributions made by the global programs, and Section 7 describes issues in the support of research and drug supplies. Section 8 offers recommendations.

[6] The Global Fund must be applauded for its up to date and highly informative website containing information on a variety of aspects of the Fund's activities.

THE CHALLENGE POSED BY COMMUNICABLE DISEASES

8. According to WHO, 14.5 million people die annually from preventable communicable diseases. Tens of millions more have their lives impaired by these diseases. Developing countries, especially the poorest populations among them, account for more than 90 percent of the world's communicable disease burden and 90 percent of the related deaths.

9. Worldwide, there are more than 1.1 million deaths a year from malaria, 85 percent of them among children less than five years old (WHO 2002). There are more than 500 million cases of malaria a year, and a recent study put the number of cases of a particularly severe form of the malaria parasite, *Plasmodium falciparum*, at 515 million in 2002 alone (Snow et al. 2005). The number of people living with HIV increased to 39.4 million in 2004, and about 4.9 million among them may have been newly infected with the virus, according to the latest estimates published by WHO and UNAIDS. In 2004, AIDS claimed 3.1 million lives, mostly in the developing world; two thirds were in Sub-Saharan Africa and about a fifth in South and Southeast Asia (UNAIDS 2004). Tuberculosis afflicts some 8.8 million people each year and kills nearly 2 million, mostly adults in their most productive years. TB is the most important of the opportunistic infections of HIV and the major cause of death among those who are suffering from HIV. Each year more than 30 million children, mostly in Africa and Asia, remain unvaccinated against any disease.

10. The incidence of disease is evolving rapidly. Malaria is rising in Africa. The resurgence of TB is a major public health threat even in industrialized nations, but 95 percent of the burden is in the developing world. Drug resistance is on the rise for both malaria and TB. HIV is spreading rapidly and affecting increasingly higher proportions of women, as a result of high rates of internal and cross-border migration in the less developed regions.

11. The disease challenge is most severe in Africa and South Asia. Parts of Sub-Saharan Africa have been losing ground on some key health indicators, and at current and projected levels of performance Africa as a whole is unlikely to meet the Millennium Goals in health any time soon. India has raised its per capita GDP growth rate over recent decades, but some of its health indicators have been lagging relative to those in other countries; for example, the improvement in the mortality rate for children under five slowed considerably in the second half of the 1990s. South Asia has a large share of the world's poor population, with commensurately large shares of people with poor health indicators. Urban and industrialized regions experience a greater burden and a faster rise in the numbers of people living with HIV/AIDS.

12. Drug- and vaccine-based strategies have acquired renewed currency and some have been quite successful in eradicating and/or controlling specific communicable diseases. For example, Malawi, even with its low per capita income, has successfully overcome measles, and the developing world at large is on the verge of eradicating polio. Great progress has been made in child immunization, in the control of TB—notably in China and India—and in control of malaria in India, and the disease-specific programs have helped improve some aspects of disease-specific capacity in the health sector. These successes have led disease control programs, which had languished for a number of years, to receive greater attention.

HEALTH SYSTEMS IN DEVELOPING COUNTRIES

13. National capacity is often the weakest link in the prevention of the cross-border spread of communicable diseases. There are many definitions of health systems and many ways to assess their capacities. Besides, the diversity in the size, capacity, and public-private mix of even the four countries studied for this paper—the two mega countries China and India and the two smaller ones Kenya and Malawi—shows that inter-country comparisons are fruitless from an operational perspective without a systematic typology of countries.

14. WHO's framework for analyzing the health system, as adapted to India by Peters and others, provides a good starting point (Peters et al. 2002). Adapted further for the purposes of this review, the framework seems to capture many dimensions of the health system that are either being addressed by individual global programs or need addressing, and are dealt with in this paper (Box 1.1). Time and space do not permit us to provide a comprehensive picture of the health systems, and thus the health system issues addressed in this paper must be viewed as illustrative.

15. The public sector must often play a strong role in enlarging and upgrading the delivery services for communicable diseases even if it does not conduct all activities itself. Regardless of their size and complexity, public sectors tend to be weak in health policy/strategy formulation, oversight, planning, budgeting, management, and monitoring and evaluation, and in accountability to the public. They also typically suffer from insufficient access to recurrent finance, inadequate human capital, poor incentives for performance, and poor governance. Information systems, including surveillance, and epidemiological research tend to be inadequate, and even where they exist they are inadequately deployed for problem solving.

16. The private sector is potentially a large resource for scaling up health services on communicable diseases, because consumers (even among the poor) tend to rely heavily on the formal or informal private sector for curative/symptomatic care.[7] But studies carried out on TB in India suggest that private sector providers often lack the critical information to share with patients and do not have incentives to promote prevention. Effective public-private partnerships that improve the quality of private services would help enormously to scale up the control and prevention of communicable diseases.

17. Active public-private partnerships can accelerate and help scale up programs more quickly than either the public or the private sector working alone. A variety of recently formed public-private partnerships illustrate what the public sector can do to strengthen both public and private providers concurrently, in order to help scale up approaches successfully. Another way to help scale up programs is to outsource some elements of delivery services.

[7] The few exceptions include immunization services. The universal characteristics of the private sector include its wide range in quality—often from the best in high-income urban areas to the very weak in poor regions and rural areas—leaving considerable scope for knowledge sharing and quality enhancement from the viewpoint of scaling up services.

Box 1.1: Components and Dimensions of National Health Systems

GLOBAL INPUTS

- *Advocacy (knowledge, standards, guidelines, technical assistance, global policy rules (e.g. with regard to aid and trade)*

International organizations and donors, international NGOs, international professional organizations, pharmaceuticals, and consumables**.**

- *Finance*

Including financing policies, and lending or grant making policies and procedures, economic and sector analysis, procurement and disbursement policies, technical assistance, training and capacity building.

NATIONAL HEALTH SYSTEM INPUTS

Domestic knowledge, technology, and human resources.

SOURCES OF FINANCING

- *National*: Central/state/provincial/local
- *Private***:** Consumer and institutional
- *International***:** Multilateral banks, bilateral donors, GFATM, philanthropic sources, and others.

SERVICE DELIVERY

- *Public***:** Roles of central, provincial/state and local governments including health ministries and departments and the related subsidiarity issues. Research institutions, medical colleges, and other human capital and training institutions.
- *Private***:** For profit, non-profit, traditional/informal/indigenous and allopathic, community-level organizations, health educational and training institutions. Financial and human resource policies, management systems, and incentives pertaining to the delivery systems.

GOVERNMENT OVERSIGHT FUNCTIONS

- Policy setting, information, disclosure and advocacy; regulation and standard setting and strategic incentives; public-private partnerships; monitoring and evaluation; establishing feedback loops to actors on a routine basis.

SOME CHARACTERISTICS OF THE OPERATING ENVIRONMENT

Market failures, government failures, and civil society failures.

SYSTEMS OF ACCOUNTABILITY AND GOVERNANCE

Within national governments, to scientific professional community, donors, and ultimate consumers.

18. In considering these options, caution is needed to avoid cookie cutter approaches to either reforms or to building the capacity of health systems, given the diverse human and physical limitations that health systems face.

INNOVATIONS IN THE PROVISION OF GLOBAL PUBLIC GOODS FOR HEALTH

19. The change on the global health scene has been rapid and has occurred organically rather than being based on a systematic stocktaking of lessons of experience. Four important trends are:

- the placement of global health, concurrently with the environment, on a "war footing," as a major global concern and an integral part of the Millennium Development Goals;
- the growing share of development aid being directed to health, while overall aid levels have increased little;
- the increased programming of health aid outside the key traditional international organizations such as the World Bank and WHO; and
- the focus of global health efforts on communicable diseases.

20. Several factors have prompted these trends. They include recognition of the potentially high global economic costs of cross-border spillovers and the rapid development and delivery of new drugs and vaccines, made possible by biomedical research and advances in information technology. Intense global political activism by influential leaders, stressing the large share of the global communicable disease burden borne by developing countries and the poorest within them, along with the need for resource mobilization, has played a key role in increasing the resources for global health improvements.[8]

21. Within the global health sector, substantial changes have taken place in organization and in institutional rules of the game. Much of the emphasis has shifted away from general preventive measures designed to improve well being—through promoting such elements as improved nutrition, education, public health, a clean water supply, and family planning—towards the prevention and treatment of specific communicable diseases.

22. The shift to disease-specific measures is often associated with the new global-level partnerships that have emerged among traditional intergovernmental and bilateral organizations, civil society organizations, and the private sector. Not only are UN agencies and the World Bank engaged in partnerships, but the Bill and Melinda Gates Foundation is now a major player in global health, as are foundations associated with pharmaceutical companies. The new partnerships result from the possibility of rapidly scaling up the pace of work in immunization, HIV/AIDS, TB, and malaria and, at least implicitly, the perceived failure of traditional international organizations such as the World Bank and WHO and the governments of developing countries to respond quickly enough to HIV/AIDS and malaria and the needs for immunization, despite their effectiveness in other areas.[9]

23. The new global programs have introduced new technology for addressing communicable diseases on a scale not known before, along with a strong emphasis on the deployment of vaccines and drugs. They have invoked the 40-year old debate about the

[8] The Report on Macroeconomics and Health (WHO 2001), the appeals of the UN Secretary General at recent meetings, and the G8 Okinawa meeting are examples.

[9] By the time the Global Fund began operating, however, the World Bank had committed $550 million to HIV/AIDS in 16 countries and approved the second phase of its Multi-country HIV/AIDS Program (MAP2).

merits of "vertical" mass campaigns versus "horizontal" general health services programs, although a consensus has now emerged that each approach has its own merits and weaknesses and the two need to be seen as mutually complementary (Mills 2005).[10]

24. Some of the potential positive impacts of disease-specific programming include: increased political awareness of specific diseases; additional financial resources to combat these diseases; aid coordination around a disease-specific approach; development of disease-specific strategies; mobilization of cutting-edge technical knowledge from diverse sources; efforts to address issues of disease-specific global drug supply, distribution and pricing; global networking among professionals; development of technical guidelines and performance indicators; improved surveillance; support for epidemiological and operational research; and support for disease-specific planning and implementation, monitoring and evaluation, education and training of professionals, and development of incentive systems.

25. Negative impacts include competition among different disease-specific programs for the same resources; a lack of effort to develop single-purpose staff into multipurpose health workers; a failure to develop the capacity of developing country health systems to the point where they can sustain the achievements of the disease-specific campaigns; fragmentation of multipurpose health services; distorted allocation of scarce human and financial resources and distorted incentive systems; and lack of evidence on the cost effectiveness of disease-specific approaches.

26. The institutional innovation in the health sector has included some critical changes in global trade rules—particularly with regard to intellectual property, prompted in part by intense lobbying by civil society organizations. The new trade rules have dramatically expanded the possibility of producing generic drugs in developing countries.[11] They have also reduced the prices of antiretroviral drugs and vaccines and opened up the possibility of increasing the availability of these supplies to the world's poorest populations, on a scale large enough to offer immense positive impacts on the health of the poor. This situation may well change, however, as more developing countries come to abide by WHO rules with respect to the copying of patented drugs.

27. The organizational and institutional innovations have had positive results: they have mobilized large-scale new financing, increased global and national awareness of health issues at the highest political levels, and attracted global expertise and knowledge for problem-solving from a variety of fields. By providing additional finance, the new global programs have challenged the capacities of the World Bank and WHO to deliver financial aid and technical assistance. And by shifting the balance from shareholder models of governance (in which those who *pay* for the actions of an organization are on the executive board) to stakeholder models (in which those who are *affected* are on the board), the new programs are

[10] Vertical programs are directed, supervised, and executed by specialized agencies with dedicated resources and workers, while a horizontal approach integrates different aspects of health sector development within individual countries.

[11] The breakthrough global agreement on anti-retroviral drug supply, pricing, and trade forged by the Clinton Foundation, the World Bank, UNICEF, and the Global Fund based on WHO guidelines in 2003 allows many of the world's poorest countries to buy AIDS drugs but also confronts the challenge of the weak delivery systems, increased aid dependency for treatment, and perhaps the most significant issue: long-term sustainability.

shaping the global health agenda and indirectly influencing the activities of the World Bank and WHO.[12]

28. However, the new financing programs have also placed considerable pressure on resource allocation decisions in the health delivery systems of developing countries, by financing specific activities at levels that are often out of proportion to the human and financial resources of developing countries, and by requiring those countries to respond to challenges related to those specific diseases at all levels in unprecedented ways.[13]

SEVEN GLOBAL PROGRAMS FOR CONTROL OF COMMUNICABLE DISEASES

29. Global programs are defined as partnerships and related initiatives whose benefits are intended to cut across more than one region of the world and in which the partners reach explicit agreements on objectives; agree to establish a new (formal or informal) organization; generate new products or services; and contribute dedicated resources to the program.

30. This paper assesses seven such programs: (1) three programs that either have financing of their own or are supported by a financing mechanism—the Special Program for Tropical Disease Research (TDR); the Global Alliance for Vaccines and Immunization (GAVI), supported by the Vaccine Fund; the Global Fund for AIDS, Tuberculosis, and Malaria (GFATM) and (2) four programs for advocacy, broadly defined—the Global Forum for Health Research, UNAIDS, Stop TB, and Roll Back Malaria (Table 1.1 and Annex C).

31. The programs with financing mechanisms support activities at either the global level to achieve global objectives (as with the research by TDR and GAVI's Vaccine Fund for the development of drugs and vaccines to achieve global objectives), or the national level to achieve national—and indirectly some global—objectives (as with GAVI's child immunization programs and the Global Fund to fight Aids, Tuberculosis, and Malaria).

32. The work of the advocacy programs includes undertaking political mobilization; collecting and disseminating information at the country and global levels; mobilizing resources in support of global research and development; developing—and building consensus around—disease-specific global strategies, standards, and norms; supporting scientific networking among professionals from the north and the south; developing consensus on the harmonization of donor financing policies and practices in support of action against specific diseases; and establishing facilities for financing drugs and supplies.

[12] WHO, for example is the major supplier of technical assistance for the GFATM proposals funded in developing countries, and is an observer on the GFATM board, and the World Bank is the trustee of Global Fund resources. Both the World Bank and UNAIDS Secretariat are observers on the GFATM board. The World Bank is a co-sponsor of UNAIDS together with ten UN agencies, has an observer status on its board, and receives funds from UNAIDS to operationalize several UNAIDS messages in Bank operations.

[13] In the last few years, programs against TB, HIV/AIDS, and malaria have themselves been among the major sources of documentation of the weaknesses in human resources and laboratory capacity across the health sector. Similarly, drug procurement initiatives have strongly highlighted the need to improve countries' underlying systems for supplying essential drugs.

Table 1.1: Global Health Programs: Main Features

Program	Start Date	Latest expenditure *(US$ millions)*	Sponsors	Goals
FINANCING MECHANISMS				
Special Program for Tropical Disease Research (TDR)	1975	47.4	UNDP, the World Bank, and WHO. The program is housed in WHO.	Develop new and improve existing approaches to prevent, diagnose, treat, and control neglected infectious diseases and to strengthen the capacity of developing countries to undertake research in support of disease control.
Global Alliance for Vaccines and Immunization (GAVI)	1999	124.1	Co-sponsored by the Bill and Melinda Gates Foundation, UNICEF, WHO, the Vaccine Fund, and the World Bank.	Save children's lives and protect people's health through the widespread use of safe vaccines, with a particular focus on the needs of developing countries. Increase immunization coverage at global, regional, and national levels; provide technical expertise to support country level programs, capacity building, and policy reforms and to accelerate development of new vaccines. GAVI's Vaccine Fund is a separate fund with its own governance and management structure that finances GAVI-approved proposals on immunization.
The Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM)	2002	1,009.0	An independent international fund co-sponsored by the UN, G-8 countries, developing countries, private foundations, and others. WHO provides administrative support for the Secretariat and the World Bank acts as Trustee.	Dramatically increase resources dedicated to fighting HIV/AIDS, tuberculosis, and malaria for prevention, treatment, care, and support. Provide resources for purchase of commodities to prevent and treat the three diseases, and provide associated support for strengthening comprehensive commodity management systems at the country level.
ADVOCACY PROGRAMS				
Global Forum for Health Research	1996	3.10	An independent international foundation co-sponsored by the World Bank.	Help bridge the so-called 10/90 gap (whereby diseases that account for 90 percent of the global burden of disease receive 10 percent of the funding for health research), by focusing research efforts on the health problems of the poor. Improve allocation of health research funds. Facilitate better collaboration on health research between public and private sectors.
UNAIDS	1996	95.0	UNDP, UNICEF, UNFPA, the World Food Program, UNODC, the International Labor Organization (ILO), UNESCO, WHO, and the World Bank.	Foster unprecedented global political mobilization on HIV/AIDS; stimulate UN and bilateral donors to increase their funding for HIV/AIDS activities, build consensus on and acceptance of a global strategy with which to approach agreed global goals and targets, develop new approaches to partnerships, including the pharmaceutical industry and civil society.
Global Partnership to Stop Tuberculosis (Stop TB)	1998	20.8	A network of international organizations, countries, private and public financial donors, governmental and nongovernmental organizations, and other entities (NGOs, research institutions, technical health agencies, and individuals). Co-sponsored by the World Bank, UNICEF, and WHO, which serves as lead international agency.	Eliminate tuberculosis (TB) as a public health problem and, ultimately, obtain a world free of TB. (i) Ensure that every TB patient has a health seeking behavior and has access to effective diagnosis, treatment, and cure. (ii) Stop the transmission chain of TB. (iii) Reduce the inequitable social and economic toll of the disease. (iv) Develop and implement new preventive, diagnostic, and therapeutic tools and strategies.
Roll Back Malaria (RBM)	1998	11.4	Co-sponsored by the World Bank, UNDP, UNICEF, and WHO, which serves as host agency.	Halve the world's malaria burden by 2010. Communicate the RBM concept, strategy, approach, and progress for sustainable RBM implementation. Coordinate technical and programmatic assistance programs. Disseminate and promote best practices for scaling up malaria control interventions. Promote rational drug treatment policies and remove taxes and tariffs on essential malaria commodities. Establish and strengthen capacities in national malaria control programs at the service delivery level.

33. At the country level, all the inputs provided by global programs must be integrated to treat, control, prevent, and eventually eradicate a specific disease by drawing on the global knowledge and financial and technical assistance and reach of partners. While making use of technical and financial assistance, countries need to establish their own disease control and treatment strategies appropriate to their circumstances.

STUDY METHOD AND INFORMATION SOURCES

34. The analysis underlying this paper was based on a standard set of questions (Table 1.2).

Table 1.2: Questions Addressed and Evaluation Criteria Used

Questions	Evaluation criteria
How relevant are the declared objectives of the specific global health initiatives to preventing or controlling communicable diseases on a sustainable basis?	Relevance
How and how well are the programs implemented at the country level?	Efficacy
How evaluable are program outcomes and impacts?	Evaluability of outcomes and impacts
What have the programs achieved in relation to their declared objectives, and what impacts have they had on the capacities of developing countries?	Impacts including on capacities of developing countries
How sustainable are their outcomes and impacts?	Sustainability of financing, outcomes, and impacts

35. Not surprisingly, many methodological challenges arise in using standard evaluation frameworks to evaluate global programs in health. Results chains linking inputs, outputs, outcomes, and impacts tend to be non-linear and complex. Further, they are not always well articulated and often the available evidence is not sufficiently garnered before programs are designed, as happened in the case of GFATM or Roll Back Malaria. In principle, outcomes and impacts are easier to measure, causality is easier to establish, and outcomes are easier to attribute to specific activities, for financing mechanisms than they are for advocacy programs, because financing mechanisms tend to promote concrete activities.

36. All programs except GAVI and GFATM have had independent external evaluations, but the latter two have also had a number of evaluations conducted by specific donors or by their own management on specific program aspects (Annex C, Table C.5). The quality and coverage of evaluations have varied, but sometimes individual programs respond so quickly to evaluations—as do GAVI or GFATM—that an evaluation such as that reflected in this paper can be outdated even before it is completed.

37. Ultimate impacts on beneficiaries are known with confidence only in the case of TDR, which has developed tools for tropical disease control and scientific research capacity;

GAVI, which measures the numbers of children's lives saved; and Stop TB, which measures the numbers of patients treated and cured. There is stronger evidence of positive process outcomes (or potential for achieving them) from UNAIDS and GFATM than from Roll Back Malaria or the Global Forum. The latter two programs are too new to have accumulated a strong evidence base, and their monitoring and evaluation systems are weak.

2. EFFECTS OF GLOBAL PROGRAMS ON NATIONAL HEALTH SYSTEMS

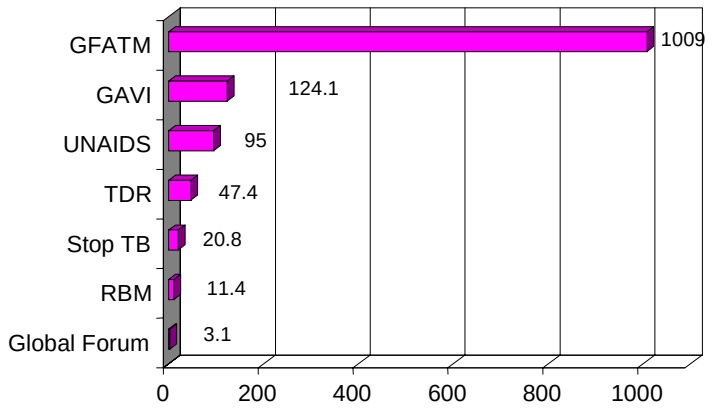
38. To control and prevent communicable diseases requires concerted efforts that include:

- An appropriate and sound scientific approach to biomedical and socioeconomic research and development to develop technologies, products, and delivery systems relevant to local circumstances.
- Political mobilization to develop social action on disease control. Such action is needed at all levels, from global to local.
- Financing to ensure that scientific/technical knowledge is generated and shared, that scientific and political consensus is built, and that policy, institutional, physical, and logistical capacities are built in developing countries. Increased financing is necessary but not sufficient. A key challenge is to deploy financing to alleviate the most binding constraints.
- Often, inputs from other sectors such as agriculture, water supply and sanitation, education, and community participation.

39. When viewed from this perspective the objectives and missions of the seven global programs are highly relevant to existing needs.

40. Are the programs large enough to make a difference? They range in size from the Global Fund, which committed well over a billion dollars to the three diseases in fiscal year 2004 alone, to the Global Forum for Health Research, which spent $3.1 million in that year (Figure 2.1).

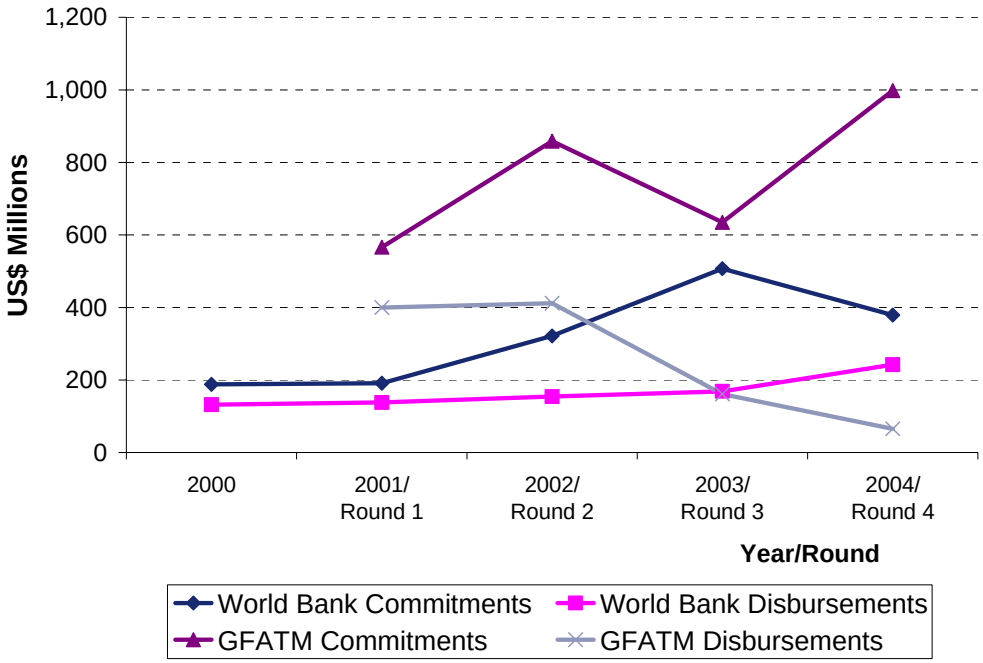
Figure 2.1: Size of Health Programs Evaluated in Terms of Annual Expenditures, Including Grant Disbursements
($ millions)



Note: Expenditures for GAVI and Stop TB include disbursements from the Vaccine Fund and the Global Drug Facility, respectively. Data for GFATM pertain to grants made by the Fund. All expenditures are for the latest year in which data are available.

41. The Global Fund is large even compared to the World Bank in its commitments to the three communicable diseases, having committed slightly more than $3 billion to 129 countries in four rounds of grant reviews since its establishment. It has disbursed slightly more than one billion dollars to 123 countries—an impressive performance by any account—with 56 percent of funding allocated for HIV/AIDS, 13 percent for TB, and 31 percent for malaria. By comparison, the World Bank's cumulative commitments and disbursements (including for projects approved before GFATM was established) over the same period went to 78 countries and amounted to $1.5 billion for HIV/AIDS and $835 million for other communicable diseases (Figure 2.2 and Annex B).

Figure 2.2: Commitments and Disbursements for Communicable Diseases: A Comparison of World Bank Financing and Global Fund Grants, 2000-04
($ millions)



Note: The disbursement data for GFATM and the World Bank shown in Figure 2.2 are not strictly comparable. They only provide orders of magnitude and should be interpreted with caution. The World Bank disbursements shown involve commitments made prior to 2000. In the case of GFATM, disbursements to principal recipients are more in the nature of advances and do not indicate the extent of implementation. The local Fund agents play an important role in approving applications and giving the green light to proceed with disbursements to sub-recipients. In the case of the World Bank, disbursements more closely reflect the rate of project implementation, although the Bank also establishes revolving funds in its investment programs and has made fast-disbursing adjustment loans, mostly in Latin America.

42. The Global Alliance for Vaccines and Immunization (GAVI) has provided significant finance for child immunization, and it committed $124 million for this purpose in 2004. GAVI has been operating in 70 countries, compared with the World Bank's presence in financing immunization in 40 countries. Until IDA 13 was approved, the World Bank was unable to provide grant funding and even today this is limited to the lowest income countries.

Hence the demand for World Bank loans and IDA credits for health interventions, including for immunization, has been limited.[14]

GLOBAL PROGRAMS ARE RELEVANT TO NEEDS, BUT CANNOT DO THE JOB ON THEIR OWN

43. Individual global programs bring to bear only a few of the many ingredients needed to control or prevent each disease, and only a few do so on a scale that is commensurate with the problems. While global programs such as the Stop TB partnership, TDR, and GAVI have helped build the capacity of developing countries in specific areas, as illustrated below, capacity building is not their declared mission, nor do the programs supply either the skills or the resources needed to build capacity. Therefore, how the mission and goals of individual international health programs are incorporated into the health systems of developing countries is a vital determinant of results.

44. Further, the factors leading to the spread of communicable diseases call for fundamental changes outside the realm of the health sector. For example, education, changes in sexual mores, better nutrition, population policy, and more are often needed for HIV/AIDS control and prevention. Changes in behavior, sanitation, and environmental policy are obviously important in the case of malaria and TB, and women's education is important for reducing child mortality.[15] Hence an increased flow of external funds for specific drug-based disease programs, while necessary, is not sufficient.

GLOBAL PROGRAMS IMPOSE HEAVY TRANSACTION COSTS ON DEVELOPING COUNTRIES

45. The global programs vary in their procedures, reporting requirements, and performance indicators. They often require the establishment of special units, with each program attempting to address similar constraints by using its own procedures, often without building on the existing procedures of governments or donors. The global health programs make many important positive contributions, as described later in this paper. But as the result of their heterogeneity and insufficient integration into the health systems, they are creating huge transaction costs for developing countries.

46. The essential challenge is to make the quick improvements needed to prevent epidemics from rapidly worsening, while not creating parallel systems unless absolutely necessary. A major strength of the WHO-recommended strategy for effective control of tuberculosis, the "Directly-observed treatment, short course strategy for TB control", known as DOTS, is that it moves from a clinical approach to TB to a public health approach that is

[14] As shown later in this paper, in China the Bank helped mobilize grant funds from DFID to make its overall lending terms to the health sector attractive.

[15] A careful statistical study of the effects of education, especially of girls, may indicate a stronger negative impact on HIV infection rates than do information, education, and communication, or condom distribution programs. Improved nutrition, which education as well as other policies can affect, is likely to increase resistance to becoming infected by one or another of these communicable diseases. Some legal and institutional arrangements—perhaps laws regulating prostitution, needle-exchanges, marriage, labor relations, or policies regarding national service—may also result in lower infection rates.

built on and seeks to improve the primary care foundation for sustainable treatment programs. Even though HIV sufferers potentially need a lifetime of treatment, there are important lessons from the DOTS approach that are being applied to HIV.

TOWARDS A BETTER BALANCE BETWEEN IMPROVING HEALTH SYSTEM CAPACITY AND ATTACKING EACH DISEASE SEPARATELY

47. In their efforts to combat communicable diseases, the global programs have not always taken into account the systemic issues that need attention. A better integration of disease control programs with health system development is needed.[16] Such a system-wide focus would help to ensure the needed balance in developing primary, secondary, and tertiary services; upgrading facilities for training health personnel and for research and surveillance; improving the financial and logistical aspects of sector management; and strengthening capacities to plan and evaluate disease-specific and health system-wide policies and strategies. The better integration is needed for a number of reasons.

48. First, there are scale economies in improving systems for a number of communicable diseases simultaneously, rather than attempting to strengthen systems disease-by-disease. The example of the Global Alliance for Vaccines and Immunization in India demonstrates this well. The Indian Government concluded that an immunization program involving the new multivalent vaccines promoted by GAVI would be financially and institutionally unsustainable on a nationwide basis without assured external funding on a long-term predictable grant basis on a large enough scale. This was partly because India's polio eradication program, well on the way to achieving its target, had placed enormous strains on the existing immunization delivery system.[17] The experience of India, with its relatively large financial and institutional capacity, suggests that most low-income countries would be unable to sustain an immunization program involving new multivalent vaccines unless they were assured of external grant aid on a long-term predictable basis.[18]

49. Second, there are huge transaction costs to developing countries in dealing with each disease, and each vertical program, separately, as illustrated by the example of GFATM in

[16] The need for integration between the activities of global programs and country development agendas extends beyond the health sector and is now quite broadly recognized. For example, the March 2005 Paris Declaration issued by the High-level Forum on Harmonization, Common Actions, and Results says, inter alia, "We commit ourselves to taking concrete and effective action to address the remaining challenges, including: …insufficient integration of global programs and initiatives into partner countries' broader development agendas, including in critical areas such as HIV/AIDS." The Forum was sponsored by the multilateral development banks, OECD-DAC, and the UN and hosted by the French government. Virtually all donor countries and more than 50 developing countries participated. Paris Declaration, para. 4.
<http://www.adb.org/Documents/Periodicals/MfDR/mar-2005.pdf>

[17] India's polio eradication campaign is one of the largest-ever efforts at social mobilization. According to the health officials interviewed, polio eradication is highly staff intensive. Nevertheless it is anticipated that if India can sustain its current rate of progress it will be declared polio-free in 2005.

[18] Some commentators on an earlier draft of this paper stressed that in India, like China, the share of health in public budgets is one of the lowest among developing countries. India has recently announced its intention to double the health budget. Yet questions about priorities among competing demands remain daunting and decisions are driven in part by local needs and a political process.

the case of HIV/AIDS (Section 5 below). Communicable diseases would be more rapidly controlled if there were greater coherence at the country level.

50. Third, much more can be achieved if the programs work in long-term strategic partnerships, at the operational country level, with key international organizations such as the World Bank and WHO. These international organizations make up the core of the global system for combating communicable diseases. They are the major institutions with the necessary resources, experience, track record, and relative advantage to scale up programs effectively, in place of the current often ad hoc cooperation between the global programs and their key partners, with at best variable linkages at the country level. With their mandates and demonstrated track record, and notwithstanding their many limitations, these traditional international organizations are the only ones that are in a position to provide policy/strategy and technical inputs in the health sector on the scale needed to achieve global results (Box 2.1).

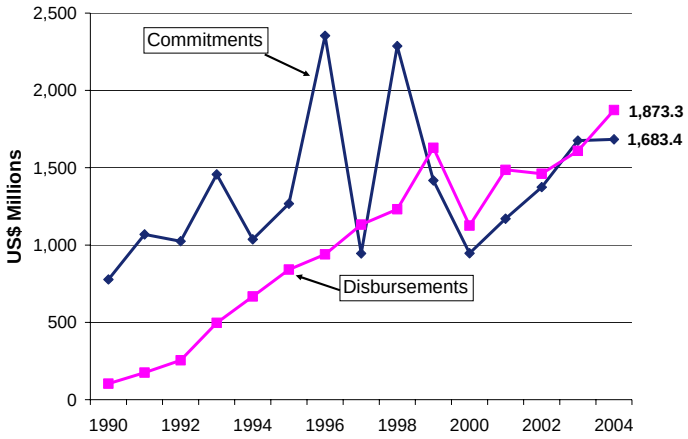
Box 2.1: World Bank Support for Health

The World Bank's contributions to the prevention and treatment of communicable diseases are not within the remit of this paper. Yet the Bank remains the largest overall funder of health development in developing countries, and thus its activities form an important part of the context for evaluating the work of global programs. Moreover, it remains an important partner both in the search for solutions to communicable disease problems and in helping its client countries to build up their health systems.

As the only organization at work in the health field that has a multisectoral presence, the Bank is able to bring sector-specific, multisectoral, and macroeconomic expertise to bear on health issues at the global and the country level in a way that the more specialized agencies cannot. The Bank's *World Development Reports* on Population in 1984 and Health in 1993 made major contributions to health strategies in developing countries.

The World Bank lent nearly $20 billion and disbursed $15 billion for health over 1990-2004. Its lending for the health sector (including investment and adjustment finance) has increased by 3.4 percent annually since 1990 and has fluctuated around US$1.4 billion a year in nominal terms.

World Bank lending to the health sector, 1990-2004



Lately global advocacy has had a striking impact on patterns of World Bank lending. Commitments to HIV/AIDS alone have grown by an average of 16.7 percent annually since 1992, mostly reflecting the commitments for Multi-country HIV/AIDS Programs (MAPs) in Africa. New commitments for all communicable diseases have grown by an average of 8.6 percent a year since 1992 (Annex B, Table B.1). Lending for child health, on the other hand, has increased by 5.2 percent a year (mostly in East Asia and the Pacific and in South Asia), and commitments to population and reproductive health and to nutrition and food security have declined at 0.2 and 0.7 percent a year respectively. Improvements in health system performance, though still accounting for the largest component of health sector lending, increased by only 2.2 percent annually and fluctuated around $500 million a year.

Global advocacy has also led the Bank to address HIV/AIDS as a multisectoral issue, leading to the promotion of national AIDS councils in several countries, with representation of various ministries and location at the apex level of the government to provide them with the necessary clout for interministerial coordination. The importance of a multisectoral approach has also led to a retrofitting of Bank-funded projects in other sectors with HIV/AIDS components, particularly in Africa.

There is growing view within the Bank, however, that the multisectoral approaches may inadvertently have undermined the capacities of health ministries, disempowering them and resulting in the loss of qualified staff to other ministries.[a,b] Completion and audit reports of HIV/AIDS projects suggest that Bank operations that helped to strengthen the capacity of the ministries of health in countries such as Brazil and India may have been more effective in capacity building than has its support for multisectoral projects.[c] The implementation completion reports on "component projects" reinforce these conclusions, suggesting that the inclusion of HIV/AIDS components in non-health projects (for example in transport projects, to provide information to truck drivers) did not ensure their effectiveness except when the inclusion was associated with well informed design, implementation, and oversight, and accompanied by strong technical inputs, which can come from ministries of health.

The changing composition of Bank financing for health raises a question as to whether sustainable outcomes in the areas of communicable diseases can be achieved unless the Bank, other major donors, and governments make more investments in health system support to increase the capacity of developing countries to utilize the new resources to fight communicable diseases rapidly and effectively.[d]

[a] See the 2004 Regional HIV/AIDS Treatment Acceleration Project for Africa, which tries to empower ministries of health.
[b] Bilateral donors in the 1990s preferred to bypass the ministries of health and to finance NGO activities directly, on grounds of the poor governance of the ministries, as for example in Kenya. This preference contributed to the loss of health ministries' staff and capacity.
[c] See the World Bank Operations Evaluation Department audits of the Indian National AIDS Control Project as well as the audits of the First and Second Brazilian AIDS and STD Control Projects.
[d] The evaluation of the World Bank's health sector lending that was carried out in 1999 by the Bank's Operations Evaluation Department also stressed this need (OED 1999).

51. Successful programs are learning lessons from their own and others' experience. Yet despite the demonstrated results of well coordinated disease-specific strategies and the rhetoric of harmonization, collective action problems often seem to prevent agencies from using their comparative advantage to serve countries in a programmatic mode.

3. TUBERCULOSIS AND THE STOP TB PARTNERSHIP

52. Considered one of the most successful global health partnerships, Stop TB offers important lessons for global TB control, for application to other communicable diseases, and for effectively linking advocacy to financing mechanisms.

53. The partnership has promoted the use of DOTS, which has had a major impact on TB control. DOTS ensures that people suffering from tuberculosis are fully treated with a powerful combination of drugs under the regular supervision of health workers or community volunteers. The treatment costs about $13 for six months of drugs and uses primary care services. In most cases, when implemented well, DOTS can effectively cure patients of TB.

54. The DOTS-based strategy is being implemented in 182 countries and DOTS coverage has been extended to areas that have 69 percent of the world's TB-affected populations. The TB Global Drug Facility (GDF), an important component of the Stop TB strategy, has now provided treatment to 4.4 million patients in more than 65 countries. The global TB case detection level is now 45 percent and the treatment success rate is 82 percent.

55. The Stop TB partnership has mobilized complementary actions by all relevant partners to achieve control in some large countries and to pave the way in others, for example by promoting increased World Bank investments in TB control and by actively lobbying for the inclusion of TB in the Global Fund, thus increasing the resources available to countries for the control of TB.

56. Where there is political will and delivery capacity, Stop TB has provided a strong mixture of vertical managerial and support functions for integrated delivery systems whose implementation, monitoring, and evaluation can be well executed according to defined standard guidelines. In countries where it has shown good results, notably China and India, the partnership has been able to mobilize the needed inputs, such as research, supplies of TB drugs, investment finances at the country level, quality technical assistance, and training on monitoring and evaluating results. The DOTS strategy is well coordinated, involving the use of TB drugs, finance, and technical assistance to achieve a system-wide TB focus that delivers effective services at the primary, secondary, and tertiary levels. In China, the World Bank and WHO have worked with DFID to increase the grant component of financial aid for TB. This was done to meet China's reluctance to borrow for health programs, a circumstance forced on the government by China's graduation from IDA credits to IBRD loans. In India, the central government developed the Revised National TB Control Program (RNTCP), with funding from a World Bank loan of $142 million in 1997. The loan has since been supplemented by funds from DANIDA, DFID, USAID, GFATM, and the Stop TB Partnership.

57. Thanks to political mobilization by Stop TB, all 22 high-burden countries have developed national plans to combat TB and the number of people being treated has risen by 23 percent since the program's inception. Prevention of TB has been recognized as a critical

factor for mitigating the impacts of HIV/AIDS, and guidelines have been developed for collaborative arrangements between TB and HIV projects. The guidelines call for managing co-infection, but progress in promoting collaborative arrangements in TB/HIV has been slow. For people with multi-drug resistance, pilot projects and the Green Light Committee for approving applications for DOTS have facilitated streamlined access to life-saving second-line drugs. Progress is also being achieved with new lines of promising drugs.

Box 3.1: The Global Drug Facility in India

Given the large TB burden in India, the resources required for drugs are substantial even though the cost of TB drugs has fallen sharply, and is now at Rs. 500 ($13) per full course. Stop TB contributed TB drugs in kind through the Global Drug Facility for three years (2001-04) for the state of Orissa and for 200 million people outside Orissa, meeting approximately 25 percent of India's drug requirements. The Government of India appreciates the contribution of GDF as a useful addition to the Revised National Tuberculosis Control Program. Procurement through GDF has been smooth; and all procurement of TB drugs (even drugs not funded by GDF) is being done through GDF.

58. Results from the four country case studies indicate that performance of Stop TB is uneven across countries, with considerable scope for expanding access to health services and to DOTS in Kenya and Malawi. Although these countries have two of the stronger TB control programs in Africa, barriers remain to their broader use of DOTS: weak public health systems, shortage of trained personnel, a large number of vacancies, poor infrastructure, the process of decentralization, and the need for closer cooperation with other disease control programs such as those for leprosy and HIV/AIDS. Problems reported in Kenya include the poverty of patients, the large HIV disease burden, rising urban slum population, high proportions of nomadic and semi-nomadic TB-affected populations who are beyond the reach of TB services, inadequate health care facilities and equipment, lack of knowledge and awareness among health workers, a large private health care sector that is uninvolved in DOTS (especially in urban areas), and inadequate funding of proposed DOTS expansion activities.

REASONS FOR SUCCESS

59. What explains the quick success of the Stop TB Partnership in treatment using the DOTS strategy?

- The partnership has been more successful in large countries with strong national health system capacity than in small countries with weak capacity.
- The partnership gave high priority to developing a shared global plan.
- It further developed concrete cost-effective DOTS-based approaches for diagnosis and treatment with detailed technical guidelines for implementation that are relatively easily implemented and monitored.
- It actively helped countries such as China and India to mobilize funding on attractive terms from the World Bank, DFID, and other donors in support of the strategy.
- It developed concrete realistic short-, medium-, and long-term objectives ranging from research and development to field implementation on a country-by-country basis.

- It made available advice in the form of easily implementable and monitorable guidelines for treatment, together with free access to drugs and high quality technical assistance.
- It established the Global Drug Facility.
- It worked closely with countries to take advantage of World Bank loans and credits and more recently GFATM funds.

60. This combination of factors has made the control of TB more of a success than the control of malaria or HIV/AIDS. The TB control program is technically easier to implement than the multisectoral approach that is needed to control HIV/AIDS or malaria. In China and India, success depended partly on pre-existing strong partnerships between government and WHO (Box 3.2).

Box 3.2: DOTS Success in China and India

China's success in combating TB reflects major investments by the World Bank in TB control, strong political support, general acceptance of the DOTS technical packages, and financing from the Global Fund to extend the program to the remaining eight poor provinces. But the financial sustainability of TB control is not assured in China because the program supports free diagnosis of all patients and free treatment of at least the infectious (smear-positive) patients. This is a departure from China's fee-for-service health finance system and it has added a substantial financial burden at the local and provincial levels. In the first World Bank assisted project, some provinces ended free service as soon as the Bank financing ended—adversely affecting the control program. Therefore, while official commitments do exist, GFATM and other international agencies will need to continue strong advocacy through effective policy dialogue.

DOTS coverage in India, one of the most successful TB programs, is estimated at about 886 million people, geographically covering over 80 percent of the country; and the Government is expecting to scale this up to 100 percent coverage by March 2005. With funding of $142 million from the World Bank, the Revised National Tuberculosis Control Program (RNTCP) has expanded DOTS coverage 40-fold in the last five years, treated more than 2.5 million patients and trained 300,000 health workers, and established public private-partnerships to upgrade private sector knowledge of the DOTS strategy. The cure rate for TB in India under DOTS is 84 percent. WHO has played a key role in the partnership in providing technical assistance.

In the interest of uniformity and accountability GOI is managing and mediating all inputs from donors into the TB control program at the central level. However, if state TB control officers had better information regarding the objectives of the Stop TB program and more support, they would be able to contribute more. For example, Karnataka's TB program is floundering; greater targeting of Stop TB inputs, particularly advocacy, monitoring, and capacity building at the state level and an enabling environment, are required. Rather than focusing on GOI/RNTCP, which is already on track, the Stop TB Partnership needs to respond to state-level needs and in the process involve departments of health, whose capacity and commitment tend to be low and to require support. Furthermore state finances are in considerable disarray in India and the long-term sustainability of the program, whose dependence on external assistance has increased, is in question.

61. With WHO, the partnership achieved global consensus around the technical control package and developed technical strategies to respond to HIV/TB and MDR-TB, leading to successes in countries such as Cambodia, Peru, and Vietnam—as well as in many small low-

capacity countries such as Moldova that have been assisted by the Global Drug Facility, or middle-income countries such as Latvia that are affected by MDR-TB. The partnership's strong consensus-building around science and strategy, as well as its defined measures of performance, may offer a model for some other programs.

CURRENT ISSUES: INADEQUATE FINANCE AND PREVENTION

62. The problem of TB is growing in scope and complexity due to drug-resistant strains of the disease, financing barriers, and a host of other factors. TB is rising in many African countries, with AIDS as the main driver of the epidemic, and in Russia, as a result of the breakdown in public health services and social and economic challenges.[19] In several countries, cure rates are substantially below the average.

63. Originally the Global Partnership to Stop TB estimated that costs for TB control would be $9.1 billion over a five year period (or $1.8 billion annually), but it identified funding of only $6.1 billion ($1 billion annually) or a funding gap of $3.8 billion ($0.8 billion annually). That estimated gap has since increased to $2.2 billon annually (WHO 2004: 7-8). Securing long-term financing for the Global Drug Facility is also crucial (WHO 2004: 5).

64. The severity of the TB/HIV co-epidemics and the threat of drug resistance pose a challenge for TB control. As is increasingly recognized, efforts to implement DOTS will be challenged where HIV prevalence is high. The implementation of collaborative TB/HIV activities at the country level is slow in relation to the accelerated pace of the HIV/AIDS epidemic. And overall, the HIV/AIDS and TB control programs would benefit from stronger collaboration (Harries et al. 2001; 2004).

65. Containing new outbreaks and eradicating TB are multisectoral challenges. The program's focus on treatment would need to be expanded to the removal of the root causes, many of which relate to poverty, gender, nutrition, ignorance, stigma, and the living conditions of the poor.

[19] Elsewhere in the world, including other countries of the former Soviet Union, TB is falling or stabilizing.

4. MALARIA: THE ROLL BACK MALARIA PROGRAM

66. Malaria is said to be preventable and curable with available knowledge and technologies. But progress has been slow against malaria, unlike TB, particularly in the malaria-endemic countries of Africa. The possible remedies are much more diverse and, despite the scientific and political consensus, the strategies for the choice of remedies and their effectiveness have not yet been well planned and implemented. The delivery system needed is multisectoral and decentralized. A large part of the problem lies in the shortage of funds and the slow development of the appropriate planning and implementing capacity within countries.

67. Though monitoring and evaluation data are weak on the outcomes and impacts of the Roll Back Malaria Program (RBM), the country case studies carried out for this review confirm the findings of the independent external evaluation of RBM (Malaria Consortium 2002), the OED Global Review (OED 2004), and a new World Bank Malaria Strategy paper (World Bank 2005, forthcoming). Certainly RBM has increased global awareness and political support, and it has helped to mobilize greater funding in support of malaria prevention/treatment/control, particularly from the Global Fund. But RBM has so far had very little impact on malaria outcomes in malaria-endemic countries. It has been less successful than Stop TB in engendering concrete strategies at the country level and in mobilizing financial and policy support from the World Bank. Only recently has the RBM partnership gone beyond raising awareness of the global burden of malaria to seek concrete support for malaria control from relevant partners.

68. World Bank lending for malaria interventions (often organized as a component of health sector projects rather than as self-standing malaria projects), has lost ground. Commentators familiar with malaria interventions have argued that the World Bank assumed that poverty reduction support credits and sectorwide approaches (SWAps) alone would work. Yet, none of the stellar performers of the past decade used a SWAp: Brazil, Eritrea, India, and Vietnam all had focused malaria control programs, even while the Bank's Malaria Fact Sheet was explicitly asking countries to avoid such programs. Internal critics in the Bank argue that the Bank's advice unwittingly discouraged countries from effective approaches while promoting approaches that have not worked, and in some instances, have produced bad results. Now, however, building on the global knowledge base and lessons learned from operations, the Bank has developed a new global strategy and program to upgrade its support for malaria control in collaboration with multiple partners (World Bank 2005, forthcoming).

69. At the country level, there is more agreement on what strategy to follow on malaria than on how to apply the instruments that RBM promotes on the ground. RBM's strategy includes the promotion of insecticide-treated nets (ITNs); intermittent preventive treatment (IPT) of pregnant women to prevent mothers from getting malaria and to prevent low birth weight in the newborn; and artemisinin-based combination therapy (ACT) to address the widespread resistance to commonly used drugs like chloroquine. ITNs require subsidies and effective targeting because their obtainability and use by the poor is often a challenge. IPT

requires a strong, well-organized public sector health delivery system and an effective community-level mechanism for delivery. Combination therapy to address drug resistance—which African countries have adopted at the urging of WHO, despite their concern about the financial feasibility—costs $1 to $3 per episode, which is many times the cost of chloroquine, even though this cost itself is subsidized. Most countries with weak delivery systems cannot undertake diagnostic tests. Moreover, RBM must rely on its donor partners to operationalize solutions in small, malaria-endemic, low-income countries where the monitoring and evaluation of outcomes and impacts are weak.

70. The case studies for India and China concluded that RBM has not been a significant funder of malaria control efforts or of health policy and programs in those countries.[20] Within India's Enhanced Malaria Control Program, RBM had little impact on the awareness of the disease, approach to malaria control, financing of that effort, program implementation, or monitoring and evaluation. Nor has it had much impact on India's human resources for malaria control, on procurement of malaria control drugs or other malaria control products, on health policy, or on the nation's health system. The limited impact is perhaps a result of the relatively small burden of malaria in India, the focus of Roll Back Malaria on Africa, and the timing of India's own efforts compared to those of the global program. RBM spent much of its early years advocating more attention to malaria worldwide, while India embarked on a substantial malaria control program that corresponded to emerging best practice.

71. Brazil, Eritrea, and India have been successful in malaria control (World Bank 2005, forthcoming). Lessons from these countries may hold relevance for the design of RBM's operational approaches. The factors underlying their success have also applied in the case of the TB control programs and accord with what is needed for HIV/AIDS strategies to succeed on the ground:

- The changes implemented were flexibly adapted to the specific conditions of the individual countries. They were not fully in line with global malaria control guidelines issued by WHO and promoted by the World Bank. Program managers based program implementation on their extensive knowledge of what worked for malaria control in their own country circumstances and not, as some observers have contended, on reluctance to adopt newer strategies involving the more costly drugs.
- Interventions were targeted to high-risk areas, with a significant portion of the World Bank's loan proceeds being allocated to those areas.[21]

[20] RBM launched a project in China in October 2000 with a one-time only allocation of about $200,000, with the expectation of implementing the project for ten years. Called the Mekong Project, this was a regional project combined with local development activities in four other countries along the Mekong River: Vietnam, Laos, Cambodia, and Thailand. The project became non-functional because no further funds were provided. Another project influenced by RBM was the elimination of malignant malaria in the mountain areas of Wuzhishan in Hainan Province, a research project started in July 2003 for a total of three years and a budget of about $50,000. In this project the modified regimen was recommended by WHO as the standardized regimen to eliminate malignant malaria. A first round GFATM grant enabled China's Tenth Five Year Plan (which included programs for malaria control in remote counties of Yunnan and Hainan) to be realized, as the possibility of implementation in remote counties was not clear due to inadequacy of funds.

[21] Investments were highly targeted to high-risk municipalities in the Amazon Basin in Brazil and the 15 high-burden provinces in Vietnam. Even in Eritrea, where targeting was not central to the project design, control efforts focused more on the most heavily affected zones.

- The countries invested heavily in improving malaria surveillance systems, making targeting to high risk areas possible. Laboratory capacity was strengthened and case reporting was streamlined, integrated, and computerized—improving both the completeness and timeliness of case reporting.
- Capacity was developed at the sub-national level, both to manage the programs and to analyze and interpret surveillance data, which then affected decision making at the appropriate level.
- Strong integration and decentralization of the centrally managed, vertical implementation strategies to local public health facilities increased local commitment to implementation. Before this change was made, village-level functionaries were paid by national malaria control programs and worked solely on malaria control. The most extreme example of this was in Brazil, where malaria treatment was provided by free-standing malaria clinics that had no formal link to local public health facilities.[22] The decentralization of responsibility and resources stimulated local governments to become more involved in malaria control, a factor that was pivotal to the success in Brazil, India, and to some extent Eritrea.
- As in the case of the Stop TB Partnership, the experience with malaria control suggests that a strong vertical national malaria control program should play a key role in implementation. Brazil, Eritrea, and India effectively integrated elements of their decentralized health systems with the work of national programs, which were looked to for technical support and for procurement of essential commodities, including drugs, insecticides, ITNs, and laboratory equipment. The long history of management of vertical programs resulted in the development of strong skills, extensive networks, and the basic infrastructure necessary for efficient and effective implementation of program activities.
- In Brazil, Eritrea, and India the already well developed public health infrastructure, including the presence of skilled technical staff at state, district, and local levels and the strong leadership of directors who were nationals with both technical and managerial skills, were crucial. The technical personnel understood the systems in which they worked and were capable of moving things quickly through their bureaucracies. This happened even though the areas targeted by these projects often had much weaker infrastructure than did the rest of the country.
- Public-private partnerships played a key role at the local level. In India, local health departments have often partnered with tribal welfare, education, and agricultural departments, as well as with NGOs, community groups, local governments, and private providers. These partnerships have generally focused on specific activities. For example, NGOs are contracted to distribute and re-treat ITNs and tribal welfare workers offer malaria treatment to their surrounding communities. In Brazil's mining areas, private shopkeepers also play an important role in expanding treatment.

[22] Brazil decentralized most government functions during the first few years of the malaria control program, shifting the responsibility and resources for malaria control to municipalities. In Eritrea and India, much of the responsibility for implementation was shifted to zonal and state health authorities, respectively.

CURRENT ISSUES: NEED TO FOCUS ON COUNTRY CAPACITY BUILDING

72. RBM has been substantially restructured on the basis of recent evaluation recommendations. It now has a clearer strategy and a focus on selected countries, and has put in place a stronger governance structure with clearer roles, responsibilities, and accountabilities between its board, secretariat, working groups, and regions, and more focused participation of "beneficiary countries" in its governance. The roles of WHO and those of the partnership are being clarified, and a Malaria Medicines and Supplies Service is being established. RBM is encouraging the development of new malaria drugs, diagnostics, and vaccines, in conjunction with others. It is working more than before at the country level and trying to learn more about, and to disseminate, best practice. It is exploring with the Global Fund and others how ACT can be purchased in sufficient quantities and at reasonable prices.

73. However, these plans do not speak to the most important problem with respect to malaria, which is the lack of country system capacity to deal with the disease. The experience of GFATM suggests that the World Bank and WHO can play an active role in institutional and technical capacity building. WHO has not only developed standard guidelines for malaria interventions but is working on developing support for timely supply of ACT. The World Bank can similarly help mobilize national capacity, including for drug supply and distribution, and for design and administration of pricing, subsidies, and targeting.

5. HIV/AIDS: UNAIDS AND THE GLOBAL FUND (GFATM)

74. Prevention of HIV/AIDS calls for fundamental changes in human behavior, including sexual practices. Treatment can control but not cure the disease, and sufferers need it indefinitely. Moreover, the impact of treatment on prevention is unclear and controversial. Nevertheless treatment is justified on developmental, humanitarian, and ethical grounds.

75. In most countries, interventions against HIV/AIDS have had less than a decade to mature, and treatment has been provided only since the emergence of the Global Fund.[23] The monitoring and evaluation of outcomes and impacts is relatively new and not yet strong, and it is too early to know the extent to which increased international aid has reduced the number of HIV-positive cases. Determining the counterfactual—that is, how many more cases would have occurred without the activities of UNAIDS, the World Bank, or GFATM—and why, is difficult but will be increasingly important as the global community moves further towards performance-based assistance.

76. Only a handful of countries have succeeded in controlling the growth in new HIV-positive cases. They include Brazil, Thailand, and Uganda. Diverse factors have played a role in the successes in Brazil and Thailand, including a focus on high risk cases in terms of potential for spread; a clear emphasis on changing behavior; and strong national leadership, planning, and implementation (Ainsworth and Chamberlin 2000).

77. Prevention programs in most countries are less focused than in Brazil or Thailand. Several of the authorities interviewed for this report expressed a concern that HIV/AIDS prevention may even be being sidelined, perhaps inadvertently, because capacity is very limited and national policymakers have now shifted their attention to scaling up treatment.

78. Scaling up treatment has been made possible by major structural changes that have taken place in the global environment: the dramatically reduced drug prices, the growing international trade in generic drugs following the agreement brokered by the Clinton Foundation, and the growing amount of finance available under GFATM and the US President's Emergency Plan for HIV/AIDS relief (PEPFAR). WHO's contribution to HIV/AIDS advocacy through the "3 by 5" (treating 3 million by 2005) campaign is playing a catalytic role in accelerating treatment and prevention.

79. In this regard, the potential for HIV/AIDS programming to help strengthen health systems is critical, including the need for strong referral systems and intersections between primary, secondary, and tertiary levels of health care. The benefit of getting this right would be enormous for other areas of health service delivery, including the maintenance of patients' records and provisions for managing chronic conditions.

[23] Even the World Bank's financing of anti-retroviral therapy is relatively recent and was prompted by a combination of decline in prices of generic drugs, external advocacy, the vast need, and the perceived success of a pilot effort in the Caribbean. For additional information, see the Bank's Regional Treatment Acceleration Program for Africa (2004).

80. Yet countries are ambivalent about substantially scaling up treatment for AIDS/HIV, out of concern for the national fiscal/financial implications and uncertainty about the size and sustainability of external support for this purpose. Investigations for this study found a lack of clarity in recipient countries as to the criteria donors would use to assess performance, and hence the conditions under which donor assistance would continue to flow.[24] Countries expressed different expectations of GFATM as distinct from bilateral donors, whose decision making on assistance to the health sector is partly influenced by extraneous factors such as the overall governance of a country. That approach has made planning for health difficult, particularly for small countries where aid dependence is high.

81. The sudden large increase in the finance available for HIV/AIDS, in the face of limited institutional capacity both in international agencies and developing countries, has posed challenges for ensuring performance in developing countries and for clarifying the conditions under which donors would provide assistance. This is why a coordinated approach to monitoring and evaluation, that can be accepted by all donors, is essential. A common monitoring and evaluation framework has been developed for GFATM, PEPFAR, the World Bank, WHO, and other partners. But OED's evaluation of six global health programs (OED 2004) has indicated how difficult it has been in practice to implement this common framework.

UNAIDS

82. The UNAIDS Secretariat gets high marks for achieving its declared mission of leading, strengthening, and supporting an expanded global response to the epidemic. It has helped to foster global political mobilization on HIV/AIDS, and stimulated UN and bilateral donors to increase their funding for HIV/AIDS activities—including through substantially expanded lending by the World Bank for HIV/AIDS activities and through the establishment of the Global Fund.[25]

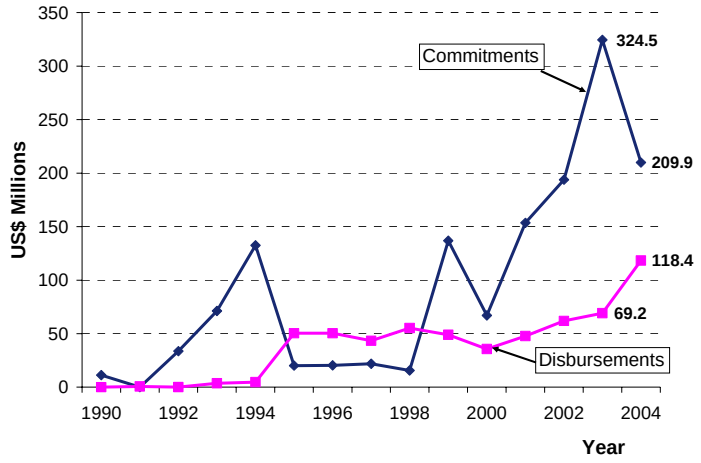
83. Because many of its messages have now been translated into donor actions, it is easy to overlook the key role that the UNAIDS Secretariat has played in a number of outcomes. In interviews, World Bank staff and managers stressed that UNAIDS's collection and dissemination of information and knowledge on the changing epidemiology of HIV/AIDS, and its advocacy, helped to make Bank managers aware of the disease and to overcome denial among national policymakers. This made it possible for the World Bank, first in Africa and later in other parts of the developing world, to open up dialogue on the sensitive issues surrounding HIV/AIDS. Before the establishment of UNAIDS, only $289.3 million of the $7.25 billion committed by the World Bank to the health sector had been allocated to HIV/AIDS, while $800.1 million had gone to other communicable diseases. Between 1996 and 2004 (i.e., after the establishment of UNAIDS and other major HIV/AIDS-related international events, including the establishment of GFATM), the Bank committed $948.9

[24] GFATM was in the process of reviewing its first two years' performance while this paper was being finalized.

[25] Even though UNAIDS did not initially support the idea of a completely new self-standing mechanism outside the existing institutions dealing with HIV/AIDS.

million for HIV/AIDS and $638.1 million to other communicable diseases (Figure 5.1 and Annex B).

Figure 5.1: World Bank lending for HIV/AIDS, 1990-2004



Source: World Bank Business Warehouse. Commitments are new commitments in each year, which are typically disbursed over a subsequent 5-7 year period. Disbursements are annual disbursements associated with commitments that were approved in previous years. Disbursements in the early 1990s are understated since projects approved before 1990 were not recoded when the Bank changed its sector and thematic coding system for Bank projects in 2002.

84. UNAIDS messages and the World Bank's and other bilateral donors' financial support have led to the development of national AIDS strategies, the formation of national AIDS councils, and the development of more inclusive approaches to partnerships, particularly involving civil society at the country level.

85. Many of the seemingly good ideas have been difficult to implement, however, especially in Africa. In the first generation of projects, countries' own national AIDS strategies and the World Bank projects supporting them were criticized for their lack of clarity and lack of focus on high-risk groups such as sex workers, or on monitoring the behavior of intended beneficiaries. Many national AIDS councils have suffered from lack of effectiveness, and some from outright scandal. Community-driven services drawing largely on NGOs have encountered at best weak local capacity for delivery, and at worst lack of fiduciary accountability, leading some governments including Kenya's to question the usefulness of these services, though others have welcomed their role in scaling up, as in Brazil or India.[26] The World Bank's Multi-Country AIDS Programs (MAPs) in Africa have also experienced implementation difficulties, in part because the early ones were prepared in a rush to get the resources out. The Bank has since devoted considerable resources to their supervision once the projects were approved, with greater country presence than the

[26] Government questioning of NGOs is viewed skeptically by some as being politically motivated and driven by the desire of governments to monopolize resources. The truth usually lies in the middle. Not all NGOs are able and incorruptible and governments do like to control resources.

GFATM, and disbursements have picked up, yet disbursing for MAPs has remained a challenge (Box 5.1).

Box 5.1: The Global Fund and MAPs

The Multi-Country AIDS Programs (MAPs) in Africa approved by the World Bank in 2000 were prompted by concerns about the HIV/AIDS pandemic being a disaster of extraordinary proportions needing an emergency response. They were designed to achieve many of the same objectives as GFATM. The Bank shortened and expedited its project preparation and approval process (MAPs could be approved at the vice presidential rather than the board level) and made disbursement procedures more flexible. The Bank's disbursements for HIV/AIDS projects in 2000-04, at $332.8 million, were nearly three times what they had been in 1990-96 ($110 million).

MAP implementation has made progress (disbursement levels have been comparable to those in health and social sector projects at the same stage of implementation), but they nevertheless face a variety of challenges similar to those faced by the Global Fund. These include disappointing implementation of individual projects and subprojects, lack of operational national monitoring and evaluation, inadequate governance of national AIDS councils, complex procedures for community-based projects and weak health responses. The Bank has since prepared a generic operational manual for preparing and implementing multisectoral HIV/AIDS programs. However, implementation of a harmonized national M&E system remains a challenge.

Sources: Jonathan Brown, Didem Ayvalikli, and Nadeem Mohammad, "Turning Bureaucrats into Warriors: Actafrica", World Bank, Washington, DC, 2004; Interim Review of the Multi-Country HIV/AIDS Program for Africa, October 2004.

86. UNAIDS has pressed for coherence in efforts against HIV/AIDS through the "Three Ones" principle: one action program, one national authority, and one monitoring and evaluation system. But as discussed below in the section on GFATM, none of the "ones" has been easy to implement, even in the few countries where governments have taken charge of their national strategies. Indeed, the establishment of GFATM may have compounded the problem of developing a unified country strategy against AIDS.

87. UNAIDS has also helped to highlight the multisectoral character of the disease, going beyond the traditional health ministries. But as indicated earlier, the multisectoral strategies have not yet been successful. The realization of other aspects of the UNAIDS mission is a long way off—namely, reducing the transmission of HIV/AIDS; providing affordable, cost-effective care for persons living with HIV/AIDS; mitigating the impact of HIV/AIDS on individuals, households, and communities; and building consensus and acceptance on a global strategy with which to approach agreed global goals and targets.

Current Issues: Extend Advocacy Down to the Country Level

88. After the success of the UNAIDS Secretariat in advocacy at the global level, the establishment of the Global Fund has helped to move action to the country level. GFATM's considerable resources have provided UNAIDS with a number of roles, including the harmonization of the World Bank's Multi-Country AIDS Programs (MAPs) and country

programs including those of the Global Fund, and the development of a single integrated work plan and of monitoring and evaluation, as in Malawi.

89. Nevertheless, the experience of the four case-study countries suggests that the country-level activities of the UNAIDS Secretariat have been opportunistic, and have varied from country to country depending on the level of support from other donors. To make better progress towards the unmet goals, the UNAIDS Secretariat may need to define a clearer niche at the country level vis-à-vis other actors and co-sponsors including WHO, the World Bank, bilateral donors, and GFATM. While its global advocacy role will remain crucial, UNAIDS may need to carry out more effective national and local level advocacy, supporting greater local information and knowledge collection and dissemination and applying it to reduce stigma and to engage households more in testing and counseling. This delineation of responsibilities vis a vis those of co-sponsors and other partners is important, since WHO's 3 by 5 Initiative emphasizes treatment for HIV/AIDS along the lines of the Stop TB partnership, which has provided substantial technical inputs in the 20 high incidence countries.

THE GLOBAL FUND

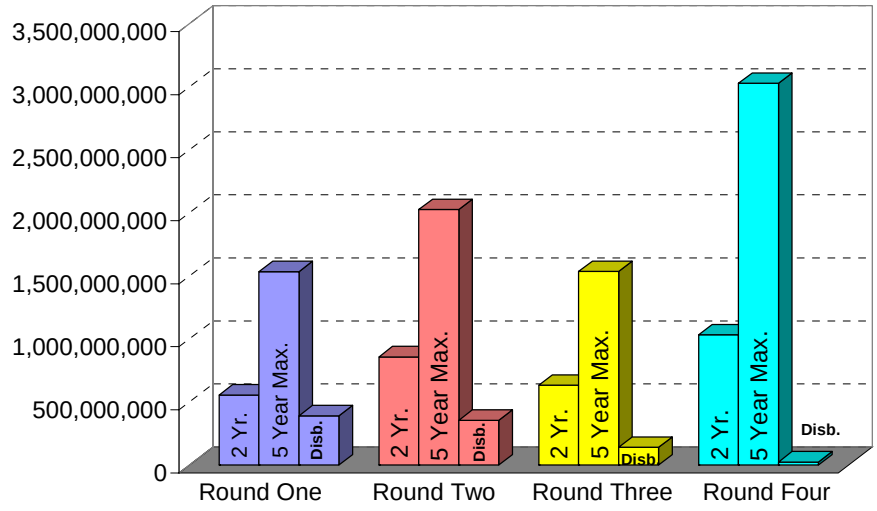
90. The Global Fund for AIDS, Tuberculosis, and Malaria (GFATM) has substantially increased the availability of resources, becoming a much larger player than the World Bank in financing the control of the three diseases. Some of the challenges of GFATM described below are the result of the fact that its first grant proposals were invited even before the Fund was formed, reflecting the speed at which GFATM operations have grown and its sheer size. Others are the teething problems of any new organization; and still others are systemic, in which GFATM's role as financing mechanism has come up against development realities.

Benefits and Costs to Developing Countries of GFATM's Approach

91. GFATM is implementing a so-called new paradigm based on (i) maximizing the involvement of all relevant stakeholders (including civil society organizations and the private sector) in designing, funding, and implementing projects, and (ii) directing its funding in response to performance. The responsibility for preparing, submitting, and implementing Global Fund proposals lies with the beneficiary countries, and the Fund has earned a high degree of ownership of its approach in these countries. The nationals interviewed considered GFATM proposals as country-driven and liked the idea of their fast approval, compared for example to those funded by the World Bank or bilateral donors, whose procedures they considered time consuming and highly bureaucratic. For China, GFATM approved more than $272 million of funding within three years of its existence and two years of operation in that country. This compares with less than one billion dollars approved by the World Bank for health in its 20 years of operations in China.[27]

[27] $786.6 million of IDA, $129 million of IBRD, and probably another $50 million of health components in multisectoral projects.

Figure 5.2: Global Fund Grant Commitments and Disbursements, by Round
(US$ millions)



Source: GFATM website.

92. The size and the grant element of its funding make GFATM the most significant player, at least for now (Figure 5.2). But the experience with disbursements of GFATM grants has caused considerable frustration in recipient countries. Another strong feature of GFATM is that it has opened up large-scale access to international aid funds for NGOs.[28] But in reality governments dominate the Fund's country coordinating mechanisms (CCMs) and are the majority recipients of funding (Box 5.2). The Fund acknowledges that ensuring the effective participation of civil society members and people living with HIV/AIDS has been more difficult than anticipated. Nevertheless, its approach is already affecting the way agencies like the World Bank, DFID, and USAID, provide financial assistance, and the way WHO and UNAIDS provide technical and other support, as well as the way stakeholders in the countries perceive these actions.[29]

[28] NGOs argue that if the Global Fund learns from its experience and becomes more responsive to their needs it will help them to strengthen their capacity to prepare and submit proposals for funding. An alternative view is that since only a small share of the total number of proposals submitted gets funded, and the bulk of GFATM funds inevitably goes through the public sector, a competitive process is wasteful of the limited internal capacity of developing countries. Some commentators also note that it has proven easy to recruit well qualified consultants to write good GFATM proposals but often the consultants or the international agency staff who write the proposals are not responsible for their implementation, while the recipients often lack implementing capacity.

[29] For example, the World Bank has shortened and expedited its project preparation and approval process (MAPs could be approved at the vice presidential rather than the Board level) and made its disbursement procedures more flexible.

Box 5.2: Membership of the Global Fund's Country Coordinating Mechanisms

A critical link in the structure of the global fund is the country coordinating mechanism (CCM). CCMs are intended to be multisectoral, involving broad representation from government agencies, nongovernmental organizations, community- and faith-based groups, private sector institutions, and bilateral and multilateral agencies. CCM composition varies greatly: NGO/civil society groups are present in almost every CCM, but in Rounds 1 and 2, only 12 percent of the suggested principal recipients came from the civil society sector. Roughly 73 percent of all CCMs include representatives from WHO and the UNAIDS Secretariat, and about half include bilateral donors; the World Bank is a member of roughly 14 percent of the CCMs.

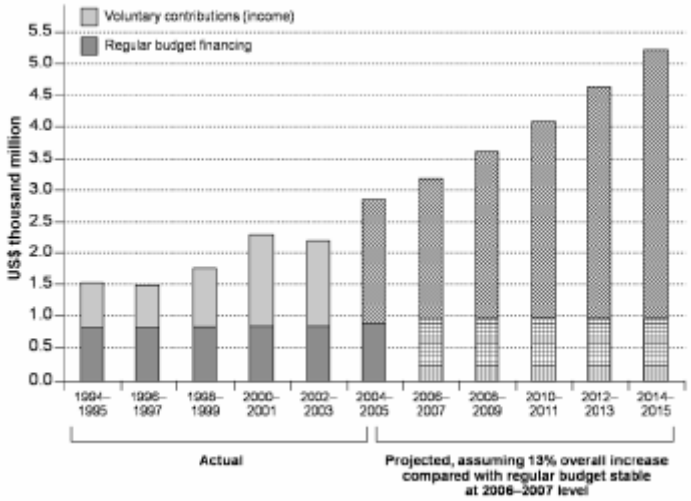
Ninety-nine percent of all CCM chairs are from national government ministries, and fewer than a fourth of all CCM vice-chairs are from outside government. The Global Fund has been taking steps to correct the pro-government slant. In Round 3, the number of vice chairs from outside government increased to 23 percent, and the percentage of NGOs/private sector organizations proposed as principal recipients increased to 21 percent. In Round 4, the latest, nearly 60 percent of the CCMs were composed of civil society and private sector representatives. Persons living with the diseases are still only marginally represented in all regions.

93. The Global Fund's own operating costs of about 3 percent may be low, as it claims, but they do not include the costs incurred by developing countries and international partners in preparing proposals and accessing Fund finance. The resource flows from GFATM have spawned a huge demand for technical assistance that is not being adequately met. WHO's regular budget has stagnated and its dependence on extra-budgetary resources to meet its growing demands has been steadily increasing (Figure 5.3). Needs for WHO's technical assistance have always exceeded supply. WHO remains overstretched and does what it can to meet demands, but does not have resources on anywhere near the scale needed to address the shortages.

94. The transaction costs of preparing proposals and accessing GFATM funds may not seem high if funds flow rapidly once programs are approved, but this has not been the case. GFATM appraises the capacity of institutions to spend the resources that it has approved, *after the grant proposals have been approved*. This is one reason why GFATM seemed so attractive to developing countries in its early stages. By contrast, the World Bank and most other donors do such institutional appraisals of implementation capacity before approving funding. Large amounts of GFATM funds have been committed but relatively little has been disbursed, as in Kenya and Malawi. Other donors argue that ministries of health and national AIDS councils have been devoting so much time to meeting GFATM's requirements for accessing the approved grants that they have left themselves too little to implement other externally funded programs, and in some cases donors are reassessing their future commitments to the health sector. Furthermore, recipient countries may not be fulfilling their own agreed counterpart funding levels for those programs and in some cases may well use GFATM funds for this purpose.[30] It is too early to assess the net increase in resource commitments and disbursements, but these issues need to be monitored on a country-by-country basis, given the diversity of circumstances.

[30] China, for example, has not been able to meet counterpart funding requirements in the health sector in several provinces that face funding shortages. The implication is that GFATM funds are being utilized to fill shortfalls.

Figure 5.3: WHO: Trend of Voluntary Contributions and Regular Budget, 1994-2015
(US$ billions)



Source: World Health Organization, *Proposed Program Budget 2006-07.* <http://www.who.int/gb/ebwha/pdf_files/PB2006/P1-en.pdf>

95. GFATM has also led to considerable duplication in requirements, procedures, and institutional arrangements at the country level. The Fund's concepts of country coordinating mechanisms, principal recipients, local Fund agents, and development partners are all new and are being tested in the field mainly by learning by doing—increasing the transaction costs of accessing resources for the countries and for the international organizations that support them. GFATM itself stresses the need for better coherence among key international organizations to ensure that increased financing helps to build a quality pipeline of investments and the national development capacities of its grant recipients. It strives for balance among diseases, regions, and interventions covering prevention, treatment, and care and support in dealing with the three diseases.

96. To date, GFATM has approved 294 proposals submitted over the course of four rounds from 129 different countries (Annex C, Table C.6). Of the 294 approved proposals, 264 have been signed as grant agreements between the principal recipient—responsible for implementing the grant—and the Secretariat of the GFATM, a signing rate of about 90 percent. Most of the unsigned proposals are from Round 4 and are still under negotiation; others involve principal recipients that do not yet meet GFATM's criteria, or reflect unresolved disagreements within country coordinating mechanisms. Generally, once a grant agreement has been signed, the GFATM may begin to make disbursements. Of the 264 proposals with signed grant agreements, GFATM has begun disbursing funds to 255.

97. The short interval between Rounds 1 and 2 was because GFATM was quick to establish itself on the international scene. But after realizing that the program was attempting to move too quickly, GFATM changed the deadlines for grant submission for Rounds 3 and 4 to at least a year apart. Still, GFATM has established a new, innovative delivery mechanism to rapidly deliver resources to end-recipients such as NGOs, national governments, private sector entities, and community groups.

98. GFATM procedures have been overhauled several times since the Fund was established. Assessments of the fiduciary capacity of principal recipients and the choice of local Fund agents have been sources of controversy. In our interviews in the case study countries, a consistent reaction was that the Fund's rules remain unclear and poorly communicated. GFATM staff acknowledged this in part by indicating that in the first two years some staff members in charge of country programs did not fully appreciate the extent to which the Board meant the rules to be applied flexibly. Such discrepancies, inconsistently applied across countries and over the various rounds, create confusion and high transaction costs for developing countries and for partners like WHO and UNAIDS that are providing technical assistance.[31] GFATM claims that it is simplifying and clarifying its procedures. Interviews with authorities in case-study countries suggest that more needs to be done; indeed, a few argued that GFATM staff will need to be located in the field to solve this problem satisfactorily.

99. Despite the high caliber of its Technical Review Committee, the Global Fund's review process receives considerable criticism in developing countries for being ad hoc and non transparent. A widely shared view is that better packaged proposals win, rather than those that are likely to be implementable. In principle, GFATM's country coordinating mechanisms screen the proposals. But while the CCMs' processes are improving, they have been fraught with difficulties and the Fund's responses may be insufficient to improve the CCMs' capacity.[32]

100. In some cases GFATM also approves proposals that supplement or scale up programs that are already well developed, appraised, and funded by other donors and have a sound record of results on the ground, using well tested technical approaches and effective implementation methods, but that lack financial resources. This has been the case for TB in China and India.

101. Most proposals that GFATM approves should be of this nature. Through an effective CCM process, GFATM should encourage governments, NGOs, and international and bilateral agencies with strong country presence to collectively prepare a pipeline of quality proposals that are well worth scaling up in the context of national disease control strategies.

Financial Instrument or Implementing Entity?

102. GFATM appears to be caught between being a pure financing agency and a full development agency. If it were the former, it would cofinance other donors' projects and rely on their procedures when appropriate. If it were the latter, it would directly or indirectly

[31] A Kenyan NGO obtained a GFATM grant even though the proposal missed the deadline for submission to the country coordinating mechanism. There may be other examples of such inconsistencies with the declared rules.
[32] In India, for example, the demands on the Government to review and help improve the huge number of proposals coming from various groups are considerable. More generally, NGOs are demanding more capacity building assistance, which the Government does not have the resources to provide. Local Fund agents provide a case in point There is a consistent view in developing countries that they are strong on fiduciary matters but weak on a variety of developmental aspects. Similarly, they cannot always supply the complementary skills and knowledge of development that the staff of other agencies are able to provide.

(through other development agencies) provide substantially more assistance for health system capacity building. The organization faces pressures to move in each of these directions.

103. Though it is possible that GFATM is becoming more flexible over time, it may be that—as in several cases the team noticed—ambiguity remains about how flexibly GFATM applies its rules on grant approval, procurement, and disbursements. The study team understood that in the case of the TB grant to India, GFATM was initially loath to use World Bank procurement or disbursement procedures, with which Indian authorities had implemented similar projects and with which they are familiar, or to rely on the World Bank as the local Fund agent. GFATM argues that principal recipients can choose whichever procurement procedure they wish, so long as the procedure fulfils minimum criteria set by the Fund.

104. GFATM's board has been unwilling to provide financial support for the institutional development of the country coordinating mechanisms that the Fund has required countries to establish. The CCMs' workload and responsibilities are growing rapidly and in most cases CCM members serve on a voluntary basis. Some countries such as China have formalized CCMs, and others are on the way to doing so. But they are having to rely on individual bilateral donors to support CCM activities.

105. GFATM's decision to provide capacity development grants from Round 5 is a good one, but GFATM itself is not equipped to help with capacity development. GFATM argues that countries should mobilize their own resources for planning and implementing proposals for funding, at least initially without indicating where the funds should come from. Lately, however, GFATM has been making an active case for more financial support for international organizations such as WHO that assist countries in project preparation and implementation.

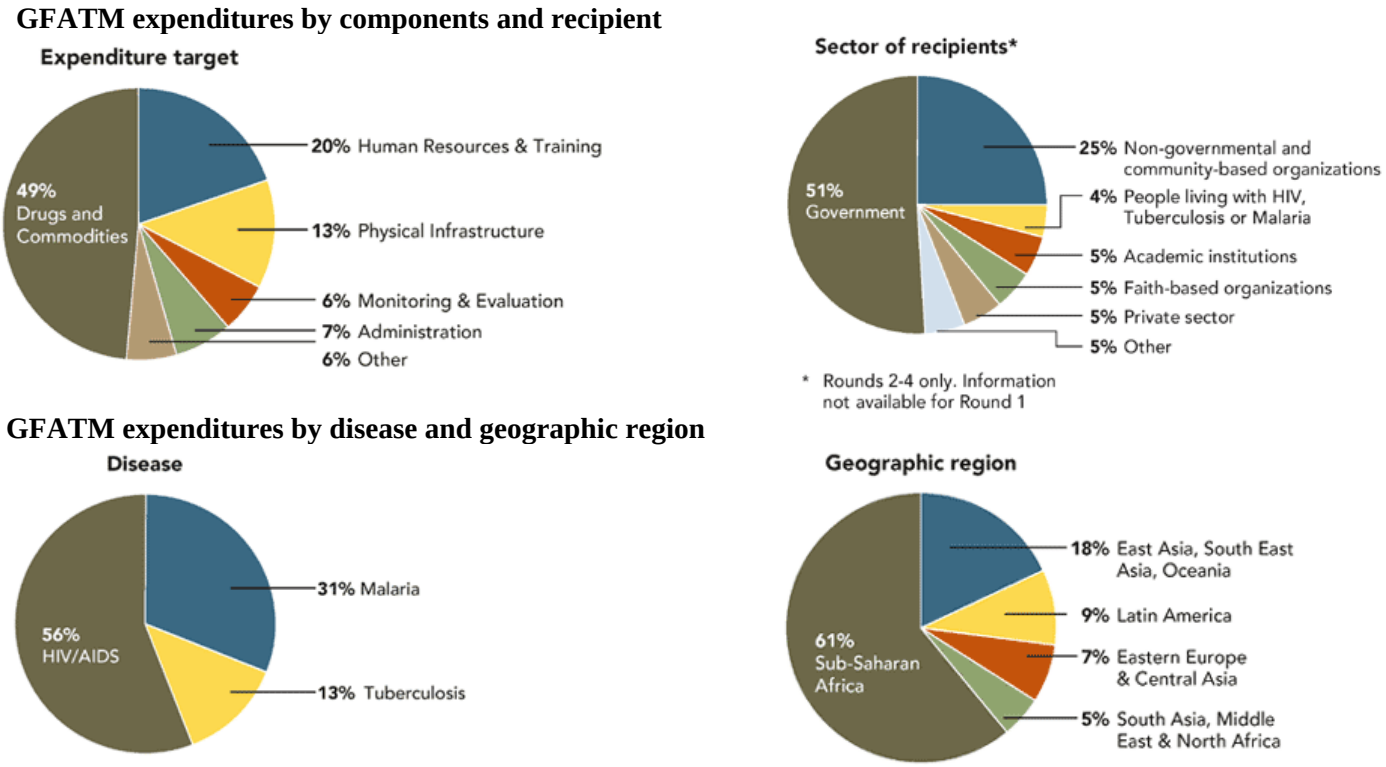
106. The issues of a financing mechanism and the developmental functions of aid are worth considering from an additional perspective. Even in China, with its relatively well developed health sector, finance for communicable disease initiatives is less a constraint than the capacity to develop sound policy initiatives and manage the delivery system. Financial assistance combined with assistance for policy development and technical and management inputs is likely to have a more beneficial impact than financial assistance alone. In countries that are less advanced than China, the need to accompany finance with policy assistance and oversight of investments is even greater.

107. GFATM partners, particularly WHO and the UNAIDS Secretariat but also bilateral agencies and the World Bank, currently provide substantial support of this kind on an ad hoc basis. The World Bank, WHO and bilateral donors would also collectively need to help countries develop capacity building proposals. An important question is which agency should provide such assistance on a long-term sustainable basis where it is needed most, and which should fund the costs of doing this.

Allocation of GFATM Funds

108. The allocation of funds among the three diseases—with 56 percent for HIV/AIDS, 13 percent for TB, and 31 percent for malaria—seems reasonable considering the burden of disease in the affected areas. GFATM funding goes to a wide variety of recipients: slightly more than half goes to national governments, one fourth to NGOs, and the remaining fourth is spread out among several destinations (Figure 5.4).

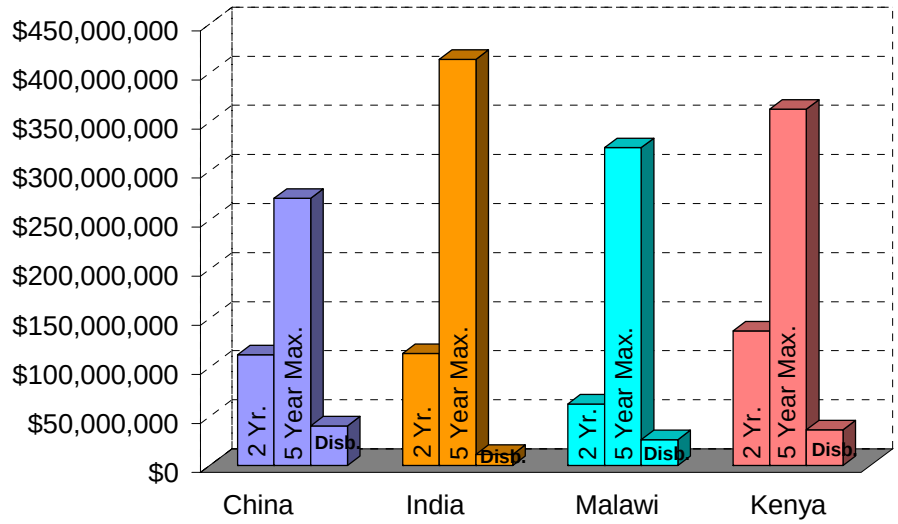
Figure 5.4: Distribution of GFATM Commitments



Source: GFATM website.

109. Sub-Saharan Africa has received a larger share of Global Fund resources than the rest of the world. This seems to reflect Africa's need more than Africa's capacity to implement. GFATM has approved grants for the three diseases to China of $112 million, and to India of $114 million, compared to $137 million to Kenya and $62 million to Malawi (Figure 5.5). Disbursements of funds have been much slower than commitments.

Figure 5.5: GFATM Grant Commitments and Disbursements in the Four Case Study Countries



Note: For additional information on GFATM grants in the case-study countries, see Annex C, Table C.7.
Source: GFATM website.

110. World Bank funding has followed a similar broad pattern. The Bank's Multi-Country AIDS Programs (MAPs) in Sub-Saharan Africa were already in preparation when GFATM was being established. During a period in which nearly 60 percent of GFATM commitments and 50 percent of disbursements were made to Sub-Saharan Africa for the three diseases, the World Bank targeted 39 percent of its commitments to the health sector to the same diseases in the same region.

111. By concentrating their resources simultaneously in Africa, the region with the weakest institutional capacity, and doing so using approaches and procedures of their own, which often differ from those of other donors, both the Global Fund and the World Bank have compounded the problems of absorptive capacity, resource transfers, and the pace of implementation.[33,34] Other regions with stronger planning and implementation capacity received smaller shares of the resources committed by both organizations.

[33] Unlike those of the World Bank, GFATM disbursements tend not to reflect the actual rate of implementation. This is because GFATM funds are transferred to the principal recipients but not to the actual grant recipients until the latter meet the Fund's demanding requirements for disbursements. This is a good fiduciary practice, yet its result is that disbursements overstate implementation outcomes.

[34] For example, GFATM approved a large proposal in Malawi while discouraging the grant applicants from including capacity building components, even though human capital constraints in Malawi are legendary. Malawi's frustration with the slow disbursements was all the greater because it was aware of the human capital constraints but was discouraged from including a response to them in the proposal that was approved. As noted above, GFATM is proposing to make human capital development an important part of its fifth Round for financing.

112. Why did this happen? Among the World Bank staff interviewed, including some of the strongest supporters of MAPs, there seemed to be a general consensus that the substantial allocations to Africa were driven by the need to act, rather than by implementation capacity and implementation issues that needed to be addressed. Over the years the Bank has substantially strengthened its in-country supervision, although implementation issues remain. The Global Fund, on the other hand, commenting on the earlier draft of this paper, observed that it does not give priority to the most affected countries and communities. Rather, its Board approves proposals that are "technically sound." This assessment, according to GFATM, may "include having adequate capacity and readiness for implementation but more importantly requires planned responses to the three diseases to be appropriate and therefore technically sound. No weighting is given to the disease burden in a given country, nor to strong capacity or readiness of implementation as a formal criteria."[35] As noted earlier in this section, however, many of those interviewed for this paper who are familiar with GFATM's allocations questioned the capacity of the Fund's Geneva-based Technical Review Committee and its current local Fund agent arrangements to assess capacity, or readiness, for implementation.

113. GFATM promotes a balanced approach to treatment versus prevention. Yet it has no requirement and no way to assess whether countries have strong prevention strategies. The balance between treatment and prevention is difficult to assess from the available evidence but, at least in the third round of funding, the Fund provided half its resources to the purchase of drugs, stressing its emphasis on scaling up treatment. Nearly half of GFATM's funds go toward procuring drugs and purchasing commodities.

Current Issues: Incorporation into a Sectorwide Approach, and Need for Empirical Research

114. GFATM's acceptance in principle of a country-wide disease-specific approach to aid for communicable diseases would have substantial implications for GFATM, donors, and countries.[36] Funds would flow into a common pool, and be used towards the implementation of the agreed disease control and prevention program. Priorities, both geographic and thematic, would be agreed across the board; common procurement procedures and monitoring formats would be developed.

115. In its comments on the earlier draft of this paper, GFATM observed that it does support the inclusion of its funds in common pooled funding mechanisms. GFATM is participating in the sectorwide approach (SWAp) in Mozambique and intends to participate in SWAps in Uganda and other countries. According to GFATM, it has introduced a major difference in its operating procedures to facilitate participation in SWAps: independent assessments of principal recipients are no longer conducted before grant signing. Rather, an assessment of the SWAp as a whole is conducted or assessments undertaken by other donors are accepted to fulfill pre-condition requirements for grant signing. From the viewpoint of capacity building, this is a positive development and more of it needs to happen.

[35] Comments by GFATM on March 24, 2005.

[36] Some country-based donor agency staff feel there is a lack of congruence between the stated commitment of their agencies to supporting sectorwide approaches and donor support for GFATM.

116. Empirical work is needed on two important questions with a bearing on inter-country resource allocation. Are small countries with limited internal capacity able to spend the resources committed to them as quickly as large countries? We could not answer this question, because GFATM's disbursements to principal recipients in the grant receiving countries do not reflect the rate of implementation. Second, in a country where resources for recurrent expenditures are extremely scarce, and the government is under pressure to give priority to maintaining externally funded, mainly communicable disease control programs, how does that affect the rate of implementation of communicable disease programs or of health system programs more generally? What can be done to help with implementation issues in small countries? Such investigations should be carried out as soon as possible.

6. IMMUNIZATION: GLOBAL ALLIANCE FOR VACCINES AND IMMUNIZATION (GAVI)

117. By bringing substantial resources to the table, GAVI has been able to rekindle enthusiasm for the immunization effort, which was declining from a lack of resources. GAVI has galvanized several key international partners and developing countries by stimulating a market for new vaccines and by bringing in additional resources, a performance orientation, and an immunization delivery system that performs.

118. Since its establishment in 1999, GAVI has committed more than $1 billion of Vaccine Fund resources to 71 developing countries for immunization. It is estimated that among children born in 2001-03, vaccinations aided by GAVI have averted more than 670,000 deaths from hepatitis B, hib disease (*haemophilus influenzae* type B), and pertussis. The Vaccine Fund is also financing the development of vaccines for rotavirus and pneumococcus.

. 119. Apart from augmenting the supply of funding and technical assistance in support of immunization, GAVI has made important contributions in two areas: (i) the introduction of new and improved vaccines, such as for hepatitis B, and (ii) an effort to stimulate the market for new multivalent vaccines by guaranteeing funding, while helping to improve the details of the delivery system. GAVI's programs have boosted immunization efforts, particularly in poor regions of the countries assisted; reduced child morbidity and mortality; improved project preparation and implementation capacity; and incorporated the use of new vaccines and technologies while increasing immunization coverage. GAVI has introduced performance-based systems known as data quality audits, increased awareness of injection safety through the use of auto-disposable syringes, and linked disbursements to performance based on incremental reporting of immunizations.

120. GAVI has sought to increase and accelerate the integration of hepatitis B vaccine into an expanded program of immunization, which is designed to provide this vaccine to all infants in defined areas, to promote safe injection practices for all routinely administered immunizations, and to reduce the prevalence of hepatitis B surface antigen (HBsAg) and the incidence of hepatitis B. Though one of GAVI's declared objectives was to expand the coverage of ongoing immunization programs in developing countries, the Alliance has been focusing on promoting new multivalent vaccines, whose unit costs are many times those of the cheaper, older, single vaccines typically used in poor countries.

EXPERIENCE IN CASE STUDY COUNTRIES

121. GAVI has had two windows: one for countries with immunization coverage of less than 50 percent and the other for countries with more than 50 percent. China and India fall into the second category of countries and thus qualify only for assistance with new vaccines such as for hib and hepatitis B. Both these countries have substantial programs of immunization—covering BCG; diphtheria, pertussis, tetanus (DPT); measles; and polio—that they fund largely from their own resources. Most of the Chinese and Indian programs

have sought to reach all children with routine immunizations and to reduce morbidity and mortality caused by vaccine-preventable diseases, and they give high priority to keeping their countries polio-free. Prior to GAVI's arrival the coverage of immunization programs varied, with low rates of immunization in the states/provinces with lower incomes and lower levels of institutional development.

122. While GAVI has provided support for hardware and vaccines and limited funding for systems support, securing recurrent resources—which GAVI does not provide—has been a challenge. In both China and India, GAVI's record in integrating immunization programs into the larger health system has been mixed. This is because GAVI has focused on the financial sustainability of its own program but has not been sufficiently involved in debates on overall health policy issues, and on the issues of domestic resource availability and resource allocation to immunization vis-à-vis other health sector activities.[37] Even with a considerable reduction in prices, the budgetary costs of the new multivalent vaccines are too high for most developing countries without continued predictable external assistance, or unless developing countries sacrifice other goals in the health sector.

123. While GAVI's program in China has been considered highly successful, even GAVI has assessed its successs in India as limited, as noted in Section 2. Three reasons were cited by all sources interviewed in India by Lele for this paper: (i) Polio eradication was taking a large share of resources; (ii) India considered the new vaccines too expensive and did not think it politically viable to pilot them in one part of the country without agreeing to provide them in others; and (iii) neither hib nor hepatitis B are regular parts of the Indian immunization program, and there is considerable debate in India as to that country's need for universal immunization for hepatitis B and hence no strong policy consensus on its delivery.[38] India has, however, piloted a program for hepatitis B vaccine with GAVI's assistance in the state of Andhra Pradesh and taken responsibility for financing larger shares of the immunization costs.

124. Kenya's Expanded Program of Immunization (KEPI) initially cost about $1 per child, but the introduction of the new pentavalent vaccines with GAVI support has pushed up the cost to $10 per child. Each year KEPI has been receiving about KSh 100 million (about $1 million) from the central government for immunization support, but it will now require about twelve times that amount.

125. In Malawi, the case study indicates that 90 percent of the cost of immunization is that of improved vaccines.

[37] Establishing baselines and assessing performance based on subsequent monitoring and evaluation and timely supplies in the right doses at the right time have also been challenges for GAVI. Both China and India have also had serious problems of injection safety.

[38] Pediatricians interviewed in India confirmed that they recommend multivalent vaccines to their patients in the cities who can afford to pay the nearly Rs. 900 cost of the vaccine, which includes Hep B. However, they do not see the use of such costly vaccines being financially sustainable in rural areas. Moreover, there is a considerable debate among health specialists in India about how widespread the incidence of Hep B is among children, stressing the importance of epidemiological research.

126. Although GAVI has been placing considerable emphasis on financial sustainability, and asking countries to take on an increasing share of the cost of vaccination, financial viability remains the biggest challenge for the programs that GAVI has assisted. GAVI's experience has shown that a timely, reliable, and sufficient supply of new vaccines can be generated if there is enough purchasing power. But countries' capacity to use the vaccines can take a long time to develop, requiring the program to scale back its expectations of results on the ground. GAVI has learnt other important lessons on institutional capacity building and monitoring and evaluation of results, but it is unclear if they are sufficient to ensure the program's financial sustainability without injections of external resources continued over the long term.

127. Many of the sources interviewed in India, Kenya, and Malawi suggested that the programs GAVI has supported might now be more easily scalable and financially more sustainable if GAVI had: promoted the traditionally more affordable vaccines, together with new vaccines where appropriate, according to its originally stated goals; worked to improve the effectiveness of their delivery within the public delivery system; and simultaneously tried to increase the supply and further reduce the prices of the newer improved vaccines, even beyond the price declines the new vaccines have already experienced.

CURRENT ISSUES: CONTINUED INTERNATIONAL FUNDING FOR IMMUNIZATION?

128. GAVI has informed countries that it is phasing out in 2006. Its partners have launched a global campaign through the International Financing Facility to mobilize funding specifically for a program on immunization known as IFFIm. GAVI has developed scenarios based on different potential levels of immunization funding between $4 billion and $8 billion over ten years. The details of criteria for funding and for disbursement mechanisms, financial architecture, the extent of future reductions in vaccine prices, and the absorptive capacity of poor countries will of course evolve. Some donors have already expressed interest in providing the necessary resources to underwrite IFFIm. It is unclear whether IFFIm will reflect the lessons of experience or guarantee the resources needed on the scale needed to increase immunization coverage using new vaccines on a scaled up sustainable basis. In the meantime, a positive development is that the Gates Foundation has committed additional resources to the immunization programs.

7. SYSTEM-WIDE ISSUES: RESEARCH, PROCUREMENT, AND HUMAN RESOURCES FOR HEALTH

HEALTH RESEARCH

129. Research, development, and affordable access to new products and technologies are crucial for preventing and containing communicable diseases in developing countries. Investments in health research at the global level have increased substantially but coordination, prioritization, and global and country links among research efforts and funding at the national level are still weak. Public sector funding is needed for research and development of drugs and vaccines for communicable diseases; market-based approaches may not work fast enough. It is also needed to strengthen the international and domestic public procurement arrangements for drugs, vaccines, and health-related products.

130. Currently most of the international discussion on health research focuses on research that can be both financed and implemented at the global level. Global-level research is necessary but not sufficient. To prevent the spread of communicable diseases also calls for applied, adaptive, and operational research of a public health nature at the regional, country, and local levels, supported by long-term predictable sources of funding. Among the research needs are: biological research to detect microbial resistance; research to test and assess the adoption and efficacy of new products and technologies; epidemiological research to understand and control the spread of communicable diseases; and operations research and evaluation to better understand the effectiveness of interventions. Research experts have stressed three areas needing attention:

- The large resource needs for investment in product development once research investments begin to deliver promising results.
- More investment in surveillance to detect current or latent outbreaks of diseases. The outbreaks of SARS and Avian Flu in East Asia and of cholera in India have shown not only the personal cost but the high global economic cost when developing countries' national capacity for surveillance fails, and the need to make relevant information freely and widely available.
- Epidemiological and operations research, again at the country level.

131. Investment in the last two areas is insufficient, requiring the public sector to fund (if not carry out) research that could easily be provided by private research institutions and nongovernmental organizations. This is partly because neither developing country governments nor donors yet appreciate the full importance of this investment and the need for its funding on a long-term predictable basis.

132. The gap in research spending between developed and developing countries is wider in health than in agriculture. In agriculture, developing countries undertake almost half the research spending, reflecting a substantial increase in donor investments in self-standing

agricultural research projects.[39] Such investments have not materialized for health research even in large countries.

133. The source of sustained finance for surveillance, epidemiological, operational, and data collection research in developing countries on the scale needed remains unresolved. Surveillance can be argued to be both a global and a national public good. WHO as the leading technical agency has advocated for increased surveillance funding, but money has not been forthcoming on the scale needed. Some financing for surveillance components at the national level is typically included in overall health sector investments by the World Bank; estimates of this financing are not readily available, but interviews of Bank staff that were carried out for the OED study of global health initiatives suggest it is limited. To provide the technical and financial resources needed for vital improvements in developing countries' health research and surveillance capacity, the Bank and WHO need to work together with other partners, as did the World Bank and private foundations and bilateral donors with the UN Food and Agriculture Organization in the case of agricultural research, by substantially enhancing investment in the national agricultural research systems of developing countries to complement investments in the CGIAR.

134. Initiatives are underway to discover vaccines for HIV/AIDS and for malaria. Yet at least a decade of research and testing is likely to be needed before a vaccine will be commercially available for either. Research and testing can be accelerated substantially by strengthening links between global and national research institutions—links that are currently weak and sporadic—and through increased public funding of R&D at the international level.

135. Since the costs of developing drugs to treat the diseases of the poor will not be recovered from sales in the market, research on these diseases has been severely under-funded. Although a growing number of public-private partnerships are supporting increased research of relevance to the diseases of the poor, adding to the efforts of longer established programs in this area, the large gap in research funding is indisputable.[40] Neither the Special Program for Research and Training in Tropical Diseases (TDR) nor the Global Forum for Health Research, nor the newly emerging public-private partnerships are large enough in relation to the health research challenge.

Special Program for Research and Training in Tropical Diseases (TDR)

136. TDR, the oldest of the global health programs, has been an important and effective agency for research, training, and institutional capacity building in scientific areas of tropical health. It is under-funded because it primarily deals with researchers and research institutions, and does not engage in public advocacy, nor package its programs and progress well for interested parties.

137. As shown by independent evaluations, and confirmed by investigations conducted for this report, with relatively small amounts of funding TDR has achieved substantial impacts in

[39] Even for agricultural research, however, donor investments appear to have peaked.
[40] The Commission on Macroeconomics and Health recommended that $3 billion be spent annually on health research. Some sources interviewed for this paper considered this level of spending unrealistic in the current aid climate, while some others questioned the assumptions underlying the estimate.

a number of key communicable diseases that afflict the poor. It has leveraged support for the development of candidate vaccines for malaria, leishmaniasis, and schistosomiasis, and strengthened research capacity in developing countries through collaborative research involving scientists in developing and advanced countries (Box 7.1). TDR's publications have an impressive record of citation in scientific journals.

Box 7.1: Linking Global Research to Country Problems: TDR in Malawi and China

Malawi: Malawi has one of the world's highest child mortality levels. According to Malawian researchers, perhaps one of TDR's most important contributions in that country was its support for research into severe malaria among children in Blantyre. The researchers devised a means of staging the severity of malaria in comatose children—the Blantyre Coma Score—and examined the safety and efficacy of artemether and artesunate in the treatment of severe malaria. They also investigated the safety and efficacy of LapDap in the treatment of uncomplicated malaria. Leprosy research supported by TDR in Malawi has had significant effects on research and treatment methods. Chemotherapy studies led to the adoption of a multi-drug therapy for leprosy. Studies that evaluated vaccines showed that a BCG vaccine was superior to the killed M. leprae preparation; they also provided some of the most complete demographic and clinical data available on a large population. The leprosy studies led to the establishment of an excellent research facility in northern Malawi. TDR has also supported the evaluation of the safety and efficacy of Ivermectin for the treatment of onchocerciasis and its use on a community-wide basis. The results were important for the scale up of community-based drug distribution in other endemic regions in Africa, and also formed the basis of a relatively successful control program in Malawi.[a]

China: With China's improved capacity, TDR's research focus in China shifted to funding research projects based on their scientific merit. Considering the size and diversity of China's needs, TDR's capacity building efforts concentrated mainly on malaria and schistosomiasis control with some funding for leishmaniasis, leprosy and, more recently, TB control. TDR research has also influenced the quality of World Bank lending in China (for example for schistosomiasis control) and improved the design of specific World Bank operations.

[a] See Felix Salaniponi, "Global Health Initiatives and Health System Capacities in Developing Countries: A Case Study of Malawi", prepared for the International Task Force on Global Public Goods, 2005.

138. Country case studies provide evidence, for example in China and Malawi, that in several diseases and disciplines, TDR support for basic training and capacity building activities has helped to create research leadership among individuals and institutions.

139. Kenya has a long-standing record of collaborative research with TDR, reflecting its strategic location as a regional research center. However, researchers in Kenya stressed that external support is sporadic, and that it focuses on issues of interest to international organizations that do not necessarily match the needs on the ground (OED 1999; OED 2003b).

140. With expenditures of $47.4 million in 2003, TDR's funding has stagnated in real terms over the past ten years and has become more earmarked. Meanwhile the program's research mandate has expanded from eight to ten tropical diseases. Donors have become less willing to provide funding and more demanding of quick results with wide impacts.

141. In response to the rapidly changing external environment for health research and financing and some internal constraints, TDR has been addressing fundamental issues of its own scope, strategic objectives, role in global research, and funding and partnership strategies. It has been enhancing the quality of its technical reviews, method of work, governance, and management, and achieving improved accountability for results. Among other things it has been striving to achieve greater autonomy from WHO—a move that partner agencies have advocated to allow TDR to acquire the speed, flexibility, and responsiveness it needs to better exploit new opportunities, for example in public-private partnerships.

142. Going forward, the control of communicable diseases would benefit if TDR were to refocus its efforts on scientific research on health, where it has strong experience and comparative advantage, rather than spreading itself too thinly to developmental activities, as donors seem to be demanding.

Global Forum for Health Research

143. With spending of just over $3 million in 2003, the Global Forum is an example of a small donor response to a large need. Most of the sources interviewed for this paper considered that the efforts of the Global Forum are too small in relation to its objectives and the needs it serves.[41]

144. The Global Forum generates information on trends in research funding. It finances some public-private partnerships of its own, promotes networking among scientists, and develops new tools for research priority setting. The Forum lacks its own research funding mechanisms (except on a very small scale) and offers developing countries little leverage over other sources of funds. It lacks its own scientific capacity and does not have the ability of TDR or the Consultative Group on International Agricultural Research to muster scientific advice through technical advisory committees.

145. Networking by the Global Forum is a useful source of information on international best practice, but more funding, more effective long-term predictable support, and more sustained global-country linkages are needed.

New Public–Private Research Partnerships

146. In the last five years, new public-private research partnerships have pledged some $2 billion to new not-for-profit ventures for research on diseases of the poor (Widdus and Wright 2004). These partnerships now provide some $200 million annually (Global Forum, private communication).

147. Looking ahead through 2007, the additional financing required for health research by existing drug- and vaccine-related partnerships is estimated to exceed $1 billion. Long-term assurance of sufficient funding is believed to be essential to ensure that products will result from the promising results of those current initiatives. Drug development can take much

[41] A view expressed by the Secretary to the Commission on Macroeconomics and Health in India, among others.

more than ten years and require hundreds of millions of dollars. As more candidate products enter the final stages of drug development, the guaranteed availability of sufficient funding becomes more critical. Vaccine development takes even more resources.

148. Large and middle-income developing countries, such as India and Brazil, that have scientific capacity are beginning to expand their own health research and to collaborate with new public-private initiatives such as those supported by the Gates Foundation.[42] A positive development is the proposal for a global network being considered by scientists in advanced and developing countries with the support of the Global Forum, Rockefeller, and Gates Foundations, to link medical research institutions in advanced and developing countries. The purpose is to undertake joint research projects of mutual interest. Such a network would be well worth supporting, provided issues of research priority-setting are addressed.[43]

Current Issues: Links between Global and Local Levels; Need for Long-term Research Funding

149. Resources for R&D on the diseases of the poor remain extremely scarce. Stronger links between activities at the global and local levels are needed to exploit economies of scale and scope in research and development.

150. Despite the substantial catalytic efforts of the Gates Foundation, the lack of a long-term funding mechanism is still a major constraint on research on diseases that affect the poor. The creation of a well structured international financing mechanism has been recommended by the Commission on Macroeconomics and Health.[44] But bilateral aid agencies, and the domestic research agencies of industrialized countries, have not been willing to support new efforts and current donors are at the limit of their funding, given their other priorities for use of their limited resources.[45]

---

[42] Investments in health research by middle-income developing countries such as Brazil and Cuba reach almost 2 percent of health expenditures. India has adopted the same target. Brazil and Colombia are searching for new sources of research funding, for example taxes on alcohol and tobacco. But their health expenditures go disproportionately to the tertiary sector and perhaps so do health research expenditures.

[43] For details on this initiative see Keusch (2003). Who and what should determine research priorities and how scientific probabilities of success and science quality should be balanced with societal needs and preferences in allocating resources have been challenges for health research. Even at the national level, setting research priorities based on the burden of disease and research gaps, relative to the needs of politically more powerful urban populations, remains a challenge. The Global Forum has developed a methodology for research priority-setting by national health research systems, but it is unclear how many countries are using it. In developing countries the priorities of national councils of medical research, much like the priorities reflected in public health spending, tend to be driven by the disease burden of the urban and elite populations, and they tend to focus on medical rather than social science research. Currently, there is no process of priority setting for health research for development at the global level and too little is known about country priority setting processes.

[44] Jamison (2001) has argued that rivalries among research and control communities in health and among different disease-related professionals have prevented them from cooperating, whereas agricultural scientists working at the international level were willing and able to overcome these rivalries for a common purpose of establishing a global agricultural research network.

[45] Public funding for research takes place through "push" programs, while "pull" mechanisms assure markets for the products of research once they are developed. Both approaches are at work in global health initiatives. Kremer (2001) has stressed the many benefits of the "pull" approach: greater efficiency, fewer risks, and research that is more precisely targeted to the end user. The pull approach has become attractive to aid donors.

151. Because of economies of scale and scope, and limited resources for research to meet the needs of the poor, global priority setting for research on the diseases of the poor and a financing plan to back the priorities are both of considerable importance. But there is currently no broadly shared process of global priority setting on what research should be carried out on the diseases of the poor, on how research should be financed or conducted at different levels, or on how global health research should be linked to research at the national and local levels.

152. Appropriately adapted, the model used by the Consultative Group for International Agricultural Research—with its 15 autonomous international research centers located throughout the world, a Secretariat in the World Bank, and a Science Council (previously known as the Technical Advisory Committee) located in the UN Food and Agriculture Organization—is necessary and perhaps overdue in health research (Box 7.2). Organizing and managing global health research would certainly face challenges, as the CGIAR system testifies. Yet the returns are likely to be well worth the effort.

Box 7.2: Consultative Group on International Agricultural Research (CGIAR)

CGIAR was established with a strategic mission and a science-based organization to mobilize the best of science in advanced countries to develop technologies for the benefit of food deficit countries and populations. Its mandate has now expanded substantially to achieve food security and poverty reduction through research, partnerships, capacity building, and policy support, promoting sustainable agricultural development based on sound environmental management of natural resources. CGIAR has:

- Conducted strategic research of a global or regional public goods nature, with large transnational spillovers.
- Brought the best of known science to address the problems of food security in developing countries.
- Funded productivity-enhancing research that has had sizeable impacts on reducing poverty through employment, incomes, food prices, and land savings.
- Established gene banks (with 600,000 accessions) and plant and animal breeding that are unique global public goods assets with large global spillovers.
- Ongoing reforms at CGIAR are attempting to address the challenges arising from the radically changed external and internal environment faced by the Group.

Source: OED 2003b.

153. The emergence of a global health research system faces many obstacles. Major funding from donors is unlikely to materialize without the collective leadership of the World Bank, WHO, and other concerned international organizations. Scientists tend to be suspicious of a strong donor role in setting research priorities because of a concern that research organizations can become donor-driven rather than science-driven. Donors worry that research and expenditure priorities may reflect the interests of the more powerful segments of society, whether the urban elite or scientists. Yet TDR has shown that a public organization can undertake research on the diseases of the poor, do so successfully, and have a considerable leveraging effect.

154. The World Bank lacks a financing mechanism beyond its small Development Grant Facility (DGF) to finance research at the global level. DGF funds, limited to about $150 million annually, would need to be diverted from other activities including agricultural research.

155. The proposed International Financing Facility (IFF) is a potential source of financing for health research. Increased international funding on a stable long-term basis would establish an assured market and stimulate production of existing drugs and vaccines, but by itself it is unlikely to stimulate research on communicable diseases. IFF could possibly fund research directly by establishing a window for health research or by helping to guarantee markets for drugs and vaccines. In the research field, TDR and the Global Forum need to consider merging to achieve a critical mass of impact.

DRUG PURCHASE ARRANGEMENTS AT GLOBAL AND COUNTRY LEVELS

156. Drug purchase arrangements pose major constraints on efforts to scale up the prevention and control of communicable diseases. For example, since WHO revised its guidelines to countries to promote the use of artemisinin-based combination therapy (ACT) to treat drug-resistant malaria, there is a considerable shortage of the new ACT drugs, and prices of the raw material have risen.

157. Fairness, competition, corruption, and governance associated with the large-scale procurement of services and commodities are also issues. In interviews undertaken for this paper, the procurement procedures of the World Bank, UNICEF, GFATM, and bilateral donors were strongly criticized by developing countries as well as by international technical advisers working in the countries where case studies were undertaken. These procedures were perceived to suffer from excessive centralization of procurement approval authority in the capital cities of donors, and to be complex, tedious, unresponsive to borrower needs, and slow. As part of its support for sectorwide approaches the World Bank is simplifying its procurement procedures.

Drug Purchasing in the Global Programs

158. The Global Fund for AIDS, TB, and Malaria commits nearly half of its funds to procurement of drugs and commodities, as noted above. Stop TB's Global Drug Facility (GDF) was established to enable developing countries' health ministries implementing DOTS programs to procure quality drugs at reliable, competitive prices. Developing countries support such purchase arrangements because they increase the reliability and quality of supply and lower the price of drugs. An evaluation by McKinsey and Company generally gave the Facility high marks (Box 7.3). It suggested that the Facility should specialize in drug procurement, clarify the roles and responsibilities of its partners in the governance of the Facility, and leave funding for drugs to other donors including the Global Fund. At $15.6 million in 2003, GDF is grossly under-funded; indeed, McKinsey identified a need for an additional $20 to $30 million for 2003 alone. The Roll Back Malaria partnership has similarly embarked on establishing a facility to assure a more reliable supply of quality drugs and bed nets. The World Bank, through its lending operations, has strengthened procurement procedures in China, India, and Malawi, including helping to draft new

legislation in Malawi and helping to build the capacity of Malawi's ministries to procure health supplies. The Indian state of Tamil Nadu uses competitive processes to procure drugs at prices even lower than those obtained through international arrangements.

Box 7.3: The Global Drug Facility (GDF)—A Changing Focus

GDF, launched in 2001 with start-up funding from the Canadian government, is an initiative of the Stop TB Partnership hosted by WHO, designed to increase access to high-quality drugs for tuberculosis. Its objectives are to provide grants, procure drugs, and mobilize partners for technical assistance for DOTS expansion, and it has contracted with the United Nations Development Program Inter-Agency Procurement Services Office (UNDP/ IAPSO) to purchase TB drugs for use in DOTS programs.

McKinsey's evaluation of the performance and organizational effectiveness of GDF in its first two years of operations found that "GDF has been able to achieve reduction in drug prices of up to 30 percent for developing countries and a positive effect beyond access to quality drugs and low prices by catalyzing expansion of DOTS plans, and securing additional support from donors and technical partners." It emphasized that GDF's grant-making role is necessary for continued impact.

The evaluation concluded that while GDF's governance model, with WHO providing a legal entity and administrative support and the Stop TB Partnership providing an advisory 'Board' and funding, had functioned acceptably, "the roles of WHO, the Stop TB Partnership, and the Working Committees should be more clearly specified, and GDF should explore …..mutually beneficial relationships with the Global Fund and other key donors."

Source: McKinsey (2003b).

159. Some of the sources interviewed for this report argued that the Roll Back Malaria partnership and efforts against HIV/AIDS should adopt the vertically integrated DOTS model used in TB treatment, including establishing an international drug facility for those diseases. But they also recommended that efforts should be made concurrently to ensure that developing countries develop their own national and state/provincial capacities for competitive international procurement. They offered several reasons why:

- International procurement arrangements such as the Global Drug Facility operated by WHO, UNICEF, and other international organizations assure quality supply at competitive prices but they also cost developing countries about 4 to 10 percent of the costs of drugs procured. Developing countries could save by building their own domestic or regional capacities.
- Even for highly aid-dependent countries, national drug procurement involves much larger quantities and expenditures, and a wider range of goods, than typical aid-related procurement.
- Establishing capacity for transparent and accountable procurement of drugs, vaccines, and materials helps to improve the management of domestic delivery systems. Several Indian states, for instance, have developed improved competitive processes as well as domestic distribution systems including warehouses to even out drug supplies over several months.

- National capacity for procurement can also help improve overall domestic supply management and raise the efficiency of domestic delivery systems.
- Using multiple sources of financing and procurement procedures by different donors currently entails huge transaction costs, delayed procurement and disbursements, duplicative training and monitoring efforts, and multiple logistical requirements for patented and generic drugs.
- With improved domestic procurement capacity, purchases can be better tailored to domestic needs.

160. Developing countries argue that target dates could be established to phase out international arrangements, providing an incentive to build national capacities to procure drugs and vaccines. The international community could facilitate this process by (i) providing technical assistance for legislation and its implementation, as well as for training, and (ii) establishing international standards of good practice in procurement, including transparency and accountability, thereby providing incentives for developing countries to adopt these processes and practices.[46] International agencies should increase their current efforts to help developing countries establish their own capacity.

Current Issues: Harmonize Procurement Arrangements

161. Developing countries favor improving existing procurement arrangements such as those of the Global Drug Facility rather than establishing completely new ones. The World Bank, the Global Fund, and the Global Alliance for Vaccines and Immunization should harmonize their procurement standards and practices.[47] As the discussion of HIV/AIDS above illustrated, each new arrangement entails competition among agencies, learning by doing, and unnecessary costs to developing countries of learning new and changing rules.

162. The lessons from developing countries should be taken on board by programs such as the Global Fund and disseminated more broadly. Addressing the procurement issues head on will increase the appropriateness, timeliness, and affordability of purchases by developing countries and the scope for scaling up.

HUMAN RESOURCES FOR HEALTH: THE NEGLECTED CRITICAL FACTOR

163. At various points in this paper the importance of underpinning specific disease control programs with substantial health system capacity has been stressed. There can be no better illustration of this than a focus on health system personnel issues. Most analysts agree that shortages of well-trained doctors, nurses, and health administrators are the principal bottleneck to more rapid progress in fighting communicable diseases and that these shortages cannot be overcome from within specific disease control programs (except perhaps at the expense of other important health programs). As Lincoln Chen (2004) has noted, "irrespective of money and drugs, health achievements depend upon frontline health workers

[46] It could award them internationally recognized certificates of good practice in much the same way that Transparency International announces a ranking of countries on corruption.
[47] The World Bank is doing this in several countries including the four studied here, but these efforts should be enhanced.

who connect people and communities to technologies and services. …. pouring money and drugs at a problem is wasteful if workers are not available, motivated, skilled, and supported."

164. The availability of such health workers, particularly for public health programs, never great in most developing countries, has generally worsened in the last two decades. First, the spread of infectious diseases like HIV/AIDS and TB has taken its toll, directly through death and absenteeism due to illness of the health workers and indirectly by reducing the desirability of working in the health sector. Second, budgetary constraints, in some cases linked to structural adjustment and health sector reform programs, have resulted in under-investment in professional health training programs and facilities—with the result that today's training pipeline is narrow and cannot easily be expanded without a serious deterioration in quality. Third, demand for health workers in affluent countries and easier migration policies have swelled the exodus of better-trained workers from developing countries. Fourth, the perennial problem of recruiting health professionals to work in the public sector and in rural areas has worsened, due to constraints on civil service salaries and hiring policies on the one side, and attractive offers from the private sector and donor-supported NGO programs on the other. All these issues are coming together at a time when the AIDS epidemic has dramatically raised the need for more and better-trained health workers.

165. These problems are most severe in Africa. A recent study estimated that for Sub-Saharan Africa to improve the current ratio of one health worker per 1,000 population to the target level of 2.5 that would be needed to reach the Millennium Development Goals by 2015, the region would need to add the equivalent of a million health workers between now and 2015 (Joint Learning Initiative 2004).

166. Among our four case study countries, these problems are most severe in Malawi, where vacancy rates for funded positions in the public health system are at least 25 percent for nurses and as high as 80 percent for specialists; indeed it is alleged that there are more Malawian doctors in Manchester, England than in Malawi.[48] Kenya is much better endowed with human resources, but donor support to NGOs and the unattractive salaries and working conditions in the public service have resulted in considerable loss of well qualified staff to the private sector. The consequences can be seen most clearly in Kenya's rural health centers where mortality and morbidity rates are growing, as the result of neglect and inadequate treatment of birth complications, respiratory infections, and diarrhea, as well as the continued spread of HIV/AIDS and related infections. The situation in India and China is less severe, in part because the infrastructure for training doctors and nurses is better developed but also because efforts to recruit, train, and deploy para-professionals—community health workers and volunteers in India, "barefoot doctors" in China—have been more successful. But even in those two countries the quality of care, especially in rural public clinics, is poor in the less developed regions and has deteriorated.

[48] World Bank staff estimates. A *New York Times* article of July 12, 2004, "An Exodus of African Nurses Puts Infants and the Ill in Peril" quotes from a report indicating that two-thirds of public health nursing positions in rural areas are vacant, and a report that claims that there are more Malawian doctors in Manchester, England, than in Malawi.

167. There are no simple common fixes for these problems. Issues that need to be addressed, in addition to the most obvious one of the appropriate budget allocation for the health sector, include civil service regulations and salary reforms, housing in rural areas, agreements with receiving countries to help sending countries recover the costs of training emigrants, and donor policies towards the financing of the recurrent costs of public programs on a long-term basis.

168. Funding for vertical disease control programs cannot solve these problems; in some situations, such funding adds to the problem. Donors should consider funding training programs on a large scale, as they did in the agricultural sector when food shortages threatened many developing countries in the 1970s.

USE OF A SECTORWIDE APPROACH

169. Meeting myriad donor requirements on a disease-by-disease basis is often difficult and wasteful and can dilute the ability of recipient countries to establish and maintain national priorities in the health sector. A sectorwide approach to communicable diseases can in principle strengthen the stewardship role of ministries of health, promote greater cohesion in the health sector, harmonize donor support, and channel the limited capacities of developing countries to achieve results on the ground. These potential benefits, combined with demand from bilateral donors and some governments, have led the World Bank to participate in some 30 health-related SWAps in nearly 20 countries over the last decade. [49]

170. Use of a SWAp provides an opportunity to support a country's health sector development through time-slice financing, rather than earmarking particular activities or inputs for support. The approach requires broad-based ownership and partnership in the implementation of the health system strategy.

171. As noted above, GFATM supports the inclusion of its funds in common pooled funding mechanisms such as the ongoing SWAp for health in Mozambique, in which it is participating. Among the case study countries, Malawi is in the process of negotiating a sectorwide approach with the World Bank, and GFATM funding could be folded into this approach. The Government of India is considering developing such an approach for disease prevention by building on that country's successful TB program which, although focused on a single disease, calls for a sectorwide approach. GFATM has affirmed that it would be willing to support India's initiative, including accepting the procedures and formats suggested by the Government. For India this would be a major breakthrough in increasing harmonization of approaches among donors with respect to a specific disease, and eventually in the case of more than one disease, enabling the Government to be in the saddle.

172. Nevertheless, skeptics in the World Bank and developing countries see a sectorwide approach as, among other things, potentially tying up a considerable amount of committed resources if donors fail to reach agreement on certain issues. They note that in the case of

[49] For the World Bank, SWAPs can cover major subsectors or have multi-sector involvement in which health is an input; several modalities have been used to finance them. Other donors may sometimes use different definitions.

malaria control there is no cross-country evidence that SWAps have resulted in better outcomes or greater efficiency. They also raise questions about the technical rigor and strategic relevance of the contents around which donors are harmonizing processes through SWAps.[50] In short, they are demanding more evidence that SWAps can result in improved outcomes.

173. Certainly a sectorwide approach may not be appropriate in all cases—particularly where there is no agreed-upon strategy, where demand for this approach is not initiated by the government, or where opinions differ between a government and donors. But where the approach works well, it can be an effective way to improve the efficiency, quality, and equity of a country's health system while ensuring a minimum package of essential health services. There has been no independent evaluation of health SWAps and one is needed urgently, given their potential to contribute to sectorwide strategies.

[50] In Zambia, for example, the World Bank Operations Evaluation Department's report on the Health Sector Support Project (IDA Credit 003239) noted that while there was progress on the reforms and harmonization agendas, "there is no clear evidence that the overall quality of, and access to, a national package of essential health services had improved." Furthermore, the local perception prevailed of "too much emphasis on process and not enough on achieving visible results on the ground." Drug shortages were common, especially in the urban health centers. In another example, while the Malawi Joint Program of Work (2004/2010) for the SWAp recognized malaria as "the leading case of outpatient visits (30 percent)", malaria outcomes were not among the 42 indicators in the SWAp indicator matrix. And in Uganda, the coverage of insecticide-treated bed nets is only about 15 percent despite the SWAp.

8. CONCLUSIONS AND RECOMMENDATIONS

174. Global health programs need to shift from a tendency for "crisis management" to a greater focus on longer-term strategic planning and implementation. The crisis mentality, stimulated in part by very effective advocacy programs, has resulted in a justifiable shift in resources towards treatment of communicable diseases. But it has been based on estimates of need rather than of absorptive capacity, and that has resulted in inefficient use of resources and neglect of critical components such as prevention, system capacity building (reflected most dramatically in shortages of professional health workers), surveillance, research, monitoring and evaluation, and the role of non-health sectors, all of which affect health outcomes. The crisis mentality has also resulted in a proliferation of uncoordinated agencies and programs that increase transaction costs and further reduce the effectiveness of foreign assistance. These problems are particularly severe in small, low-income countries that depend heavily on aid. Without a shift to a longer-term approach, disappointment with results will lead to donor fatigue that will threaten the sustainability of global health programs.

175. These conclusions lead to the following recommendations.

- ***Develop an effective mechanism for greater coherence and coordination at both the strategic and the country operational level***, especially among the three core organizations—the World Bank, WHO, and GFATM—but also other related partners and funders. There is a natural division of labor between the core organizations, with WHO setting standards and providing technical assistance, the World Bank providing assistance for system-wide policy planning and capacity building, and GFATM providing large-scale funding. The global system cannot work well without active and effective collaboration between all three at both the global and the country levels. Some agency must take the lead to make this happen, as well as to ensure that the other anchor functions are satisfactorily carried out. Given the roles it now plays, WHO would seem to be the logical agency to do this.

- ***Increase the core funding of WHO*** (as opposed to funding from extra-budgetary sources that are ad hoc and of questionable sustainability) so it can properly serve as an anchor institution and meet the growing needs of developing countries for technical inputs, evaluation of their impacts, and technical assistance to develop investment proposals.

- ***The World Bank needs to become more proactive in building country-level health system capacities and coordinating the activities of bilateral donors in this field.*** As the only agency with significant operational capacity in all sectors, the World Bank has a relative advantage in assessing the appropriate balance between disease-specific and overall health system approaches, bringing into play non-health sectors, viewing health in a macroeconomic context, and helping design and support country-specific programs to build capacity in the health sector. It is also in an optimal position to provide leadership at the country level in coordinating bilateral donor programs in health system capacity building.

- ***The Global Fund needs to continue evolving towards becoming a true funding agency***. Building on the steps it has already taken in this direction in some countries, GFATM should scale up its support for country-wide disease-specific strategies supported by other donors, without weakening its laudable outcome-based approach to funding.

- ***Achieve sharper focus of some programs and consolidate others.*** Agencies that focus mainly on advocacy, for example UNAIDS, have been more successful at the global than at the country level; they need to consider ways to work more successfully at the country and local level. In the research field, TDR and the Global Forum need to consider merging to achieve a critical mass of impact.

- ***Improve the balance between disease-specific and sectorwide programs, between treatment and prevention, and among the roles of public, private, and community organizations***. The most serious imbalance arises from the relative neglect of system-wide programming and capacity building, especially in small, poor countries, where it is hurting health programs for non-communicable diseases. Donors and international organizations have a special responsibility to help these countries develop the capacity to correct these imbalances.

- ***Establish programs aimed at overcoming shortages of skilled and motivated professionals for the health system as a whole.*** This will require policies and programs that cut across various disease-specific programs, and a willingness among donors to ramp up investments in health training and research institutes and to help governments fund adequate salaries for public health workers.

- ***Substantially enhance monitoring and evaluation, research, and data gathering capacity at both the global and the country level.*** Apart from critical humanitarian and development considerations, one of the reasons for emphasizing treatment is that available strategies and technologies for prevention are few, complex, and difficult to implement and to evaluate for impact. Operationally useful lessons need to be derived from the few success cases in containing the spread of HIV/AIDS and TB. Operations research is also needed, using randomized experimental designs to test different strategies for inducing behavioral change. Medical R&D is needed to develop vaccines for communicable diseases, new and more effective barrier methods, and ways to contain the growth of drug resistance. Funding for such research and related data-gathering and surveillance activities is much lower than benefit-cost estimates suggest is appropriate. Innovative mechanisms to induce private sector investments in these areas should be considered and piloted. Non-health sectors must be included in any analysis and policy discussion. Much of this capacity should be created in developing countries. Many issues—for example, the appropriate choice among different drug formulations and ways to change behavior—are country-specific. Sooner or later, all new products and approaches must be tested in the settings where they are to be used.

REFERENCES

Ainsworth, Martha, and Christopher Chamberlin. 2000. "Social Monitor: Thailand. Thailand's Response to AIDS: Building on Success, Confronting the Future." Bangkok: The World Bank. <http://www.worldbank.or.th/social/publications.shtml>

Barnett, Tony. 2003. *HIV/AIDS, Human Development, and the Coming Epidemic in the Balkans, Baltic, Russian Federation, and the CIS.*

Barnett, Tony, and Alan Whiteside. 2002. *AIDS in the 21st Century: Disease and Globalization.* New York: Palgrave-Macmillan.

Brown, Jonathan, Didem Ayvalikli, and Nadeem Mohammad. 2004. "Turning Bureaucrats into Warriors, Actafrica." Washington, DC: The World Bank.

Caines, Karen, Richard Biritwum, Neil Cameron, Adukwei Hesse, Emma Jefferys, Enamul Karim, Hatib Njie, Mark Pearson, and Julia Delgado. 2003. *Report of the Independent External Evaluation of the Global Stop TB Partnership,* London, UK: Institute for Health Sector Development.

Caines, Karen. 2002. "Report of the External Review of the Functions and Interactions of the GAVI Working Group, Secretariat, and Board." Geneva: GAVI Secretariat.

Chen, Lincoln, 2004. "Foreword". In Physicians for Human Rights, *An Action Plan to Prevent Brain Drain: Building Equitable Health Systems in Africa,* p. vii. <http://www.phrusa.org/campaigns/aids/pdf/braindrain.pdf>

Commission on Health Research for Development. 1990. *Health Research: Essential Link to Equity in Development.* New York: Oxford University Press for the Commission on Health Research for Development.

Coriat, Benjamin, Jérome Dumoulin, Yves-Antoine Flori, Tony Barnett, Yves Souteyrand, and Jean-Paul Moatti. 2003. "Patents, Generic Drugs, and the Markets for Antiretrovirals". In *Economics of AIDS and Access to HIV/AIDS Care in Developing Countries, Issues and Challenges.* Agence Nationale de Recherches sur le Sida. <http://www.iaen.org/papers/anrs.php>

Davis, Michael, and Andrew Stark, eds. 2001. *Conflict of Interest in the Professions.* Oxford, UK: Oxford University Press.

Development Committee. 2003. "Progress Report and Critical Next Steps in Scaling Up: Education for All, Health, HIV/AIDS, Water, and Sanitation. Addendum IV: Accelerating Progress Towards the Health, Nutrition, and Population Millennium Goals Progress Report." Washington, DC: World Bank and IMF.

DiMasi, Joseph, Ronald Hansen, and Henry Grabowski. 2003. "The Price of Innovation: New Estimates of Drug Development Costs," *Journal of Health Economics* 22:151-185. <http://www.cptech.org/ip/health/ econ/dimasi2003.pdf>

Dugger, Celia W. 2004. "An Exodus of African Nurses Puts Infants and the Ill in Peril", *New York Times,* July 12.

Dumoulin, Jérôme, Yves-Antoine Flori, Philippe Vinard, and Thomas Borel. 2003. "World Market Strategies for Drugs to Fight AIDS". In *Economics of AIDS and Access to HIV/AIDS Care in Developing Countries, Issues and Challenges.* Agence Nationale de Recherches sur le Sida. <http://www.iaen.org/papers/anrs.php>

Gill, Mel. 2001. “Governance Do’s and Don’ts: Lessons from Case Studies on Twenty Canadian Non-profits.” Ottawa: Institute on Governance. <http://www.iog.ca/publications/nonprofit-gov.PDF >

Global Forum for Health Research. 2001b. "Monitoring Financial Flows for Health Research." Geneva: Global Forum for Health Research. <www.globalforumhealth.org>

_____. 2001. “Findings from the External Evaluation: A Report to the Foundation Council.” Geneva: Global Forum for Health Research.

_____. 2002. “The 10/90 Report on Health Research 2001-2002.” Geneva: The Global Forum for Health Research. <http://www.globalforumhealth.org/pages/ index.asp>

Hammer, Jeffrey. 1996. *Economic Analysis of Health Projects.* Policy Research Working Paper WPS 1611. Washington, DC: The World Bank.

Harries, Anthony et al. 2001. “Deaths from tuberculosis in sub-Saharan African countries with a high prevalence of HIV-1.” *The Lancet* 357 (9267): 1519-1523.

_____. 2004. “Monitoring the response to antiretroviral therapy in resource-poor settings: the Malawi model,” *Transactions of the Royal Society of Tropical Medicine and Hygiene* 98 (12): 695-701.

Jamison, Dean. 2001. “WHO, Global Public Goods, and Health Research and Development.” In Christopher D. Gerrard, Marco Ferroni, and Ashoka Mody (eds.), *Global Public Policies and Programs: Implications for Financing and Evaluation.* Proceedings from a World Bank Workshop. Washington, DC: World Bank.

Joint Learning Initiative. 2004. “Human Resources for Health.” <www.globalhealthtrust.org>

Keusch, Gerald T. 2003. “Health Research: Tapping the Power of Small Institutions,” *Nature* 422 (April 10): 561-562.

Kremer, Michael. 2001. “Creating Markets for New Vaccines.” In Christopher D. Gerrard, Marco Ferroni, and Ashoka Mody (eds.), *Global Public Policies and Programs: Implications for Financing and Evaluation.* Proceedings from a World Bank Workshop. Washington, DC: World Bank.

Lele, Uma. 2003. “Biotechnology: Opportunities and Challenges for Developing Countries.” Paper presented to the American Agricultural Economics Association. Montreal, July 29.

Lucas, Adetokunbo. 1999. “Public-Private Partnerships: Illustrative Examples”. Paper presented at the Workshop on Public-Private Partnerships in Public Health, Endicott House, Dedham, Massachusetts, April 7-8, 2000.

Malaria Consortium. 2002. “Achieving Impact: Roll Back Malaria in the Next Phase. Final Report of the External Evaluation of Roll Back Malaria.” August 2002. Liverpool, UK: Malaria Consortium. <http://www.doh.gov.za/issues/malaria/red_reference/rbm/background/rbm24.pdf>

McKinsey and Co. (for Bill & Melinda Gates Foundation). 2002. “Developing Successful Global Health Alliances.” Seattle, WA: Bill & Melinda Gates Foundation. <http://www.gatesfoundation.org/nr/downloads/globalhealth/GlobalHealthAlliances.pdf>

_____ (for Global Alliance for Vaccines and Immunizations). 2003a. “Achieving Our Immunization Goal.” Geneva: UNICEF. <http://www.vaccinealliance.org/home/ Resources_Documents/Policy_Technical/Access/access.php>

_____ (for Stop TB). 2003b. “Evaluation of the Global Drug Facility (GDF).” Geneva: The World Health Organization. < http://www.stoptb.org/GDF/gdf_reportapr03.pdf>

Mills, Anne. 2005. “Mass campaigns versus general health services: what have we learnt in 40 years about vertical versus horizontal approaches?” *Bulletin of the World Health Organization* 83 (4) (April): 315-316. <http://www.who.int/bulletin/volumes/83/4/en/315.pdf>

Musgrave, Richard A. 1987. “Merit Goods.” In John Eatwell et al., *The New Palgrave Dictionary of Economics.* London: The Macmillan Press.

Operations Evaluation Department of the World Bank (OED). 1999. “Investing in Health: Development Effectiveness in Health, Nutrition, and Population.” Washington DC: The World Bank.

_____. 2002a. “The World Bank’s Approach to Global Programs: An Independent Evaluation – Phase I.” Washington DC: The World Bank.

_____. 2002b. “The Heavily Indebted Poor Countries (HIPC) Debt Initiative: An OED Review.” Washington DC: The World Bank.

_____. 2003a. “Annual Review of Development Effectiveness: Achieving Development Outcomes: The Millennium Challenge.” Washington DC: The World Bank.

_____. 2003b. “The CGIAR at 31: A Meta Evaluation of the Consultative Group on International Agriculture Research.” Washington DC: The World Bank.

_____. 2004. *Global Health Programs, Millennium Development Goals, and the World Bank’s Role*. Washington, DC: The World Bank. <http://www.worldbank.org/oed/gppp/>

Over, Mead, Peter Heywood, Julian Gold, Indrani Gupta, Subhash Hira, and Elliot Marseille. 2004. “HIV/AIDS Treatment and Prevention In India: Modeling the Cost and Consequences.” Washington, DC: The World Bank.

Peters, David, Aldo S. Yazabeck, Rashmi R. Sharma, G.N.V. Ramana, Lant H. Pritchett, and Adam Wagstaff. 2002. “Better Health Systems for India’s Poor: Findings, Analysis, and Options.” World Bank Human Development Network and Hindustan Publishing Corporation.

Picciotto, Robert. 1998. “The Logic of Partnership: A Development Perspective.” Unpublished paper, September 29. Washington, DC: The World Bank.

Salaniponi, Felix. 2005. “Global Health Initiatives and Health System Capacities in Developing Countries: A Case Study of Malawi.” Prepared for the International Task Force on Global Public Goods.

Sandler, Todd. 2002. “Financing Global Public Goods.” In Marco Ferroni and Ashoka Mody (eds.) *International Public Goods: Incentives, Measurement, and Financing.* Boston, MA: Kluwer Academic Publishers for the World Bank.

Snow, R. W., C.A. Guerra, A.M. Noor, H. Y. Myint, and S. I. Yan. 2005. “The Global Distribution of Clinical Episodes of Plasmodium Falciparum Malaria,” *Nature* 434 (7030): 214–216.

Starling, Mary, Ruairi Brugha, Gill Walt, Annie Heaton, and Regina Keith (for London School of Hygiene and Tropical Medicine). 2002. “New Products into Old Systems: The Initial Impact of the Global Alliance for Vaccines and Immunization (GAVI) at Country-level.” London: Save the Children.<http://www.gaviftf.org/forum/pdf/newproducts_oldsystems_final.pdf>

Subbarao, Kalanidhi, and Diane Coury. 2003. “Orphans in Sub-Saharan Countries: A Framework for Public Action.” Washington DC: The World Bank.

Special Programme for Research and Training in Tropical Diseases (TDR). 2000. “TDR Strategy – 2000–2005.” October 2000. Geneva: The World Health Organization. <http://www.who.int/tdr/publications/publications/pdf/strategy.pdf>

_____. 2002a. “Research Capacity Strengthening Strategy: 2002-2005.” Geneva: The World Health Organization. <http://www.who.int/tdr/publications/publications/pdf/rcs-strategy.pdf>

_____. 2002b. “TDR General Operations Guide 2002–2003.” Geneva: The World Health Organization. <http://www.who.int/tdr/publications/publications/pdf/rcs-strategy.pdf>

_____. 2003. “Investing in Health and Development: Research Capacity Building in Developing Countries.” Geneva: The World Health Organization. <http://www.who.int/tdr/publications/publications/pdf/rcs_grantee.pdf>

Teixeira, Paulo, Marco Antônio Vitória, and Jhoney Barcarolo. 2003. “The Brazilian Experience in Providing Universal Access to Antiretroviral Therapy.” In *Economics of AIDS and Access to HIV/AIDS Care in Developing Countries, Issues and Challenges*. Agence Nationale de Recherches sur le Sida. <http://www.iaen.org/papers/anrs.php>

’t Hoen, Ellen F. M. 2003. “TRIPS, Pharmaceutical Patents, and Access to Essential Medicines: Seattle, Doha and Beyond.” In *Economics of AIDS and Access to HIV/AIDS Care in Developing Countries, Issues and Challenges.* Agence Nationale de Recherches sur le Sida. <http://www.iaen.org/papers/anrs.php>

UNAIDS. 2003. “Responses that Work and Lessons Learned: How to Identify and Propose Them for the UNAIDS Best Practice Collection.” Geneva: UNAIDS. <http://www.aids.md/best_practice/bestpractice.shtml>

_____. 2004. *Global Summary of the AIDS Epidemic*. Geneva: UNAIDS.

UNAIDS/PCB. 2002. “Five-Year Evaluation of UNAIDS.” Geneva: UNAIDS/PCB.

United Nations Millennium Summit. 2000. *Millennium Development Goals.* New York: Oxford University Press for the United Nations.

Widdus, Roy, and White, Katherine. 2004. “Combating Diseases Associated with Poverty: Financing Strategies for Product Development and the Potential Role of Public-Private Partnerships.” Initiative of Public-Private Partnerships.

Wigzell, H., F. K. Nkrumah, G. T. Castillo, J. Sepulveda Amor, and W. P. Thalwitz (for the Special Program for Tropical Disease Research). 1998. “Final Report: Third External Review.” Geneva: The World Heath Organization.

World Bank. 1993. *World Development Report: Investing in Health.* New York: Oxford University Press for the World Bank.

_____. 1997. *Health, Nutrition, and Population (HNP) Sector Strategy Paper.* Washington, DC: World Bank.

_____. 2001. *Global Development Finance*. Washington, DC: World Bank.

_____. 2003. “Progress Report And Critical Next Steps in Scaling Up: Education for All, Health, HIV/AIDS, Water, and Sanitation.” Background Papers. Washington, DC: World Bank.

_____. 2004. “Interim Review of the Multi-Country HIV/AIDS Program (MAP) for Africa.” Washington, DC. <http://www.worldbank.org/afr/aids/map/MAP_Interim_Review-04.pdf>

_____. 2005, forthcoming. *Rolling Back Malaria: The World Bank Global Strategy and Booster Program.* Washington, DC: World Bank.

World Health Organization. 2001. *Macroeconomics and Health: Investing in Health for Economic Development.* Commission on Macroeconomics and Health. Geneva: The World Health Organization.

_____. 2002a. *Achieving Impact: Roll Back Malaria in the Next Phase. Report of the External Evaluation of Roll Back Malaria.* Geneva: The World Health Organization.

_____. 2002b. *The World Health Report 2002: Reducing Risks, Promoting Healthy Life.* Geneva: The World Health Organization.

_____. 2002c. *International Action Plan on Scaling-Up Access to HIV Care: A Commitment to Universal Access and Action on HIV/AIDS Treatment.* Geneva: The World Health Organization.

_____. 2003. "WHO's Contribution to Achievement of the Development Goals of the United Nations Millennium Declaration." Geneva: The World Health Organization.

_____. 2004. *Progress Report on the Global Plan to Stop Tuberculosis, Stop TB Partnership.* Geneva: The World Health Organization.

ANNEXES

CONTENTS

ANNEX A: LIST OF PEOPLE CONSULTED

Name	Organization/Affiliation	Location
Thomas N'chinda		Cameroon
Bellah Ahmad	Scientific Officer, Program Planning and Management, TDR, WHO	China
Cai Jiming	Deputy Director General, Foreign Loan Office, Ministry of Health, Beijing	China
Craig Shapiro	GAVI Office, Beijing	China
Daniel Chin	WHO, Beijing	China
Duan Mingyue	Deputy Division Director, FLO/MOH, Beijing	China
Fan Fuhua	UNAIDS, Beijing	China
Fan Xiaojie	Head of LFA (UNOPS)	China
Feng Lin	Deputy Director, International Cooperation, CDC	China
Guang Shi	China Network on Health Economics Research and Training	China
Jiang Shiwen	National TB Center, Beijing	China
Joel Rehnstrom	Representative, UNAIDS, Beijing	China
Lisa Lee	WHO, Beijing	China
Lui Guangyuan	Division of Ministerial Relations, Dept of International Cooperation, Ministry of Health	China
Miguel Angel Gonzalez Block	Manager, Alliance for Health Policy and System Research	China
M.R. Zero	UNAIDS, Beijing	China
Petra Heitkamp	Stop TB Partnership Secretariat, WHO, Geneva	China
Qiang Zhengfu	Executive Director, Principal Recipient, CDC	China
Shen Jie	Deputy Director, CDC	China
Tang Enhua	Director, Institute of Parasitic Disease Prevention, CDC/China	China
Wang Liying	Director, Division of Schistosomiasis Prevention, Disease Control Department, Ministry of Health	China
Wang Shiyong	Program Officer, World Bank Office, Beijing	China
Wang Xiaojun	Chief Co-Manager, Division II Epidemiology, National Immunization Program, CDC	China
Wu Zunyou	Head of AIDS Technical Panel, CDC, Beijing	China
Xi Cuigang	Director, Division of Immunology, Department of Disease Control, Ministry of Health	China
Yu Jingjin	Deputy Director General, Disease Control Department, Ministry of Health	China
Zhang Ben	Foreign Loan Office, Ministry of Health, Beijing	China
Zhou Shuisheng	Chief, Department of Malaria Prevention, Institute of Parasite Diseases, CDC	China

Ahmed Mandil	Professor of Epidemiology, High Institute of Public Health, Alexandria University	Egypt
Abu Rab		Egypt
Demissie Habte		Ethiopia
Hunt Davis	University of Florida	Gainesville, Florida
Alex Ross	WHO	Geneva
Andres Defrancisco	Global Forum	Geneva
Andrew Ball	Director, Regional & Country Support, Dept. of HIV/AIDS	Geneva
Anne Duke	Director, HR, GFATM	Geneva
Arletty Pinel	Sr. Advisor, Grant Performance, GFATM	Geneva
Asamoah-Baah	Assistant Director-General	Geneva
Awa Marie Coll-Seck	Executive Secretary, Roll Back Malaria, WHO	Geneva
Barry Green	CFO, GFATM	Geneva
Bernhard Schwartlander	Director, Strategy, Information & Evaluation, GFATM	Geneva
Bo Stenson	GAVI	Geneva
Brad Herbert	The Global Fund	Geneva
Christoph Benn	External Relations, GFATM	Geneva
Daniel Louis-Beer	Manager, Monitoring & Evaluation, GFATM	Geneva
Doris D'Cruz-Grote	Coordinator, CM Development, GFATM	Geneva
Duncan O. Earle	Team Leader	Geneva
Elhadj Sy	Director, Operational Partnerships & Country Support, GFATM	Geneva
Erik Godfrey	Financial Officer (disbursement), GFATM	Geneva
Fatoumata Nafo	Director, RBM Dept., WHO	Geneva
Fawzia Rasheed	Senior Policy Adviser, Dept of Strategic Planning and Innovation HIV/AIDS, Tuberculosis and Malaria, WHO	Geneva
George Amofah	RBM Director	Geneva
Gottfried Hirnschall	Tech. Support Team, Dept. of HIV/AIDS	Geneva
Hind Khatib-Othman	GFATM	Geneva
Ian Smith	WHO	Geneva
Jacques-François Martin	President of the VF	Geneva
Julian Fleet	Senior Advisor, Care and Public Policy	Geneva
Julian Lob-Levyt	Executive Secretary, GAVI	Geneva
Kate Taylor	Global Health Initiative	Geneva
Kerry Kutch	Consultant	Geneva
Lawrence Barat	Sr. Advisor on Public Health	Geneva
Marcos Espinal	Executive Secretary, Stop TB Partnership	Geneva

Mario Raviglione	Director, Stop TB Dept., WHO	Geneva
Mazuwa Banda	WHO	Geneva
Nicholas Drager	WHO	Geneva
Nicole Gorman	GFATM	Geneva
Paul DeLay	Director, M&E Exec. Office	Geneva
Peter Piot	Executive Director, UNAIDS	Geneva
Richard Feachem	Executive Director, The Global Fund	Geneva
Rob Ridley	Director (ad interim), TDR	Geneva
Roy Widdus	WHO	Geneva
Sandii Lwin	Fund Portfolio Manager	Geneva
Stephen Matlin	Executive Secretary, The Global Forum for Health Research	Geneva
Taufiqur Rahman	Fund Portfolio Manager	Geneva
Thierry Mertens	WHO	Geneva
Thomas O'Connell	Technical Officer/Country Support, Roll Back Malaria Partnership Secretariat, WHO	Geneva
Toby Kasper	Policy Manager, GFATM	Geneva
Tom Hurley	GFATM	Geneva
Tore Godal	Executive Secretary, GAVI	Geneva
Valerie Diaz	Partnership Officer, Stop TB Secretariat	Geneva
Xavier Leus	WHO Representative – ESCAP United Nations Economic and Social Commission for Asia and the Pacific, WHO	Geneva
Yves Souteyrand	Director, Strategic Info. & Research Dept. of HIV/AIDS	Geneva
Paul Lalvani	Procurement Advisor, The Global Fund	Geneva
Fred Binka		Ghana
Mr. Thangaraj	Secretary, Dept. of Health, Government of Karnataka	India
Ms. Vandana Gurnani	Project Director, Karnataka State AIDS Prevention Society	India
Nandini Kapoor	UNAIDS, New Delhi	India
Nevin Wilson	Junior TB Officer, IUALTD	India
Paramita Sudharto	Public Health Specialist, WHO	India
Preeti Kudesia	Senior Public Health Specialist, The World Bank, New Delhi	India
Rita Teaotia	Joint Secretary, Ministry of Health and Family Welfare, Government of India	India
Salim Habayeb	WR, WHO	India
Sudarshan	Former Director, Health Task Force, Government of Karnataka	India
Sujata Rao	Commission on Macro Economics and Health, Government of India	India
Suneeta Singh	Senior Public Health Specialist, The World Bank, New Delhi	India
Chauhan	Deputy Director General, TB	India

	Program, Government of India	
GNV Ramana	Senior Public Health Specialist, The World Bank	India
Joanna Reid	Senior Health Adviser, Dfid Representative in India	India
Joytna Sokhey	Assistant D-G of Health, Malaria	India
JVR Prasada Rao	Secretary, Ministry of Health and Family Welfare, Government of India	India
K. Sudhakar	Sr. Health Specialist, The World Bank	India
Michael F. Carter	Country Director, The World Bank	India
Nandini Kapoor	UNAIDS Program Officer	India
Nevin Wilson	Junior TB Officer, IUALTD	India
Paramita Sudharto	WHO Public Health Specialist	India
Preeti Kudesia	Senior Public Health Specialist, The World Bank	India
Raj Kumar	Project Manager, Vaccinations	India
R. Poornalingam	Secretary, Dept. of Disinvestment, Ministry of Finance	India
Rita Teaotia	Joint Secretary, Ministry of Health and Family Welfare, Government of India	India
Sahu	Tuberculosis Program Officer, WHO	India
Salim Habayeb	WHO Representative	India
Sudarshan	Director of the Health Task Force of the Karnataka Government	India
Shreelata Rao-Seshadri		India
Sudhakar	Senior Public Health Specialist, The World Bank	India
Sujata Rao	Commission on Macroeconomics and Health, Government of India	India
Suneeta Singh	Senior Public Health Specialist, The World Bank	India
S. Ramasundaram	Joint Secretary, Ministry of Commerce, Government of India	India
Syeda Hameed	Member, Planning Commission	India
S.Y. Quraishi	Addl. Secretary and Project Director, NACO	India
Taposh Roy	Director (Special Programs), Voluntary Health Assn. of India	India
Thangaraj	Secretary, Department of Health	India
Vandana Gurnani	Project Director, Karnataka State AIDS Prevention Society	India
V. L. Chopra	Member, Planning Commission and National Academy of Agricultural Sciences	India

Abdishakur Othowai	Program Manager Nomad Life Foundation	Kenya
Albertus Voetberg	Human Development Network World Bank, Kenya Country Office	Kenya
Alfred Kenyanito	Programme Officer, Health	Kenya
Ambassador Bullut	Previous Director, National Council for Population and Development	Kenya
Assumpta Muriithi	Integrated Management of Childhood Illness/National Professional Officer	Kenya
Augustine M. Ngindu	National Professional Officer	Kenya
Bill Gallo	Deputy Director for Operations	Kenya
Charity Kaluki Ngilu	Minister of Health Nairobi	Kenya
Charles Appleton	Partner, KPMG Certified Public Accountants	Kenya
Cheryl Sonnichsen	Sr. Advisor for HIV/IDS	Kenya
Christina Mwachari	Research Officer, Kenya Medical Research Institute	Kenya
Douglas Munga	Director, Ernst & Young Advisory Services	Kenya
Harris Mule		Kenya
Isaiah Tanui	TB/HIV Collaboration Officer National AIDS &STD's Control Program	Kenya
Joanne Greenfield	Malaria Programme Advisor, WHO	Kenya
Joel Kangangi	National TB & Leprosy Control Officer, Ministry of Health	Kenya
John Chimumbwa	RBM Partnership RBM Partnership Focal Point for the East Africa Sub-Regional Network (EARN)	Kenya
Joyce Onsongo	Disease Prevention and Control Officer (DPC) WHO	Kenya
Kevin De Cock	Director, Centers for Disease Control	Kenya
Kevin Marsh	Wellcome Trust Research Laboratories	Kenya
Kristan Schoultz	UNAIDS Country Coordinator	Kenya
Mahktar Diop	Country Director	Kenya
Margaret Gachara	Director, NACC	Kenya
Mathew T. Chepkwony	Deputy Director, Finance and Administration, National AIDS Control Council, Office of the President	Kenya
Melanie Renshaw	UNICEF Regional Adviser for Malaria	Kenya
Miriam K. Were	Chairman, National AIDS Control Council	Kenya
Monique Wasunna		Kenya

Muhwa Jermiah Chakaya	Head, National Leprosy & TB Programme, Ministry of Health	Kenya
Mutuma Mugambi	Vice-Chancellor Kenya Methodist University	Kenya
Nathan Buziba	Laboratory Director & Coordinator, Innovation in TB control - W. Kenya Faculty of Health Sciences, MU	Kenya
Omari Onyangore	Coordinator, Living Well Network	Kenya
Peter O. McOdida	Country Director International Medical Corps	Kenya
Peter P. Eriki	MB:CHB; M. MED; DTCD; MPH Representative	Kenya
Risper Genga	Audit Senior Head, Department of Standards and Regulatory Services (DSRS)	Kenya
Sammy Oinyaiku		Kenya
Tom Mboya Okeyo	Coordinator, European Commission Health Projects and Global Fund, Kenya Program	Kenya
William M. Macharia	Associate Professor University of Nairobi	Kenya
Billy Stewart	DFID	London
Hilary Vaughn	Consultant, Crown Agents	London
Jill Walt	Consultant	London
Karen Caines	Consultant	London
Melissa Harold	DFID	London
Robb Alastair	DFID	London
Aida Girma	Representative, UNICEF	Malawi
Anna de Cleene	Health Advisor, DfiD	Malawi
Anthony D. Harris	FHI National TB Programme C/O The British High Commission	Malawi
Boi-Betty Udom	The RBM Geneva focal point for Malawi, RBM Partnership Secretariat (RPS) Country Support Development (CSD)	Malawi
B. S. Mwale	Executive Director, National AIDS Commission	Malawi
Charlotte Gardiner	UN Theme Group on HIV/AIDS, Chair UNFPA Representative	Malawi
Charlotte Gott	Nurse	Malawi
Chirwa Alfred	USAID HIV/AIDS Project Management Specialist	Malawi
Christine Kimes	Sr. Operations Officer, Malawi Country Office, World Bank	Malawi
Crispen Nyemba	Procurement Consultant, The World Bank	Malawi
D. Chitale	UNAIDS	Malawi
David Kaliwo	Information Technology Analyst	Malawi
Desiree Mhango	Nursing and Training Officer	Malawi
Dunstan M. Wai	Country Manager, Malawi Country Office, The World Bank	Malawi

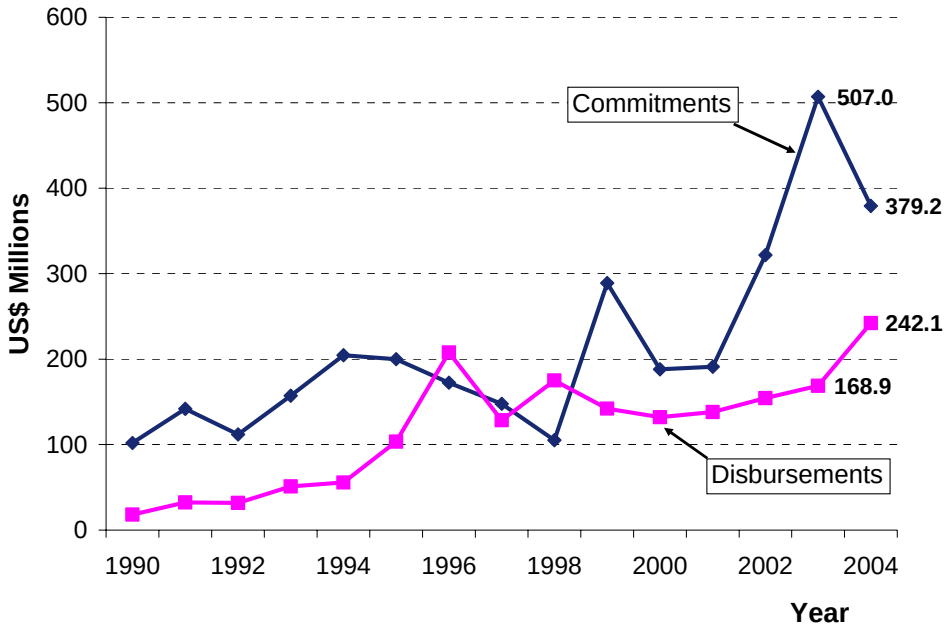
Edwin Libamba	HIV/AIDS Manager	Malawi
Eliab Some	Project Officer, HIV/AIDS/Malaria	Malawi
Enrique Malemi	Country Director, Children of the Nations (COTN)	Malawi
Erasmus Morah	UNAIDS Country Programme Adviser, UNAIDS	Malawi
Esther Lozo	Team Assistant, The World Bank	Malawi
Ethel Khuniwa	Accountant, The World Bank	Malawi
Felix Namakhuwa	TB Control Officer, Mzuzu City TB Control Initiative	Malawi
Felix Salaniponi	Director, Malawi National Tuberculosis Control Programme	Malawi
Francis M'buka	Agricultural Services Specialist	Malawi
Grace Soko	Team Assistant, The World Bank	Malawi
Gresham Phiri	The World Bank	Malawi
Habib Somanje	Director, Ministry of Health and Population	Malawi
Hannah Ashwood Smith	Health Planner, Department for International D Phiri, evelopment	Malawi
Henry Mbedwe	Programme Officer, Health	Malawi
Hetherwick Ntaba		Malawi
Jacqueline Kabambe	Programme Officer, UNAIDS	Malawi
James Ntabalika	Driver, The World Bank	Malawi
John Chicopa	Information Assistant, The World Bank	Malawi
John Phillips	Pediatrician	Malawi
Justin C. Malewezi	Consultant	Malawi
Kabuluzi	Program Manager, CHSU	Malawi
Ketema Bizuneh	Project Officer Malaria Control, UNICEF	Malawi
Mavida	DHO	Malawi
Michael Mambo	Education Specialist, The World Bank	Malawi
Patrick Gomani	Clinical Coordinator, MSF, Luxembourg Malawi Mission	Malawi
Paul Mtali	Resource Management Analyst	Malawi
Peggy C. Nyirongo	Accounts/Administrative Assistant, The World Bank	Malawi
Phiri	Lilongwe District Health Service	Malawi
Rex Mpazanje	Director of Clinical and Population Services/Head of HIV/AIDS Unit, Ministry of Health and Population	Malawi
Rhebab Chimzizi	TB/HIV Programme Officer Malawi National TB Control Programme, Community Health Sciences Unit (CHSU)	Malawi
Roger Teck	Head of Mission MSF Luxembourg	Malawi

Roy Thompson	Manager, Heifer Scheme, Land O'Lakes, Inc.	Malawi
Runar Soerensen	Programme Coordinator/Deputy Representative	Malawi
Salaniponi Felix	TB Programme Director Community Health Sciences Unit, Ministry of Health and Population	Malawi
Sheila Phillips	Nurse	Malawi
Shiva Murugasampillay	WHO Coordinator, Southern Africa Malaria Control Programme	Malawi
Stanley Hiwa	Agricultural Economist, The World Bank	Malawi
Sue Makin	Mulanje Mission Hospital	Malawi
Susan Mshana	Health Advisor, DFID	Malawi
Susanne Kraemer	HIV/AIDS Liaison Officer	Malawi
Tana Ngwira	Executive Assistant, The World Bank	Malawi
William Aldis	WHO Representative for Malawi	Malawi
Woo Sangala	Chief Technical Advisor, Ministry of Health and Population	Malawi
Jackie Peace	Governance Advisor, Poverty Reduction Support Team	Malawi
Ade Lucas		Nigeria
Elodie Montétagaud	Expert, Secretariat of the International Task Force on Global Public Goods	Sweden
Gunilla Smith-Ericson	International Task Force on Global Public Goods	Sweden
Katell Le Goulven	International Task Force on Global Public Goods	Sweden
Sven Sandstrom	Executive Director, Secretariat of the International Task Force on Global Public Goods	Sweden
Anabela Abreu	Sector Manager, South Asia Region, The World Bank	Washington, DC
Anne Peterson	USAID & Deputy Governor for the GFATM	Washington, DC
Armin H. Fidler	Sector Manager, Europe & Central Asia Region	Washington, DC
Bernhard Liese	Consultant, The World Bank	Washington, DC
Christopher D. Walker	Lead Specialist, The World Bank	Washington, DC
David Peters	Professor	Washington, DC
Debrework Zewdie	Director, The World Bank	Washington, DC
Dzingai Mutumbuka	Sector Manager, Africa Region, The World Bank	Washington, DC
Evangeline Javier	Sector Manager, Latin America & the Caribbean Region, The World Bank	Washington, DC
Fadia M. Saadah	Sector Manager, East Asia Region, The World Bank	Washington, DC
George Shieber	Health Policy Advisor, The World Bank	Washington, DC
Hartwig Schafer	Country Director, The World Bank	Washington, DC
Ivar Andersen	Sr. Operations Officer, The World Bank	Washington, DC

Jacques Baudouy	Sector Director, The World Bank	Washington, DC
Joanne Salop	Former Vice President, World Bank	Washington, DC
Jonathan Brown	Operations Advisor, The World Bank	Washington, DC
Kate Stillman	Associate Director, Global Fund Study, Abt Associates	Washington, DC
Keith Hansen	Manager, The World Bank	Washington, DC
Keith Jay	Lead Policy Analyst, The World Bank	Washington, DC
Kyung Hee Kim	Sr. Manager, The World Bank	Washington, DC
Logan Brenzel	Sr. Health Specialist, The World Bank	Washington, DC
Michael Mills	Lead Economist, Human Development Department, Africa Region, World Bank	Washington, DC
Oey Astra Meesook	Former Sector Manager, Africa Region, The World Bank	Washington, DC
Ok Pannenborg	Sr. Health Advisor, The World Bank	Washington, DC
Olusoji Adeyi	Coordinator, The World Bank	Washington, DC
Pamela Cox	Acting Country Director, World Bank	Washington, DC
Peter Mamacos	Policy Analyst, Office of US Global AIDS Coordinator	Washington, DC
Rajiv Misra		Washington, DC
Richard Skolnik	George Washington University	Washington, DC
Ritva Reinikka	Country Director, The World Bank	Washington, DC
Sara Bennet	Director, Global Fund Study, Abt Associates	Washington, DC
Suprotik Basu	Operations Analyst, The World Bank	Washington, DC
Susan Stout	Manager, The World Bank	Washington, DC
Sushma Rajan	The World Bank	Washington, DC
Tawhid Nawaz	Lead Implementation Specialist, The World Bank	Washington, DC
William Brencick	Director, The World Bank	Washington, DC
Yukon Huang	Former Country Director, The World Bank	Washington, DC

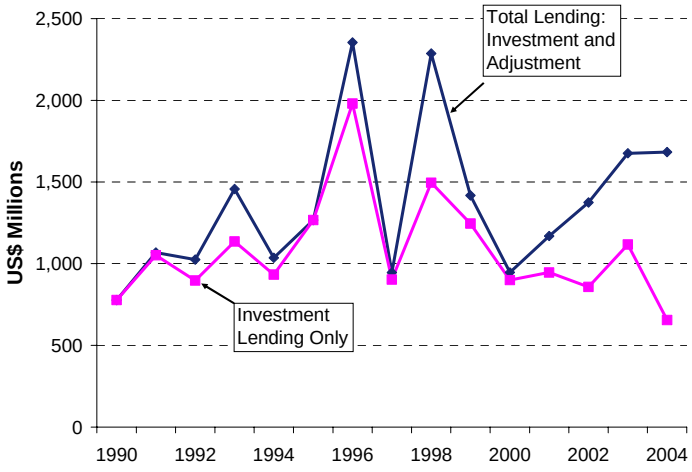
ANNEX B: WORLD BANK LENDING TO THE HEALTH, NUTRITION, AND POPULATION SECTOR

Figure B.1: World Bank Lending for HIV/AIDS and Other Communicable Diseases, 1990-2004



Source: World Bank Business Warehouse.

Figure B.2: World Bank Lending to the Health Sector, 1990-2004



Source: World Bank Business Warehouse. Commitments correspond to total lending for health, nutrition, and population (HNP) activities, whether managed by the HNP sector board or other sector boards.

Figure B.3: World Bank Lending to the Health Sector, by Region and Lending Instrument, 1990-2004

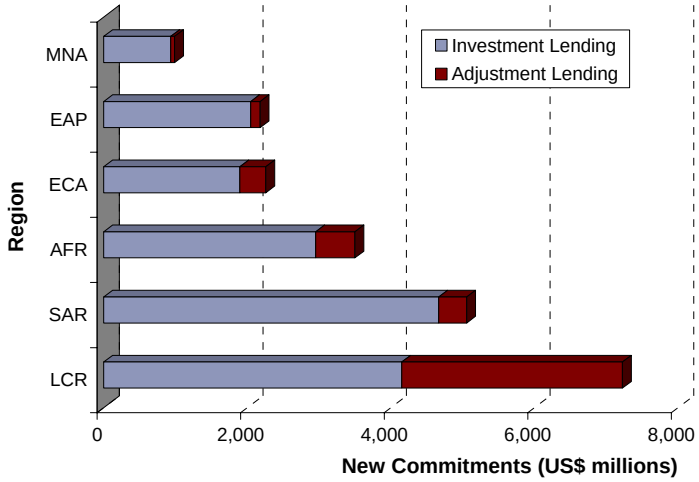


Table B.1: New World Bank Commitments, by Theme, 1990-2004
(US$ millions)

Year	Child Health	Health System Performance	HIV/AIDS	Injury/Non-Communicable Diseases	Nutrition & Food Security	Other Communicable Diseases	Population & Reproductive Health	Total
1990	155.1	198.6	11.3		57.7	90.5	174.9	687.9
1991	113.0	410.8		30.0	167.0	141.8	217.9	1080.5
1992	133.2	265.0	33.6		23.2	78.4	201.0	734.4
1993	173.6	338.2	71.3	200.0	126.1	85.8	151.4	1146.4
1994	76.0	278.7	132.6	38.9	46.5	71.9	150.5	795.1
1995	75.1	526.9	20.1	4.5	201.8	179.8	134.5	1142.7
1996	76.0	1125.6	20.4	7.8	69.0	151.9	214.2	1664.9
1997	111.5	145.0	22.0	14.5	62.3	125.7	104.1	585.3
1998	208.8	971.2	15.5	5.1	288.9	89.6	148.6	1727.7
1999	42.9	382.7	136.9	2.4	24.9	152.1	153.3	895.1
2000	152.9	330.0	67.0	85.6	95.0	121.1	60.8	912.5
2001	75.1	316.2	153.6	1.9	39.5	37.6	93.3	717.1
2002	129.8	336.5	193.9		43.5	127.7	128.4	959.8
2003	224.4	502.4	324.5	159.6	199.7	182.5	196.7	1789.7
2004	337.7	546.5	209.9	314.7	32.0	169.3	292.3	1902.4
Total	**2085.0**	**6674.1**	**1412.5**	**865.0**	**1477.1**	**1805.7**	**2421.9**	**16741.3**
1992-2004 Growth	5.2%	2.2%	16.7%	n.a.	-0.7%	3.1%	-0.2%	3.6%

Source: World Bank Business Warehouse.

ANNEX C: SUMMARY DATA ON THE GLOBAL HEALTH PROGRAMS STUDIED

Figure C.1: Participation in Governing Boards of Global Health Programs

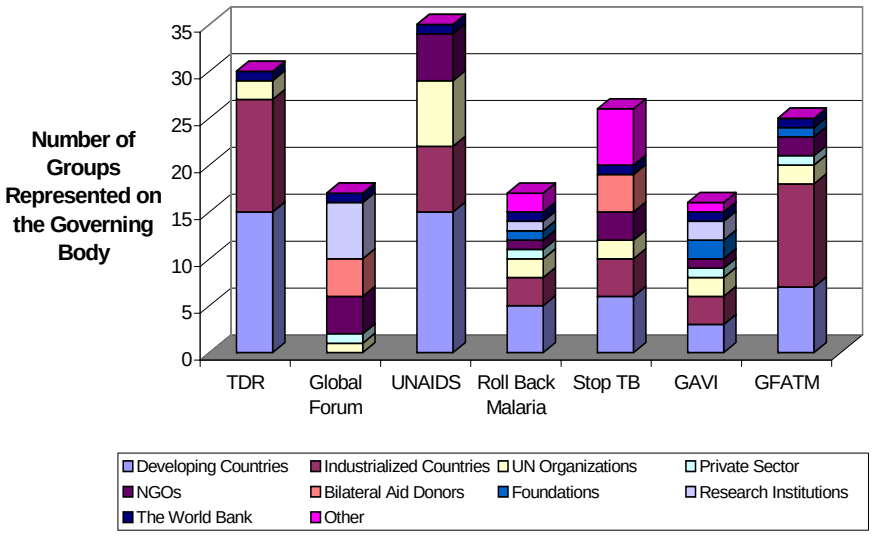


Table C.1: Global Health Programs at a Glance

Program	Operational start date	Independent legal entity	Location	2003 Program expenditures *($millions)*	Country-level TA	Retailing grants
Special Programme for Research and Training in Tropical Diseases (TDR)	Dec. 1975	No	WHO	47.4[a]	Yes	Yes
Global Forum for Health Research	January 1998	Yes	Geneva	3.07	No	Yes
UNAIDS (Joint United Nations Programme on HIV/AIDS)	January 1996	Yes	Geneva	95.0[b]	Yes	No
Roll Back Malaria	Nov. 1998	No	WHO	11.4	Yes	No
Stop TB Partnership	July 1999	No	WHO	20.8[c]	Yes	Yes
Global Alliance for Vaccines and Immunization [d]	October 1999	No	UNICEF	124.1[e]	Yes	Yes
Global Fund to Fight ATM	January 2002	Yes	Geneva	1095.1	Yes	Yes

[a] $95.2 million for the 2002/03 biennium.
[b] $190.0 million for the 2002/2003 biennium.
[c] Includes $5.6 million disbursed by the Global Drug Facility in 2002 and $15.6 million in 2003.
[d] The Vaccine Fund is an independent legal entity – a 501(29) non-profit corporation under US law.
[e] Includes $14.5 million expensed by GAVI and $109.6 million disbursed by the Vaccine Fund.

Table C.2: Goals and Objectives of Global Health Programs

Program	Mission/Goal	Development Objectives
Special Program for Research and Training in Tropical Diseases (TDR)	To help coordinate, support, and influence global efforts to combat a portfolio of major diseases of the poor and disadvantaged.	*Research and Development:* • To improve existing and develop new approaches for preventing, diagnosing, treating, and controlling neglected infectious diseases. • Readily integrating into the health services of these endemic countries and focusing on the health problems of the poor. *Training and Strengthening:* • To strengthen the capacity of developing endemic countries to undertake the research required for developing and implementing these new and improved disease control approaches.
Global Forum for Health Research	The *vision* of the Global Forum is a world in which health research is recognized as a global public good and a critical input in health system development, where priority is given, at the global and national levels, to the study of those factors with the largest impact on people's health and to the effective delivery of research outcomes for the benefit of all people, particularly the poor. Its *central objective* is to help correct the 10/90 gap in health research and focus research efforts on the health problems of the poor by bringing together key actors and creating a movement for analysis and debate on health research priorities, the allocation of resources, public-private partnerships and access of all people to the outcomes of health research.	• Contribute to the efforts to measure the 10/90 gap, monitor developments, and disseminate pertinent information regarding this gap, including on its causes and consequences. • Support the development of priority-setting methodologies to identify research priority areas, including in sectors other than health which have a crucial role to play in the promotion of health. • Identify and debate critical, controversial, and burning issues affecting the 10/90 gap in health research. • Give special consideration to the health problems of the poor. • Ensure that gender analysis is consistently and systematically applied to all work on the 10/90 gap. • Be a platform for debate and synthesis review of efforts in the field of research capacity strengthening, paying special attention to the needs of the national health research systems. • Support concerted efforts and the development of networks/partnerships (between the public sector, private commercial sector, and civil society organizations) in the priority sectors of health research, when appropriate and when the benefits of joint action are larger than the sum of individual actions.

Program	Mission/Goal	Development Objectives
UNAIDS (Joint United Nations Programme on HIV/AIDS)	As the main advocate for global action, UNAIDS leads, strengthens, and supports an expanded response to the epidemic. This response has four goals: • To prevent the spread of HIV • To provide care and support for those infected and affected by the disease • To reduce the vulnerability of individuals and communities to HIV/AIDS • To alleviate the socioeconomic and human impact of the epidemic	The partnership aims to build stronger political commitment in all sectors of society to promote a sense of urgency among the public and create a more supportive environment while providing the political and strategic guidance to enhance the coherence and coordination of the global response to HIV/AIDS by providing: • Leadership and advocacy for effective action on the epidemic • Strategic information to guide efforts against AIDS worldwide • Tracking, monitoring and evaluation of the epidemic and of responses to it • Civil society engagement and partnership development • Mobilization of resources to support an effective response
Roll Back Malaria	To halve the world's malaria burden by 2010.	Provision of an enabling environment (e.g., political commitment; development and implementation of appropriate recruitment and career policies; provision of facilities and resources; strengthened training institutions). Intensification of training and retraining of personnel. Technical support mechanisms (e.g., information, communication, and supply systems to support trained personnel, supervision, monitoring, and evaluation).
Stop TB Partnership	To increase access, security, and support to: • Ensure that every tuberculosis patient has access to treatment and a cure • Protect vulnerable populations from tuberculosis • Reduce the social and economic toll that tuberculosis exerts on families, communities, and nations	To expand its current strategy—DOTS—so that all people with TB have access to effective diagnosis and treatment. To adapt this strategy to meet the emerging challenges of HIV and TB drug resistance. To improve existing tools by developing new diagnostics, new drugs, and a new vaccine. To strengthen the Global Partnership to Stop TB so that proven TB-control strategies are effectively applied.

Program	Mission/Goal	Development Objectives
Global Alliance for Vaccines and Immunization/The Vaccine Fund	The Global Alliance for Vaccines and Immunization is a public-private partnership committed to one goal: saving children's lives and people's health through the widespread use of vaccines. GAVI partners created *The Vaccine Fund* to provide long-term financing to the world's poorest countries to strengthen health systems and introduce new and under-used vaccines.	To fulfill its mission of protecting children of all nations and of all socioeconomic levels against vaccine-preventable diseases, GAVI has established six strategies: • Improve access to sustainable immunization services • Expand the use of all existing safe and cost-effective vaccines, and promote delivery of other appropriate interventions at immunization contacts • Support the national and international accelerated disease control targets for vaccine-preventable diseases • Accelerate the development and introduction of new vaccines and technologies • Accelerate research and development efforts for vaccines needed primarily in developing countries • Make immunization coverage a centerpiece in international development efforts
The Global Fund to Fight AIDS, Tuberculosis, and Malaria	To attract, manage and disburse additional resources through a new public-private partnership that will make a sustainable and significant contribution to the reduction of infections, illness and death, thereby mitigating the impact caused by HIV/AIDS, tuberculosis and malaria in countries in need, and contributing to poverty reduction as part of the Millennium Development goals	• Finance effective programs, balancing the needs for prevention, treatment, care, and support, in order to alleviate suffering, save lives, and help end these diseases • Dramatically increase the global resources dedicated to fighting HIV/AIDS, tuberculosis, and malaria To accomplish its goals, GFATM engages in the following activities: • The Fund will balance its resources by giving due priority to areas with the greatest burden of disease, while strengthening efforts in areas with growing epidemics. • Identifying criteria to focus the choice of activities/programs/projects to be supported. • Support strategies that focus on clear and measurable results. • Focus its resources on increasing coverage of critical and cost-effective interventions against the three diseases. • The Fund will provide grants to public, private, and nongovernmental programs in support of interventions for the prevention, treatment, care, and support of the infected and directly affected.

Table C.3: Relationship of Global Health Programs to International Conventions/Conferences/Agreements

Program	Convention/Agreement	Role
Special Programme for Research and Training in Tropical Diseases (TDR)	Chiang Mai Declaration 2000	Strongly endorsed the TDR/WHO global strategy for prevention and control of dengue and dengue hemorrhagic fever.
Global Forum for Health Research		
UNAIDS (Joint United Nations Programme on HIV/AIDS)	UN Special Session on HIV/AIDS 2001	The UN General Assembly adopted a Declaration of Commitment on HIV/AIDS and fully endorsed the UNAIDS program.
Roll Back Malaria (RBM)	Abuja Summit 2000 Okinawa Summit 2000	Both Summits endorsed actions synonymous with those proposed by the RBM Partnership.
Stop TB Partnership	Amsterdam Declaration 2000	Formally recognized the efforts of the Stop TB Initiative and endorsed the program.
Global Alliance for Vaccines and Immunization (GAVI)	Dakar Declaration 2000	The Summit formally requested that the partners of the GAVI and the Vaccine Fund continue to assist countries in the mobilization of additional financial resources for health and immunization.
The Global Fund to Fight AIDS, Tuberculosis, and Malaria	G8 Meeting in Okinawa, Japan in 2000 Millennium Development Goals UN Special Session on HIV/AIDS 2001	Leaders of G8 countries acknowledged the need for additional resources to combat HIV/AIDS, TB, and malaria in their 2000 meeting in Okinawa, Japan. A United Nations General Assembly Special Session on AIDS in June 2001 concluded with a commitment to create such a fund to focus on the achievement of the MDGs.

Table C.4: Relationship of Global Programs to Millennium Development Goals

Goals	Targets	Direct relation-ship[a]	Less direct relationship[b]
1. Eradicate extreme poverty and hunger	1. Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day		Global Forum
	2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger.		Global Forum
2. Achieve universal primary education	3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling		Global Forum
3. Promote gender equality and empower women	4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015		Global Forum
4. Reduce child mortality	5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate	GAVI	TDR, UNAIDS, RBM, Stop TB, Global Forum
5. Improve maternal health	6. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio		TDR, Global Forum, UNAIDS, RBM, Stop TB, GAVI
6. Combat HIV/AIDS, malaria and other diseases	7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS	UNAIDS, GFATM[c]	Global Forum
	8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.	RBM, Stop TB, GFATM	TDR, Global Forum, GAVI
7. Ensure environmental sustainability	9. Integrate the principles of sustainable development into country policies and programs and reverse the losses of environmental resources		
	10. Halve by 2015 the proportion of people without sustainable access to safe drinking water and sanitation		Global Forum
	11. Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers		Global Forum
8. Develop a global partnership for development	12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system		Global Forum
	13. Address the special needs of the least developed countries		Global Forum
	14. Address the special needs of landlocked countries and small island developing states		Global Forum
	15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term		Global Forum
	16. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth		Global Forum
	17. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries		TDR, UNAIDS, RBM, Stop TB, GAVI, GFATM, Global Forum

Goals	Targets	Direct relation-ship[a]	Less direct relationship[b]
	18. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications		

[a] The stated objectives of these programs are directly related to specific MDG targets, although their outputs are only part of the ingredients needed to achieve the MDGs.
[b] The objectives of these programs are also related to the achievement of the MDGs in the sense that the goods and services the programs provide are important ingredients needed to achieve particular MDG targets.
[c] The International AIDS Vaccine Initiative, not included in this study, is attempting to develop vaccines for HIV/AIDS.

Table C.5: Most Recent Program-level Evaluations of Global Health Programs

Program	Date	Commissioned by	Reported to	Conducted by	Title
TDR	October 1998	TDR Joint Coordinating Board (JCB)	TDR JCB	H. Wigzell, F. K. Nkrumah, G. T. Castillo, J. Amor, W. P. Thalwitz, H. G. Boyer	Final Report: Third External Review of TDR
Global Forum	Dec. 2001	Global Forum Foundation Council	Foundation Council	Fred Binka, Jan Holmgren, Nimala Murthy	Findings from the External Evaluation: A Report to the Foundation Council
UNAIDS	October 2002	UNAIDS Program Coordinating Board (PCB)	UNAIDS PCB	Derek Poate (leading a four-person team)	Five-Year Evaluation of UNAIDS, Final Report
RBM	August 2002	UK DFID	DFID and the RBM Steering Committee	R. Feachem (leading a seven-person team)	Achieving Impact: Roll Back Malaria in the Next Phase
Stop TB Partnership	December 2003	Stop TB Partnership Coordinating Board	Coordinating Board	Karen Caines et al, Institute for Health Sector Development London, U.K.	Independent External Evaluation of the Global Stop TB Partnership
	April 2003	Stop TB Partnership Coordinating Board	Coordinating Board	McKinsey & Co.	Review of the Global Drug Facility[a]
GAVI	June 2002	GAVI Board	GAVI Board	Karen Caines, Hatib N'jie	Report of the External Review of the Functions and Interactions of the GAVI Working Group, Secretariat, and Board[a]
The Global Fund to Fight AIDS, Tuberculosis, and Malaria	Program-level evaluation not yet available.				

[a] The McKinsey review of the Global Drug Facility and GAVI's external review are not full program evaluations.

Table C.6: GFATM Financial Data

1. GFATM Financial Data Summary

	No. of Countries w/ Approved Proposals	US$ Amount Approved	US$ Amount Disbursed to Date
By Round			
		d	
Round 1	36	566,476,296	400,110,761
Round 2	73	858,785,725	411,803,355
Round 3	64	634,499,912	161,187,952
Round 4	66	997,871,478	65,271,880
Total	**129**	**3,057,633,412**	**1,038,373,947**
By Region : All Rounds			
East Asia & the Pacific	22	395,718,938	162,555,869
Eastern Europe & Central Asia	19	277,826,743	94,294,090
Latin America & the Caribbean	30	292,009,778	119,615,971
North Africa & the Middle East	11	143,906,475	45,779,887
South Asia	8	156,279,037	40,966,505
Sub-Saharan Africa	39	1,791,892,441	575,161,625
Total	**129**	**3,057,633,412**	**1,038,373,947**
	% of Countries w/ Approved Proposals	**%of US$ Amount Approved**	**% of US$ Amount Disbursed to Date**
By Region : As Percent of Total			
East Asia & the Pacific	18	13	16
Eastern Europe & Central Asia	14	9	9
Latin America & the Caribbean	23	10	12
North Africa & the Middle East	9	5	4
South Asia	6	5	4
Sub-Saharan Africa	30	59	55
Total	**100**	**100**	**100**

2. Disaggregated by Region and Round

	No. of Countries w/ Approved Proposals	US$ Amount Approved	US$ Amount Disbursed to Date	% of US$ Amount Disbursed to Date
By Region and Round				
East Asia & the Pacific				
Round 1	7	129,967,753	107,450,504	83
Round 2	18	65,167,305	33,743,667	52
Round 3	7	85,677,153	21,361,698	25
Round 4	6	114,906,727	0	0
Total	22	395,718,938	162,555,869	41
Eastern Europe & Central Asia				
Round 1	4	34,906,386	26,282,145	75
Round 2	8	72,696,042	47,708,710	66
Round 3	7	58,207,497	16,632,921	29
Round 4	7	112,016,817	3,670,314	3

Total	19	277,826,743	94,294,090	34
Latin America & the Caribbean				
Round 1	5	78,019,691	57,282,074	73
Round 2	8	98,729,444	39,656,545	40
Round 3	22	88,826,952	21,592,502	24
Round 4	19	26,433,691	1,084,850	4
Total	**30**	**292,009,778**	**119,615,971**	**41**
North Africa & the Middle East				
Round 1	1	4,738,806	3,909,772	83
Round 2	7	53,437,972	25,185,426	47
Round 3	6	45,799,321	14,577,989	32
Round 4	5	39,930,376	2,106,700	5
Total	**11**	**143,906,475**	**45,779,887**	**32**
South Asia				
Round 1	2	13,708,619	10,579,332	77
Round 2	6	65,497,170	16,807,488	26
Round 3	3	26,464,487	11,655,389	44
Round 4	5	50,608,761	1,924,296	4
Total	**8**	**156,279,037**	**40,966,505**	**26**
Sub-Saharan Africa				
Round 1	17	305,135,041	194,606,933	64
Round 2	26	503,257,792	248,701,519	49
Round 3	19	329,524,502	75,367,453	23
Round 4	24	653,975,106	56,485,720	9
Total	**39**	**1,791,892,441**	**575,161,625**	**32**
GRAND TOTAL	**129**	**3,057,633,412**	**1,038,373,947**	**34**

Table C.7: GFATM Grants in the Case Study Countries
(US$)

Country	Disease Component	GA	DB	Round	2-Year Approved	5-Year Maximum	Total Disbursed
China	Malaria	x	x	1	3,523,662	6,406,659	3,523,662
	Tuberculosis	x	x	1	25,370,000	48,070,000	25,370,000
5 grants	HIV/AIDS	X	x	3	32,122,550	97,888,170	11,426,350
	Tuberculosis			4	27,890,000	56,140,000	0
	HIV/AIDS			4	23,936,918	63,742,277	0
	Total				**112,843,130**	**272,247,106**	**40,320,012**
India	Tuberculosis	x	x	1	5,650,999	8,784,999	4,313,840
	HIV/AIDS	x	x	2	26,116,000	100,081,000	4,766,000
7 grants	Tuberculosis	x	x	2	7,080,000	29,110,000	1,921,000
	HIV/TB	x	x	3	2,667,346	14,819,773	165,428
	HIV/AIDS			4	35,540,649	165,414,138	0
	Malaria			4	30,167,781	69,053,902	0
	Tuberculosis			4	6,906,000	26,632,000	0
	Total				**114,128,775**	**413,895,812**	**11,166,268**
Malawi	HIV/AIDS	x	x	1	41,751,500	284,110,722	26,253,844
	Malaria			2	20,872,000	39,688,000	0
2 grants	**Total**				**62,623,500**	**323,798,722**	**26,253,844**
Kenya	HIV/AIDS	x	x	1	220,875	220,875	199,768
	HIV/AIDS	x	x	1	2,650,813	2,650,814	2,650,813
6 grants	HIV/AIDS	x	x	2	36,721,807	129,054,092	26,454,882
	Malaria	x	x	2	10,526,880	33,586,810	4,640,447
	Tuberculosis	x	x	2	4,928,733	11,232,735	2,457,403
	Malaria			4	81,972,711	186,319,508	0
	Total				**137,021,819**	**363,064,834**	**36,403,313**
GRAND TOTALS					**426,617,224**	**1,373,006,474**	**114,143,437**

Notes: GA refers to whether or not a Grant Agreement has been signed. DB indicates whether or not disbursements have begun.
Source: GFATM Database as of 1.19.2005.

Table C.8: Global Health Programs: Members of the Governing and Executive Bodies

Program	International/ regional organizations [a]	Industrialized countries	Developing countries	Foundations	Commercial private sector	Civil society organizations [b]	Others
Special Programme for Research and Training in Tropical Diseases Joint Coordinating Board (30 members)	UNDP, World Bank, WHO, UNICEF (2003) (co-sponsors)	Belgium, Canada, Denmark, Germany, Japan, Luxembourg, Netherlands, Norway, Portugal, Switzerland, Sweden, UK, USA	Argentina, Armenia, Bangladesh, Brazil, Burkina Faso, Cameroon, China, Cuba, India, Kuwait, Laos, Malaysia, Saudi Arabia, Thailand	–	–	–	–
Global Forum for Health Research Foundation Council (20 members currently out of maximum of 20)	GFATM, TDR, World Bank, WHO	Canada, Denmark, Netherlands, Norway, Sweden, Switzerland	India, National Institute of Medical Research (Tanzania), Academy of Sciences (Russia),	Gates, Rockefeller	–	Asian-Pacific Research and Resource Center for Women, Center for Research and Advanced Studies, International Federation of Pharmaceutical Manufacturers Association, International Planned Parenthood Federation, International Women's Health Coalition	–

Program	International/ regional organizations [a]	Industrialized countries	Developing countries	Foundations	Commercial private sector	Civil society organizations [b]	Others
UNAIDS (Joint United Nations Programme on HIV/AIDS) Program Coordinating Board (35 members)	ILO, UNDP, UNESCO, UNFPA, UNICEF, UNODC, World Bank, WFP, WHO (co-sponsors)	Canada, Denmark, Germany, Ireland, Japan, Portugal, Spain, Sweden	Bahamas, Brazil, Burundi, China, Cote d'Ivoire, Guatemala, India, Kenya, Myanmar, Pakistan, Philippines, Romania, Russian Federation, Tunisia, Zambia	Canadian Foundation for Drug Policy, Hong Kong AIDS Foundation	–	AAL HDN Organizacion de SIDA-Redla+ (Argentina), Abraco (Portugal), Faith, Hope, and Love (Guatemala), Ghana HIV/AIDS Network	–
Roll Back Malaria Steering Committee (15 members currently out of a maximum of 17)	UNICEF, World Bank, WHO (co-sponsors)	Italy, Netherlands, USA	Ghana, DR Congo, India, Senegal, Zambia		Bayer Pharmaceutical	Health and Nutrition International	Executive Secretary of RBM Secretariat, The Executive Director of the Global Fund for ATM
Stop TB Partnership Coordinating Board (27 members)	UNICEF, World Bank, WHO (co-sponsors)	Canada, Japan, Netherlands, UK, USA	Brazil, India, Mexico, Nigeria, Pakistan, Philippines	Soros	–	Six chairpersons of the working groups	Six regional representatives
Global Alliance for Vaccines and Immunization GAVI Board (16 members)	UNICEF, World Bank, WHO	Canada, Centers for Disease Control (USA), Institut Pasteur (France), UK	India, Mongolia, Mozambique, Serum Institute of India	Gates, UN Foundation, Vaccine Fund,	Wyeth-Ayerst Global Pharmaceuticals	Sierra Leone Red Cross	–
GAVI Executive Committee (7 members)	UNICEF, World Bank, WHO	One rotating member	One rotating member	Gates, Vaccine Fund			

Program	International/ regional organizations [a]	Industrialized countries	Developing countries	Foundations	Commercial private sector	Civil society organizations [b]	Others
The Global Fund to Fight AIDS, Tuberculosis, and Malaria (23 members)	UNAIDS, WHO, World Bank	Canada (Representing the UK & Switzerland) The European Commission (Representing Austria & Belgium) France (Representing Germany, Luxemburg, & Spain) Italy Japan Sweden (Representing Denmark, Ireland, the Netherlands, & Norway) USA	Barbados (Representing Latin America & the Caribbean Region) Cameroon (Representing the West & Central Africa Region) China (Representing the Western Pacific Region) India (Representing South East Asia) Pakistan (Representing the Eastern Mediterranean Region) Romania (Representing Eastern Europe) South Africa (Representing Eastern & Southern Africa)	The Gates Foundation	McKinsey & Co.	AIDES (Developed Country NGO from France) ; Fundacion Nimehuatzin (developing country NGO from Nicaragua) The Indian HIV/AIDS Alliance (NGO representative of the people with disease)	Tavernier Tschanz (Attorneys-at-Law representing the Board designated non-voting Swiss Member)

[a] Refers to international and regional *public sector* organizations only, including the World Bank.
[b] Broadly defined to include NGOs, umbrella organizations, professional and trade associations, etc. that are independent of the state or governments and without a commercial, for-profit motive.

Table C.9: Management of Global Health Programs

Program Management	TDR	Global Forum	UNAIDS	RBM	Stop TB	GAVI	GFATM
Secretariat	Implements the agenda and activities of the TDR Program. The team consists of about 27 full-time staff and is administratively housed in Geneva outside of the World Health Organization's headquarters.[a]	Responsible for implementing the activities and reaching the objectives of the Global Forum while operating within Forum policies and orientations. The team currently consists of 13 full-time and support staff and is administratively housed in Geneva.	The UNAIDS Secretariat serves the whole program and is responsible for bringing the activities of the program to fruition. The total staffing of the Secretariat, including fixed and short-term employees, currently is more than 250. The Secretariat is primarily headquartered in Geneva, but there are other administrative posts in all regions of the world.[b]	Responsible for implementing the activities of the RBM Partnership. The Secretariat is hosted by the Communicable Disease Cluster of the World Health Organization in Geneva. It serves as the coordinating body of the partnership and is accountable to the RBM Governing Board. The Secretariat oversees four key areas: global advocacy and communication, partner coordination, strategy, planning, and monitoring and evaluation, and resource and financing.[c]	Supports the Stop TB partners in fulfilling the vision and mission of the partnership. To demonstrate the nature of the partnership, the Secretariat is staffed by secondments from partner organizations, and activities of the Secretariat are usually carried out in collaboration with specific partners. The Secretariat is administratively housed in Geneva.[d]	Facilitates coordination between the partners and manages the review of country proposals to the Vaccine Fund. The Secretariat reports to the GAVI Board. Currently, the team is administratively housed within the European Regional Office of UNICEF in Geneva.[e]	Within its responsibility for managing the day-to-day operations of the Foundation, the Secretariat: organizes the receipt and review of grant applications, commissions TRP, prepares materials for the Board, oversees the monitoring and evaluation process, and organizes and prepares for meetings of the Partnership Forum.
Business Planning	Scientific and financial reporting measures are in place to ensure that donors are satisfied with the implementation of the program. The Scientific and Technical Advisory Committee reviews all scientific matters; all program expenditures are reviewed and	The Foundation Council and STRATEC define the objectives, policy guidelines, and budget for the Secretariat, which is responsible for reaching these objectives within Forum policies and orientations	UNAIDS' annual work-plan and budget is reviewed and approved by the Program Coordinating Board.[g]	Roll Back Malaria's annual work-plan and budget is reviewed and approved by the RBM Governing Board[g]	Stop TB's annual work plan and budget is reviewed and approved by the Stop TB Coordinating Board.	The Secretariat collaborates with the Working Group to prepare an annual work plan, subject to the review and approval to the GAVI Board. The members of the Working Group are responsible for implementation of the plan.[h]	The GFATM's annual work plan and budget is reviewed and approved by the Foundation Board.

Program Management	TDR	Global Forum	UNAIDS	RBM	Stop TB	GAVI	GFATM
	approved by the Joint Coordinating Board.[f]						
Budget Allocation Process	At the annual meeting of the Joint Coordinating Board, the 30 JCB members meet with the STAC and Secretariat to review TDR's activities, discuss new issues and challenges, and agree on the program's strategic direction. TDR's funds, grants, and resource allocations are subject to review and approval by the Joint Coordinating Board, which has fiduciary oversight for the program.	Twice a year, the 20 members of the Foundation Council (which includes members of STRATEC) meet to review the Global Forum's priorities, events, and challenges. In addition, they discuss new issues and agree on the direction of the Forum. Financial matters are subject to review and approval by the Foundation Council, which has fiduciary oversight for the Global Forum.	Plans of action and budget are systematically reviewed and approved by the Program Coordinating Board. The PCB also reviews the plans of action for each period. The PCB then makes recommendations to the cosponsoring organizations. The UNAIDS co-sponsoring agencies — through the Committee of Co-sponsoring Agencies — monitor the activities of the program, as do external reviewers.	The RBM Governing Board is responsible for setting goals and objectives for the RBM Partnership. It coordinates the input of all other partner agencies and is accountable to this broader partnership through the biannual RBM Partners Forums. The RBM Governing Board meets to review RBM's activities, discuss new issues and challenges, and agree on the program's strategic direction for the future. Issues relating to funds are subject to review and approval by the RBM Governing Board, which holds fiduciary responsibility for the program.	At the annual meeting of the Coordinating Board, member of the partnership meet to review Stop TB's activities, discuss new challenges and important issues, and agree on the partnerships' future outlook. Investment funds, grants, and financial allocations are the responsibility of the Coordinating Board, which has fiduciary oversight for the partnership. In essence, partnership activities are supervised by a broad consensus-building process through the Partners' Forum and communications by the Secretariat, and then a work-planning process involving all Working Groups and the Coordinating Board.[l]	At the annual meeting of the GAVI Board, the 20 members meet with representatives from the Working Groups, Task Forces, and the Secretariat, to review GAVI's activities and discuss current events. GAVI's investment funds, grants, allocations, and disbursements are reviewed and approved by the GAVI Board, which has fiduciary responsibility for the program. The GAVI Board has agreed that each member of the Alliance will contribute $300,000 annually for the functioning of the Secretariat. The Executive Secretary is accountable for the use of these funds according to the appropriations approved by the GAVI Board. The funds are administered as a trust account within UNICEF and therefore are not considered to be	The Foundation Board is the supreme governing body of the GFATM. The Board shall exercise the powers of setting policies and strategies for the Foundation, setting operational guidelines, work plans, and budgets, including those of the Secretariat and the Technical Review Panel. It makes the funding decisions after the biannual board meetings where all 23 members meet to discuss the program and its priorities.

Program Management	TDR	Global Forum	UNAIDS	RBM	Stop TB	GAVI	GFATM
						income to UNICEF. Funds are disbursed through UNICEF Geneva at the request of the Executive Secretary.[j]	
Reporting	The main reporting mechanisms to the Joint Coordination Board and others are the Annual Report, external evaluations, the program Web site, a newsletter, multiple publications, the Annual TDR Joint Coordinating Board Meeting, and interim Executive Committee meetings. In addition, the Secretariat reports to and interacts with the JCB and STAC constantly about new ideas, ongoing activities, and other developments through e-mail, telephone calls, and meetings.	The main reporting mechanisms to the Foundation Council and other stakeholders are the annual Forum meeting, the annual Operations Report, multiple publications, and the Web site. Additionally, the Secretariat communicates with the Foundation Council and STRATEC effectively through e-mail, telephone calls, and other meetings.	A PCB monitoring and evaluation plan calls for regular reporting to the partners in UNAIDS. The plan calls for processes to assess the outputs, outcomes, and impacts of the program. The reviews and evaluations are shared with partners at various forums and the reviews are disseminated widely through a consultative process. Reporting to the PCB and others is accomplished through the Annual UNAIDS Report, the annual meeting of the PCB, and other mid-year progress reports and publications. In addition, the Secretariat interacts with the PCB constantly about new ideas, ongoing activities, and other developments by phone, e-mail, and through smaller meetings.	The Secretariat reports on overall progress to the RBM Governing Board. Information is also exchanged at the annual global partners meetings as well as through RBM Reports, external evaluations, and other circulated material. In addition, the Secretariat interacts with the Board to discuss new developments through e-mail and by telephone.	Stop TB disseminates information via several outlets: a weekly Stop TB Web alert, a monthly report, and a Web site where documents produced are accessible. Financial reports produced by WHO are also made available, as are work-planning documents and progress reports produced by the Secretariat. Other documents and reports prepared by the Working Groups are also available. Other reporting mechanisms include the Annual Stop TB Partners Meeting as well as the frequent communication between the Secretariat and the Stop TB Coordinating Board.	The main reporting mechanisms of GAVI are its web site, the Annual Report, the Annual Alliance Meeting, and various documents and publications. There is also communication between the Secretariat and the Board via e-mail, phone calls, and small meetings.	The reporting mechanisms of the GFATM include: its web site, the GFATM Annual Report, the biannual board meetings, the Partnership Forum, and a wide variety of electronic materials such as a newsletter.

[a] TDR web site. Secretariat Information Page.
[b] UNAIDS web site. Overview of Structure.
[c] External evaluation of RBM.

[d] Stop TB web site. Governance Structure. Secretariat Section.
[e] GAVI web site. Governance Section. Secretariat.
[f] TDR Web site. Operations procedures.
[g] UNAIDS. PCB Modus Operandi.
[h] GAVI. *Who We Are: Overview of the Operations Function in the GAVI Secretariat*, 30 May 2000.
[i] Stop TB web site. Governance Structure. Procedure Section.
[j] GAVI. *Who We Are: Overview of the Operations Function in the GAVI Secretariat*, 30 May 2000.

Table C.10: Chairs, Program Managers, and World Bank Oversight of Global Health Programs

Program	Location	Governing Body (& Executive Body, if applicable)	Chair of Governing Body	Program Management Unit	Program Manager (and title)	Comments
Special Programme for Research and Training in Tropical Diseases	WHO	Joint Coordinating Board	Dr J. Larivière (Canada) Vice Chair Professor N. K. Ganguly, (India)	Secretariat	Dr. R Ridley (Executive Director)	• Member chair of JCB for 3-year rotating term • Executive Director heads secretariat, appointed by the Director-General of WHO, and reports to JCB • JCB meets annually • Bank's overseer is JCB member
Global Forum for Health Research	Geneva	Foundation Council	Richard Feachem (GFATM)	Secretariat	Stephen Matlin	• Independent, part-time chair of Foundation Council for 3- year term • Executive Director heads secretariat, and reports to Foundation Council • Bank's overseer is Foundation Council member • See TDR comment regarding oversight
UNAIDS (Joint United Nations Programme on HIV/AIDS)	Geneva	Program Coordinating Board	Brain Chituwo (Zambia)	Secretariat	Peter Piot (Executive Director)	• Member chair of PCB for 3-year rotating term • Executive Director heads secretariat, and reports to PCB • Bank's overseer is PCB member • See TDR comment regarding oversight

Program	**Location**	**Governing Body (& Executive Body, if applicable)**	**Chair of Governing Body**	**Program Management Unit**	**Program Manager (and title)**	**Comments**
Roll Back Malaria	WHO	Steering Committee	George Amofah (Ghana)	Secretariat	Fatoumata Nafo-Traoré (Executive Director)	• Member chair of Steering Committee for 2-year rotating term • Executive Director heads secretariat, and reports to WHO for administrative purposes and Steering Committee for operational purposes • Bank's overseer is Steering Committee member • See TDR comment regarding oversight
Stop TB Partnership	WHO	Coordinating Board	Ernest Loevinsohn (CIDA)	Secretariat	Marcos Espinal (Executive Director)	• Member chair of Coordinating Board for 2-year rotating term • Executive Director heads secretariat, and reports to WHO for administrative purposes and Coordinating Board for operational purposes • Bank's overseer is Coordinating Board member • See TDR comment regarding oversight
Global Alliance for Vaccines and Immunization	UNICEF	The Board The Executive Committee[a]	Chair of both: Dr Lee Jong-wook, Director-General (WHO)	Secretariat	Tore Godal (Executive Secretary)	• Member chair of GAVI Board for 2-year rotating term • Executive Secretary heads secretariat, and reports to GAVI Board • Executive Committee established in July 2003 • Bank's overseer is GAVI Board member • See TDR comment regarding oversight

Program	Location	Governing Body (& Executive Body, if applicable)	Chair of Governing Body	Program Management Unit	Program Manager (and title)	Comments
The Global Fund to Fight AIDS, Tuberculosis, and Malaria	Geneva	The Board (a.k.a the Foundation Board)	Dr. Tommy Thompson	Secretariat	Dr. Richard Feachem (Executive Secretary)	• Board members serve a 2 year term • Board meetings are biannual with decisions made by consensus • Executive Secretary heads secretariat, and reports to the board • There also exists a TRP (Technical Review Panel) • The 26-person panel, appointed in June 2003, will serve for 3 years

[a] The Executive Committee of the GAVI Board, established in July 2003, facilitates closer supervision and implementation of GAVI's activities; it streamlines operations by removing most day-to-day management responsibilities, which allows the Board to focus on larger issues and decisions. Membership includes all five renewable members (WHO, UNICEF, the World Bank, the Vaccine Fund and the Gates Foundation) and one rotating member each from developing and industrialized country governments.