



President's Malaria Initiative



MONITORING AND EVALUATION TOOLKIT

HIV, Tuberculosis and Malaria and Health Systems Strengthening

Part 1: The M&E system and Global Fund M&E requirements

Third Edition
February 2009



Investing in our future
The Global Fund
To Fight AIDS, Tuberculosis and Malaria

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Last but not least, many colleagues at the Global Fund ensured that this toolkit best serves its targeted audience. Thank you for all your efforts and contributions.

1. Introduction

1.1 Why this toolkit?

With the global momentum to scale up the response to the three main infectious diseases, HIV, tuberculosis (TB) and malaria, public health practitioners need to provide various levels of accountability for their activities to several constituencies. It is becoming increasingly important for countries to be able to report accurate, timely and comparable data to national authorities and donors in order to secure continued funding for expanding health programs. Most importantly, they need to be able to use this information locally to strengthen evolving programs. It is particularly important for national program implementers and managers to have access to the high-quality information they need to make adjustments and programmatic and technical decisions.

The M&E toolkit has been developed with the support of international technical agencies and M&E experts. The purpose of the toolkit is to provide guidance on developing robust M&E systems, to gather a selection of standard indicators to manage results and to monitor the impact achieved by the programs in HIV, TB and malaria, including health systems strengthening. It also provides users with references to key materials and resources.

The M&E toolkit aims to assist countries in achieving the following:

- *coordinating reporting in accordance with international partners and national systems, thereby encouraging the use of existing, widely agreed and accurate measures;*
- *selecting standard indicators and measuring, reporting and using good-quality health and health-related information in a manner that meets both donor and country needs;*
- *clearly defining the standard services that are delivered by a program and establishing both routine and longer-term measures of progress;*
- *formulating a participatory national M&E strategy by providing an overview of key issues to consider;*
- *evaluating, reviewing and improving M&E systems over time as the interventions to prevent and reduce morbidity and mortality associated with HIV, TB and malaria are scaled up; and*
- *communicating the M&E requirements and processes of the Global Fund in the context of performance-based funding.*

1.2 For whom is it intended?

The primary audiences of the toolkit are national program managers for HIV, TB and malaria, project leaders, M&E officers and coordinators, donor agencies, technical and implementing partners and nongovernmental organizations working on HIV, TB and malaria. The toolkit can also be useful to M&E professionals working in other related sectors including education, women's and social affairs, transport and legal affairs and to those involved in public health research. In the context of Global Fund-supported programs and projects, the targeted audience is the country coordination mechanism members, the local fund agents and the managers and M&E officers of principal recipients.

1.3 What is its content?

The third edition of the M&E toolkit consists of two parts, designed to enable easy access to the resources in this toolkit and according to the needs of the user.

- *Part 1 provides general guidance on M&E systems and the steps needed to strengthen them and information on Global Fund M&E requirements in the context of performance-based funding, including guidance and frequently asked questions.*
- *Part 2 includes four independent sections with lists of recommended indicators and indicator descriptions for HIV, TB, malaria and health systems strengthening.*

1.4 Recent update

The third edition of the M&E toolkit does not introduce a new reporting framework but rather fine-tunes and enhances the second edition of the toolkit.

The toolkit uses the same measurement framework as developed in the first two editions (published in June 2004 and January 2006). This update represents developments in M&E that are intended to improve measurement and M&E systems in general.

The updates in this new M&E toolkit include:

- *emphasis and more guidance on harmonized M&E systems at the country level, including those outside the public structure;*
- *improved methods and guidance on harmonizing data collection efforts (such as through mapping survey schedules), monitoring community-based services, target-setting and measuring the quality of services;*
- *a focus on mainstreaming gender in the disease-specific programs and the need to disaggregate relevant indicators by sex and age to measure progress;*
- *guidance on going beyond M&E assessments and an increased focus on monitoring the implementation of an M&E plan (M&E of M&E), including developing a data quality framework; and*
- *an updated set of indicators according to evolving strategies and recommendations for M&E of the implementation of HIV, TB and malaria programs and for health systems strengthening, including a revision of the top ten programmatic and impact and outcome indicators for reporting to the Global Fund.*

Most of the indicators included in this toolkit have been globally agreed. They form part of the core indicators used in following up the United Nations General Assembly Special Session on HIV/AIDS (UNGASS), including additional recommended national indicators for HIV; used by the Stop TB Partnership; used by the Roll Back Malaria Monitoring and Evaluation Reference Group; and used by the Health Metrics Network. In addition, a few indicators capture data in areas in which countries require substantial funds from the Global Fund, such as behavior change communication, care and support and other services delivered at the community level. Such indicators should be viewed as interim indicators and will be revised and replaced by globally agreed indicators when available.

PART 1

The M&E system
and Global Fund
M&E requirements

2. Basic elements of the M&E system

A functional M&E system is one of the cornerstones of a country's response to fighting a disease. It provides the strategic information needed to make good decisions for managing and improving program performance, formulating policy and advocacy messages and planning programs better. It also generates data to satisfy accountability requirements. Many countries are well underway with developing and implementing national M&E systems. Systematic M&E assessments, a recent phenomenon, have helped to determine the strengths and weaknesses of country systems and to develop M&E plans and budgets for strengthening a country's M&E system in a coordinated way among all stakeholders.

This section provides guidance on building and strengthening a unified and coherent national M&E system. It briefly describes the components of a functional M&E system and the measurement framework as it links to methods of data collection.

2.1 One national M&E system

Coordination of the overall M&E system across country and donor requirements is an important first step in building a common M&E system that can meet a variety of needs. The principles of alignment and harmonization, embedded in the “three ones” principles and the Paris Declaration on Aid Effectiveness (Box 1), compel partners to contribute to developing and using countries' M&E systems. Although the “three ones” principles were developed for HIV, the principles have general relevance for M&E.

Box 1. Implementing global development commitments to harmonization and alignment

The “three ones”: management principles for HIV responses at the country level (2004)

On 25 April 2004, the representatives of major development partners and of many low- and middle-income countries adopted three principles as the overarching framework to better coordinate the scale-up of national HIV programs and related responses to the HIV epidemic. The “three ones” are:

- *one agreed HIV/AIDS action framework that provides the basis for coordinating the work of all partners;*
- *one national AIDS coordinating authority, with a broad-based multisectoral mandate; and*
- *one agreed country-level monitoring and evaluation system.*

The Paris Declaration on Aid Effectiveness (2005)

More than 100 countries signed the Paris Declaration on Aid Effectiveness in 2005. It promotes mutual accountability; both donor and recipient countries are committed to sharing the responsibility that aid to countries is used effectively. The Declaration promotes five principles: country ownership, alignment with national systems and processes, harmonization with partners, managing for results and mutual accountability. Applied to M&E, this means following the national M&E priorities and aligning with the national health information system.

Third High Level Forum on Aid Effectiveness (2008)

The Third High Level Forum on Aid Effectiveness in 2008 again emphasized using country M&E systems. The Accra Agenda for Action stated: “Developing countries and donors will jointly assess the quality of country systems in a country-led process using mutually agreed diagnostic tools. Where country systems require further strengthening, developing countries will lead in defining reform programs and priorities. Donors will support these reforms and provide capacity development assistance.”

The importance of creating, implementing and strengthening a unified M&E system at the country level cannot be overemphasized. A strong unified M&E system may help to ensure that:

- *relevant, timely and accurate data are made available to national program leaders and managers at each level of program and the health care system;*
- *selected high-quality data can be reported to national leaders; and*
- *the national program can meet donor and international reporting requirements under a unified global effort.*

A unified M&E system has several advantages. It contributes to more-efficient use of data and resources when it ensures, for example, that indicators and sampling methods are comparable over time and by reducing duplication of effort. As data collection resources are limited, this is an important asset, as countries may pool funds into a shared data collection agenda.

From the viewpoint of the national program, a unified M&E system helps ensure that donor-funded M&E efforts best contribute to national needs. These needs go beyond M&E focused on one disease to strengthening the overall health information system focused on several diseases and health issues. A further advantage is that a unified M&E system supports and facilitates coordination and communication between groups involved in the national response to HIV, TB and malaria. These may include ministries working on social welfare or child welfare and the ministries responsible for statistics and planning. Reporting from civil society and the private sector should also be an integral part of the national M&E system. Agreement among the major donor, technical and implementing agencies on the core M&E framework will reduce the burden of requests for data from different agencies. Shared planning and execution of data collection and analysis and dissemination of data can reduce overlap in ME activities and improve cooperation between groups, which may result in more efficient use of resources.

A unified M&E system is also a means to bring all stakeholders together in setting common targets and to follow up on the impact achieved by the collaborative effort in the fight against the three diseases.

2.2 General concepts in M&E

2.2.1 What is the difference between monitoring and evaluation?

Monitoring is the routine tracking and reporting of high-priority information about a program or project, its inputs and intended outputs, outcomes and impact. Data are obtained through record-keeping, regular reporting and surveillance systems as well as observation and surveys. Monitoring helps program or project managers to determine which areas require greater effort and whether they achieve the intended outcomes and impact. In a well-designed M&E system, the data that are routinely collected through monitoring activities contribute greatly towards evaluation. Indicators selected for monitoring differ depending on the reporting level within the health system. More information is needed for project management than is needed at the national or international level. Thus, the number of indicators for which data are collected should decrease substantially from the subnational to the national and international levels. Some indicators are, however, useful at all levels of the system. It is very important to select a limited number of indicators that program implementers and managers will actually use for effective decision-making. In addition, monitoring is used for measuring trends over time, and the methods used thus need to be consistent and rigorous to ensure appropriate comparison.

In contrast, evaluation is the rigorous, scientifically based collection of information about a program or intervention activities, characteristics and outcomes that determines the merit or worth of the program or intervention. Evaluation studies provide credible information for use in improving programs or interventions, identifying lessons learned and informing decisions about future resource allocation. Cost-effectiveness and cost-benefit evaluation is useful in determining the added value of a particular program or project. Assessing the impact of a program requires extensive investment in M&E efforts, and it is often difficult to ascertain the extent to which individual programs or individual program components contribute to overall reduction in cases and increased survival. Establishing a cause-effect relationship for a given intervention may require studies with experimental or quasi-experimental designs to demonstrate the impact. Monitoring of output or outcome indicators can also identify such relationships and give a general indication of program progress according to agreed goals and targets.

The objectives and the methods used in monitoring and evaluation differ. In general, evaluation is more difficult in view of the methodological rigor needed: without such rigor, wrong conclusions can be drawn on the value of a program or project. It is also more costly, especially outcome evaluation and impact evaluation, which often require population-based surveys or rigorous evaluation designs such as those including comparison groups or regions. Evaluation should leverage data and surveys that are nationally available and regularly undertaken, such as population-based surveys, vital registration or sentinel site disease data.

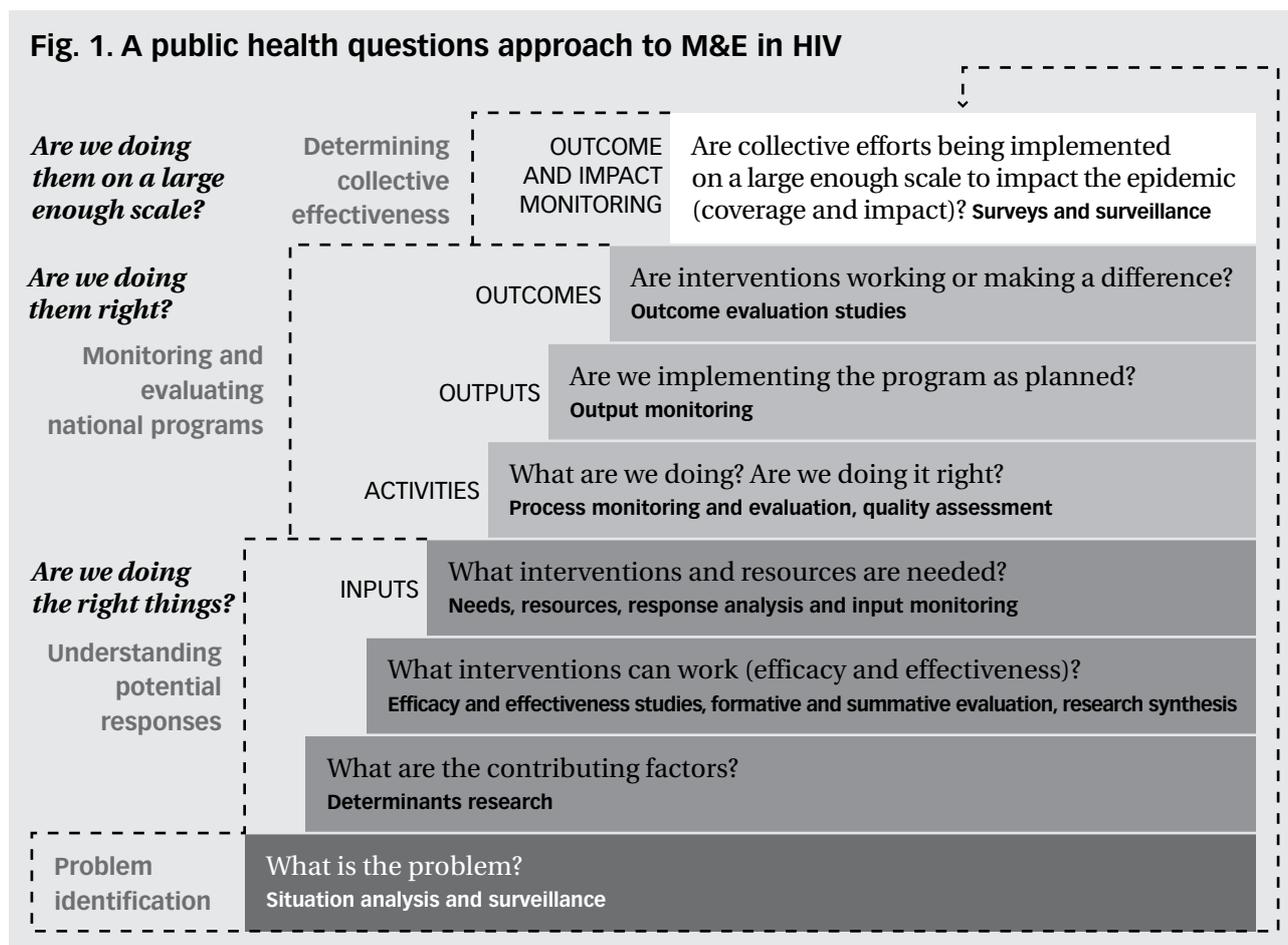
2.2.2 The M&E framework

Varying frameworks are applied to M&E. During the past few years, one largely agreed framework has commonly been used: the input-activity-output-outcome-impact framework. This reflects indicators used at different levels to measure what goes into a program or project and what results are achieved. For a program or project to achieve its goals, inputs such as money and staff time must result in outputs such as new or improved services, trained staff, people reached with services, etc. These outputs are the result of specific activities, such as training for staff. If these outputs are meaningful and are achieved in the populations intended, the program or project is likely to have positive effects or outcomes in the medium or longer term, such as increased condom use with casual partners, increased use of insecticide-treated nets, adherence to TB drugs or later age at first sex among young people. These positive outcomes should lead to changes in the long-term impact of programs, measured in fewer new cases of HIV, TB or malaria and related burden of disease among those infected and affected (such as orphans and vulnerable children or widows). For HIV, a desired impact among those infected includes quality of life and life expectancy. Additional information on M&E frameworks is available at the following sites:

- *UNDP*: http://www.undp.org/gef/undp-gef_monitoring_evaluation;
- *MEASURE Evaluation*: <http://www.cpc.unc.edu/measure>;
- *United States Government*: <http://www.globalHIVEvaluation.org>; and
- *UNAIDS*: <http://www.unaids.org/en/default.asp>.

Fig. 1 on page 14 outlines the main questions that must be addressed when planning a comprehensive national M&E system and lists the main evaluation questions and the related data collection methods that can be used to answer these questions.

Fig. 1. A public health questions approach to M&E in HIV



Source: Organizing framework for a functional national HIV monitoring and evaluation system. Geneva, UNAIDS, 2008 (<http://siteresources.worldbank.org/INT/HIVAIDS/Resources/375798-1132695455908/GROrganizingFrameworkforHIVMESystem.pdf>, accessed 15 September 2008).

2.3 Components of a functional M&E system

The global commitments on harmonization and alignment of M&E systems can only have the desired effect if they are operationalized at the country level. Much still needs to be done in countries to develop and strengthen existing M&E systems and to manage collaboratively between in-country and international partners to obtain results.

Countries have different M&E needs, determined in part by the state of their disease burdens, the characteristics of various epidemics, the national health system and the resources available (or that could be made available) for M&E. Some countries have set up a fully integrated national M&E system to serve all communicable disease control programs as well as for reproductive health, child and adolescent health and other health-related programs. Other

countries have created disease-specific M&E systems. Whether an integrated or disease-specific approach is used, common data collection methods, uniform analysis and joint annual reviews (evaluations) are needed to use resources more efficiently. To support efforts to build better national M&E systems for HIV, countries and global partners have developed and endorsed an organizing framework for a functional national HIV M&E system.¹ This framework describes the 12 components of a functional, national, multisectoral HIV M&E system and provides a benchmark against which to assess progress. Although the framework has been developed for HIV M&E systems, its components can be adapted for the M&E systems for other diseases. Table 1 on page 15 presents the components and their respective performance goals.

¹ Organizing framework for a functional national HIV monitoring and evaluation system. Geneva, UNAIDS, 2008 (<http://siteresources.worldbank.org/INT/HIVAIDS/Resources/375798-1132695455908/GROrganizingFrameworkforHIVMESystem.pdf>, accessed 15 September 2008).

Table 1. Twelve components of a functional M&E system

Component	Performance goal for this component
1 Organizational structures with M&E functions	Establish and maintain a network of organizations responsible for M&E at the national, subnational and service delivery levels
2 Human capacity for M&E	Ensure adequate skilled human resources at all levels of the M&E system to ensure completion of all tasks defined in the annual M&E workplan. This includes sufficient analytical capacity to use the data and produce relevant reports
3 Partnerships to plan, coordinate and manage the M&E system	Establish and maintain partnerships among in-country and international stakeholders involved in planning and managing the national M&E system
4 National, multisectoral M&E plan	Develop and regularly update the national M&E plan, including identified data needs, national standardized indicators, data collection procedures and tools and roles and responsibilities for implementation
5 Annual, costed, national M&E workplan	Develop an annual, costed, national M&E workplan including specified and costed M&E activities of all relevant stakeholders and identified sources of funding and use this plan for coordination and for assessing the progress of M&E implementation throughout the year
6 Advocacy, communication and culture for M&E	Ensure knowledge of and commitment to M&E and the M&E system among policy-makers, program managers, program staff and other stakeholders
7 Routine program monitoring	Produce timely and high-quality (valid, reliable, comprehensive and timely) routine program monitoring data
8 Surveys and surveillance	Produce timely, valid and reliable data from surveys and surveillance
9 National and subnational databases	Develop and maintain national and subnational databases that enable stakeholders to access relevant data for formulating policy and for managing and improving programs
10 Supportive supervision and data auditing	Monitor data quality periodically and address obstacles to producing high-quality (that is, valid, reliable, comprehensive and timely) data
11 Evaluation and research	Identify evaluation and research questions, coordinate studies to meet the identified needs and enhance the use of evaluation and research findings
12 Data dissemination and use	Disseminate and use data from the M&E system to guide the formulation of policy and the planning and improvement of programs

Source: adapted from Organizing framework for a functional national HIV monitoring and evaluation system. Geneva, UNAIDS, 2008 (<http://siteresources.worldbank.org/INT/HIVAIDS/Resources/375798-1132695455908/GROrganizingFrameworkforHIVMESystem.pdf>, accessed 15 September 2008).

2.4 The M&E plan

The national M&E plan of a country describes the organization of its M&E system and the related M&E activities and thus forms the basis for implementing a functional M&E system. Importantly, the M&E plan includes identified data needs and standardized national indicators to monitor the achievement of program objectives and goals. It includes indicator baselines and targets to be achieved, methods of data collection, data sources, frequency of data collection and the partners responsible for data collection and management. The national M&E plan covers all components of the M&E system, including evaluation needs and how they will be addressed: data analysis and data use at different levels of the system.

The national M&E plan should be linked to the national disease control strategy and usually covers M&E activities over 3–5 years. It should be developed and regularly updated in consultation with various stakeholders involved in the program, including subnational authorities and representatives from civil society. It should define how each of the 12 components of a functional M&E system will be implemented – and strengthened if necessary, ideally based on a national M&E assessment. The plan should also indicate the resources needed for implementing the M&E plan, both technical and financial, and outline a strategy for mobilizing resources.

The different sectors, development partners and subnational entities involved in program implementation may develop their own M&E plans that detail their data collection and reporting schedule. All these plans should be linked to the national multisectoral M&E plan and contribute to one national M&E system.

Standard indicators for which data collection and analysis have been field-tested and validated are recommended so that risks linked to their measurement are minimized and utility maximized. The consistent use of standard indicators based on agreed global standards provides national programs with valuable comparable measures for trend analysis. It also allows comparability across countries, regions and populations.² In some cases, however, standard indicators specific to some service delivery areas may not be available. In such cases, countries may use national or regional indicators or additional indicators proposed in this toolkit that were developed through various consultative processes. When data from different sources are combined for analysis, this triangulation of data allows national, regional or local evaluation of program efforts.

To implement a national M&E system based on a national M&E plan, a national, costed M&E workplan should be developed to direct investment in high-priority M&E activities. The period covered by the M&E workplan depends on the country context and could range from one year to several years. The M&E workplan should be based on the national M&E plan and should describe the key M&E activities during the time frame covered by the plan and include the following elements:

- *performance goals for the M&E system and results to be achieved;*
- *M&E activities with a time frame for implementation (start date and end date);*
- *defined responsibilities for implementing each activity; and*
- *cost for each activity and identified funding sources (including secured funding sources but also funding gaps and how these will be addressed).*

The M&E workplan should cover M&E activities and the agreed roles and responsibilities of all relevant stakeholders. It may address the health sector and other relevant multisectoral activities or may be disease-specific. It is good practice to integrate the M&E workplan in the overall M&E workplan and budget of the health sector to ensure appropriate linking of various data collection, management and analysis efforts as part of one national M&E system.

² Efforts are underway under the guidance of the UNAIDS Monitoring and Evaluation Reference Group to better define indicator standards; they will be published at the UNAIDS website when they are finalized.

2.5 Target setting

Target setting is not simply a matter of expanding the scope and scale of current prevention, treatment and care services. Good programmatic targets need to be linked to a comprehensive and up-to date analysis of the situation and needs and a strategic plan for controlling and managing the burden of disease. Setting ambitious yet realistic targets for indicators is an important element of the planning process. Tracking and reporting progress against these targets over time help programs to manage resources and improve the management of programs for results and achieving impact.³ Performance-based funding works on the principle of disbursing funds according to the results achieved in relation to time-bound mutually agreed targets. Targets must be based on well-defined needs considering the coverage of ongoing interventions. In the absence of disease-specific epidemiological and program coverage data, steps must be taken to establish the baselines as early as possible. In addition, target setting needs to consider the current and anticipated constraints to scaling up programs. Typical constraints include skilled human resources, infrastructure, facilities, equipment and systems to support the provision of services. These must be planned for and can be addressed through activities for health systems strengthening.

Defining programmatic needs, current coverage and impediments to scaling up require planning, sufficient time and resources. Starting the assessment process early and ensuring that sufficient resources are available to collect the required information are therefore essential.

Several publications provide guidance on setting targets for HIV.⁴ The principles and methods contained in these HIV-specific guidelines are applicable to other diseases as well. Box 2 on page 18 outlines the main steps in the process of setting ambitious yet realistic targets.

- 3 "Managing for results" is one of the five partnership commitments in the Paris Declaration on Aid Effectiveness. The Paris Declaration, endorsed on 2 March 2005, is an international agreement to which more than 100 ministers, heads of agencies and other senior officials adhered and committed their countries and organizations to continue to increase efforts in harmonization, alignment and managing aid for results with a set of actions and indicators that can be monitored.
- 4 WHO, UNODC and UNAIDS. WHO/UNODC/UNAIDS technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users (IDUs). Geneva, World Health Organization, 2006 (http://www.who.int/hiv/idu/target_setting/en/index.html, accessed 15 September 2008).
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- Setting national targets for moving towards universal access by 2010: operational guidance. Geneva, UNAIDS, 2006 (http://data.unaids.org/pub/Guidelines/2006/20061006_report_universal_access_targets_guidelines_en.pdf, accessed 15 September 2008).
- Scaling up towards universal access: considerations for countries to set their own national targets for HIV prevention, treatment, and care. Geneva, UNAIDS, 2006 (http://data.unaids.org/pub/Report/2006/Considerations_for_target_setting_April2006.pdf, accessed 15 September 2008).
- A framework for monitoring and evaluating HIV prevention programs for most-at-risk populations. Geneva, UNAIDS, 2007 (<http://www.unaids.org/en/PolicyAndPractice/Prevention/HIVprevKeyPopulations>, accessed 15 September 2008).
- Estimating prevalence: indirect methods for estimating the size of the drug problem. Vienna, United Nations Office on Drugs and Crime, 2003 (<http://www.unodc.org/documents/GAP/GAP%20Toolkit%20Module%20Final%20ENGLISH%202002-60052.pdf>, accessed 15 September 2008).
- Guidelines for sampling orphans and other vulnerable children: to estimate the size and characteristics of OVC populations. New York, Better Care Network, United Nations Children's Fund, 2003 (<http://www.crin.org/BCN/details.asp?id=9031&themeID=1001&topicID=1008>, accessed 15 September 2008).
- UNAIDS/WHO Working Group on HIV/AIDS/STI Surveillance. Estimating the size of populations at risk for HIV: issues and methods. Geneva, UNAIDS, 2003 (<http://www.who.int/hiv/pub/surveillance/pub336e/en/index.html>, accessed 15 September 2008).

Box 2. Main steps for setting targets

1. Define populations and subpopulations of people at risk for infection and those already infected and in need of diagnosis, treatment, care and support services.

- *Identify the nature of the epidemic such as low-level, concentrated, holoendemic etc.*
- *Identify the main transmission risks due to environmental factors, such as geography, economy and trade, urban versus rural setting, culture, religion and politics.*
- *Define, identify and enumerate the population subgroups that are vulnerable to and already affected by the condition or infection according to general and locally relevant factors such as physical characteristics, marital status, sex, age, social status, employment, behavior, lifestyle, religion etc.*
- *Map the characteristics, size and location of vulnerable and the subpopulations most at risk to identify the people needing disease prevention and health promotion interventions.*
- *Map the characteristics, size and location of subpopulations already infected and affected and therefore needing diagnosis, care and treatment and support.*
- *Define the most relevant and appropriate proved effective interventions and services that need to be implemented for these subpopulations.*

2. Define the number of people requiring prevention, treatment and care interventions and services for each defined subpopulation (the gap).

- *Assess the current coverage (the number of people vulnerable and already affected) as well as the recent trend in scaling up for each defined intervention and service.*
- *Assess the quality and relevance of the services currently delivered and determine whether these services are appropriate for scaling up and whether adjustments are needed.*
- *Identify other subpopulations that need to be targeted with specific interventions and services.*
- *Identify the gap to be filled to attain Millennium Development Goals, national strategic plan objectives etc.*
- *Project the potential for scaling up the delivery of interventions and services for each year for which targets are to be set, taking into account the following limitations and the parallel efforts to reduce their impact on program performance and scale-up:*
 - *barriers such as culture and beliefs, stigma and marginalization;*
 - *constraints such as limitations in human resource capacity and productivity, procurement and supply management, laboratory capacity and quality, equipment and transport facilities; and*
 - *environmental obstacles such as geography and terrain, political, physical infrastructure and climate.*
- *Set specific and ambitious annual targets for interventions and services based on the gap analysis and an understanding of the feasibility for scaling up. Activities aimed at reducing the impact of the identified barriers, constraints and obstacles as elaborated below should also have targets.*

3. Identify activities and establish targets to reduce the impact of identified barriers, constraints and obstacles.

- *Determine the resources currently available (human, material, financial resources etc.).*
- *Identify what and how many additional resources will be needed to address the barriers, constraints and obstacles so that the programmatic gap can be filled for the intervention and service targets identified in step 2.*
- *Set priorities for interventions and services according to their importance in achieving national strategy objectives, Millennium Development Goals and achieving impact on the epidemic while taking into account the resources available.*

Source: adapted from Setting national targets for moving towards universal access by 2010: operational guidance. Geneva, UNAIDS, 2006 (http://data.unaids.org/pub/Guidelines/2006/20061006_report_universal_access_targets_guidelines_en.pdf, accessed 15 September 2008).

2.6 Methods of data collection

Generally, the data for measuring the indicators come from routine data sources. The frequency of data collection depends on the data needs at the national, subnational and service delivery levels, taking into account both a reasonable time frame for an expected change and capacity for M&E. It is particularly important to include routine data collection and reporting of program-related data for management purposes (quarterly, semiannually or annually) and to plan at an early stage for population-based data collection efforts addressing the medium-term outcomes (every one to five years).

Table 2 provides suggested data collection schedules and related measurement methods for the different levels of indicators in the input–activity–output–outcome–impact result chain. Table 3 on page 20 briefly describes the most frequently used data collection methods and tools (routine and non-routine monitoring).

Table 2. Suggested reporting schedules and data collection methods for different types of indicators

Type of indicator	Recommended frequency of reporting	Examples of data collection methods
Input or activity	Regularly, such as monthly, quarterly, semiannually or annually	<ul style="list-style-type: none"> • Routine methods <ul style="list-style-type: none"> - Health services statistics - Administrative records • Surveys <ul style="list-style-type: none"> - Health facility surveys • Health facility census
Output	Regularly, such as monthly, quarterly, semiannually or annually	<ul style="list-style-type: none"> • Routine methods <ul style="list-style-type: none"> - Health services statistics - Training records • Surveys <ul style="list-style-type: none"> - Health facility surveys - Behavioral surveillance surveys • Health facility census • Qualitative methods
Outcome Impact	1–5 years ^a	<ul style="list-style-type: none"> • Routine methods <ul style="list-style-type: none"> - Health services statistics - Civil registration (birth and death registration) - Surveillance • Surveys <ul style="list-style-type: none"> - Population-based surveys (such as DHS and MICS) - Health facility surveys - Behavioral surveillance surveys • Qualitative methods

^a The reporting frequency depends on the data collection methods: routine data collection – quarterly to yearly reporting schedule; surveys – reporting schedule every 2–3 years; and population-based surveys – reporting every 3–5 years.

Table 3. Description of measurement tools

Measurement tools	Main characteristics	Examples of measurement methods used
Health service statistics	<p>Routine data reported through two main sources:</p> <ul style="list-style-type: none"> • Routine data collected from established government structures but also encompassing data from the health facilities run by private sector and civil society • Program implementation records – source documents maintained at a service delivery point. This category mainly applies to nongovernmental organizations and civil society organizations offering services outside the health facility, but similar records may be found at established government structures and the private sector 	<p>Data registered in health facilities including through client registers, client cards, client prescriptions, stock cards or registers, dispensing logs and tally sheets</p> <p>Data registered outside health facilities, including client registers and client cards</p>
Administrative records	Source documents that relate to the administrative running of service delivery points. This category mainly applies to civil society organizations, but similar records can be found at established government structures and the private sector	Stock cards, inventory sheets, pre- and post-tests related to training, pharmacy records
Health facility census	An official count or enumeration of all health facilities. It collects information on the physical features of health facility, personnel, and service provision at the facility. Health facility censuses are carried out infrequently as they are extremely expensive	<p>Direct observation</p> <p>Questionnaire using close-ended questions</p>
Health facility survey	Survey targeting a representative sample of health facilities to gather information on the availability of human resources, equipment, commodities and drugs and the type of services delivered	<p>Questionnaire using close-ended questions</p> <p>Direct observation</p> <p>Examples of health facility surveys include:</p> <ul style="list-style-type: none"> – Site-based facility surveys, such as HIV/AIDS Service Provision Assessment – SAMS (Service Availability Mapping Surveys)
Civil registration	Administrative records of vital events such as births, deaths, fetal deaths, marriages and divorces that occur among a population. Most countries have legal provisions within their constitutions to ensure that vital events are recorded	<p>Household surveys with verbal autopsy modules used to estimate proportional causes of death</p> <p>Birth certification</p>
Sentinel site surveillance	Collect prevalence information from populations that are more or less representative of the general population (such as pregnant women) or populations considered to be at high risk of infection and transmission	HIV serosurveillance in pregnant women or in identified groups at high risk. It can be linked or unlinked anonymous testing, with or without informed consent

Table 3. Description of measurement tools (continued)

Measurement tools	Main characteristics	Examples of measurement methods used
Qualitative methods	Determine “what exists” and “why it exists” rather than “how much of it there is”. Through allowing the people to voice their opinions, views and experiences in the way they want, qualitative methods aim at understanding reality as it is defined by the group to be studied without imposing a preformulated questionnaire or structure (always developed by the researchers) on the population	In-depth interview (individuals, focus groups, key informants) Direct observation Interactive or projective technique (comments on posters, open-ended story or comment on story, role-play)
Operations research	Systematic research techniques for program decision-making to achieve a specific outcome. Operations research provides policy-makers and managers with evidence that they can use to improve program operations. It is distinguished from other kinds of research by the following characteristics: <ul style="list-style-type: none"> • <i>It addresses specific problems within specific programs, not general health issues.</i> • <i>It addresses those problems that are under control of managers, such as program systems, training, pricing and provision of information.</i> 	Questionnaire using close-ended questions In-depth Interview (individuals, focus groups and key informants) Direct observation Data registered inside and outside health facilities Examples of operations research include: <ul style="list-style-type: none"> • <i>Coverage, quality of services including diagnostic and dispensing services, referral systems and information, education and communication programs</i> • <i>Managerial issues including record-keeping, information dissemination and ethical issues</i> • <i>Community and societal issues including stigma, affordability and participation barriers</i>
Population-based surveys	A survey based on sampling of the target or general population, generally aiming to represent the characteristics, behavior and practices of that population. It requires sufficient sample size to represent the larger population and to be analyzed in subgroups by age, sex, region and target population group	Questionnaire using close-ended questions Testing where applicable Examples of population-based surveys include the following: Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS) and DHS+, AIDS Indicator Surveys (AIS), behavioral surveillance surveys (BSS), Priorities for Local AIDS Control Efforts (PLACE), ⁵ Sample Vital Registration with Verbal Autopsy (SAVVY) ⁶
Population estimates	Population estimates are produced annually using methods that account for changes in the number of births and deaths, as well as changes in the epidemiology of diseases. Such estimates often serve as the denominators of indicators	National bureau of statistics reports WHO disease estimates by country

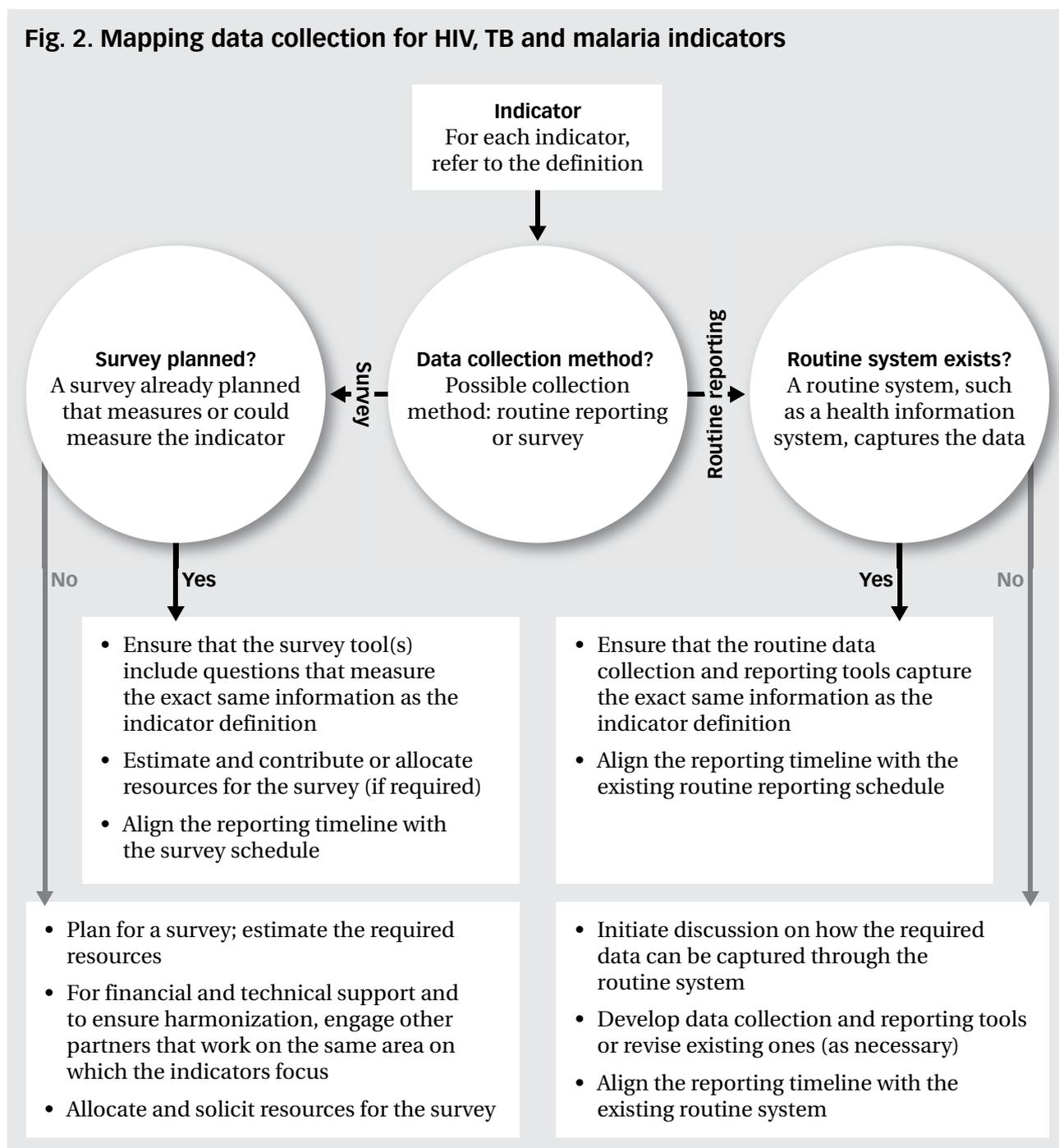
5 Weir S et al. PLACE. Priorities for Local AIDS Efforts: a manual for implementing the PLACE method. Chapel Hill, NC, MEASURE Evaluation, 2005.

6 Sample Vital Registration with Verbal Autopsy [website]. Chapel Hill, NC, MEASURE Evaluation, 2008 (<http://www.cpc.unc.edu/measure/tools/monitoring-evaluation-systems/savvy>, accessed 15 September 2008).

The disease-specific sections in Part 2 of this toolkit provide data collection methods for selected indicators. In order to harmonize reporting with ongoing data collection efforts, it is important to consider all available data collection methods in the country. Fig. 2 provides guidance on how to map data sources so that data collection is based on already existing processes in the country. Section 2.6.1 describes routine data in more detail, whereas section 2.6.2 focuses on surveys.

The data collection schedules should then be summarized in a table and included in the M&E plan and/or workplan.

Fig. 2. Mapping data collection for HIV, TB and malaria indicators



2.6.1 Routine reporting

Routine systems for tracking the demand for and supply of services need to be in place at the national, subnational and service delivery levels. Standardized data from all providers, including those based at health facilities and those not based at health facilities (community based), should be collected on a routine basis and regularly reported. Data that need to be captured through routine reporting include inputs (resources, such as staff, funds, materials, facilities and supplies), activities (interventions and services, such as training and treatment) and outputs (immediate results, such as number of staff trained and number of clients treated).

The routine data reports in many countries are not comprehensive, as they largely lack data on services provided by the civil society and the private sector. Table 4 describes some of the challenges for routine data reporting at the health facility level and outside health facilities.

2.6.2 Monitoring facility-based services

The health information system in a country should routinely track program data (inputs, activities and outputs) from all health facilities that are run by both the public and private sector and the civil society. Strengthening may be needed to ensure valid and reliable data for all types of indicators. These include input data (information on health workforce, budget and stock management), output data and impact

data (such as a patient monitoring system or sentinel surveillance information). Although significant progress has been made in setting up functional systems to track, analyze and report on service delivery through public health facilities, further and increased efforts are required for monitoring services provided in facilities run by the private sector and the civil society.

To facilitate regular and complete reporting, the health information system should have the following characteristics.

- *The data collection forms should be simple and user-friendly to avoid overburdening health workers, who often work across the different diseases and health programs.*
- *Information collection efforts across different health programs should be harmonized.*
- *Only information that is used for program management and decision-making should be collected.*
- *Data collection methods and tools should be harmonized between the public sector, private sector and civil society.*
- *The reporting system at the regional and national levels should be able to aggregate data from the various more localized sources (public sector, private sector and civil society).*

Table 4. Mapping routine service provision at different levels

Who provides the service	Where the service is provided	
	In health facilities (such as clinical HIV services)	Outside health facilities (workplaces, schools, community halls, taxi ranks, homes, etc.)
Public sector	Reporting already included in countries' health information systems	Gap in reporting that needs to be addressed
Private sector	Reporting already included in countries' health information systems but still requires strengthening for full functionality	Major gap in reporting that needs to be addressed
Civil society		

Source: prepared at an international workshop on monitoring services and systems at the community level, August 2008, Pretoria, South Africa.

2.6.3 Monitoring community-based services (outside facilities)

Community-based services in this toolkit refer to services provided outside health facilities, such as support to orphans and vulnerable children, managing fever in homes and directly observed treatment of TB. They include services provided both by government and nongovernmental service providers.

Depending on country-specific scenarios, several steps need to be taken to strengthen the monitoring of services at the community level; Box 3 summarizes these steps.

Box 3. Strengthening the M&E of services provided at the community level

- *Map services and related M&E activities (public sector, private sector or civil society) at the community level.*
- *Identify gaps in M&E activities using an M&E assessment. This should ideally be part of the national assessment of the M&E system.*
- *Include measures for strengthening M&E activities at the community level in the national M&E workplan.*
- *Define partnership and the roles and responsibilities for M&E at the community level.*
- *Build the capacity of the public sector, private sector and civil society for the M&E of services at the community level.*
- *Establish mechanisms to ensure that the data produced from M&E of services provided at the community level is fed into the national M&E system.*

Significant increases in country proposals for Global Fund support focusing on providing HIV, TB and malaria services at the community level are making use of standard indicators for similar interventions across countries more and more important. To facilitate this, the Global Fund, the UNAIDS Regional Support Team for Eastern and Southern Africa and the World Bank (Global HIV/AIDS Monitoring and Evaluation Team) hosted a three-day international workshop on monitoring services and systems at the community level with more than 40 implementing partners from 22 countries in Pretoria, South Africa, in August 2008. The purpose of the workshop was to review and refine community-level indicators that countries have been using to monitor and evaluate interventions for the three diseases, including data collection outside facilities (at the community level). The indicators recommended from this consultative process have been integrated in the relevant disease-specific and health system strengthening sections of this toolkit. Indicators and methods included in this toolkit are based on indicators already in use by countries.

2.6.4 Surveillance system

The basis for a surveillance system is “data collection for action”. As such, the system should be useful, simple, flexible, integrated and action oriented. Surveillance focuses mostly on the main causes of morbidity, mortality and disability. Table 5 shows the main sources of data for surveillance.

Table 5. Sources of surveillance data

Sources	Diseases	Periodicity of reporting
Routine reports	All diseases	Monthly
Epidemic reports	Cholera, meningitis, yellow fever, malaria, viral hemorrhagic fever, measles	Immediately, then weekly
Case-based reports	Malaria (in areas targeted for elimination)	As it occurs, immediately
Sentinel-site reports	HIV seroprevalence HIV seroprevalence among TB patients Malaria (drug resistance)	Monthly, quarterly or annually

2.6.5 Civil registration

Civil registration systems collect routine information about the number of births and deaths and, in some countries, link deaths to an established cause continuously over time. Vital statistics are essential to inform policy, planning and research and to guide interventions and evaluate the impact of the programs. Data for several impact indicators can be collected through civil registration systems, including the numbers and rates of deaths attributed to malaria, TB or HIV (with disaggregation by age and sex).

As indicated by WHO,⁷ a limited number of countries have a civil registration system with cause-of-death statistics. Most often, deaths are not consistently registered in health facilities and those that occur at home are not captured by the registration system. Moreover, when deaths are registered, the cause of death is often missing, incorrect or without medical certification. Quality assurance should therefore be an integral component of civil registration systems.

Although efforts should be made in countries to establish or improve national civil registration, some interim solutions can be used to generate relevant data with identification of probable cause of death.⁸ These include the following.

- *The census can include a question on the cause of deaths in the household, although censuses are typically conducted only every ten years, limiting their use for program planning.*
- *Household surveys with verbal autopsy modules⁹ can be used to estimate the proportional cause-of-death distributions in representative population samples, especially for adult deaths. This option is less expensive and can be implemented more rapidly than a census; it may therefore be a choice for countries with limited resources that require information quickly. It also provides a tool of choice if a country needs data from one point in time rather than for monitoring changes over time. Verbal autopsy is, however, often associated with various levels of bias.*
- *Demographic surveillance sites allow continuous monitoring of deaths and their causes (through verbal autopsy) in small-scale areas. This is the least expensive approach to generating continuous data on cause-specific mortality for a given locality and should be considered as an alternative to surveys if the interest is in monitoring trends over time rather than of getting a snapshot picture of the situation. However, the results may not be able to be generalized for a country as a whole because the selected locality may not be large enough or statistically representative of the situation in the whole country.*
- *A sample civil registration system¹⁰ relies on nationally representative samples to provide continuous civil registration data for a part of the population (currently operational in India and China). Cause of death is based on verbal autopsy. This is an alternative to a demographic surveillance site and should be considered if the interest is to get representative mortality data for a country. It is more expensive than demographic surveillance and a route to a complete civil registration system. Due to its reduced scope, it is less expensive than vital registration and takes less time, although considerable resources should be available. In addition, the sample sites are selected scientifically.*

7 Civil registration: why counting births and deaths is important. Geneva, World Health Organization, 2008 (<http://www.who.int/mediacentre/factsheets/fs324/en/index.html>, accessed 15 September 2008).

Mortality data [website]. Geneva, World Health Organization, 2008 (<http://www.who.int/whosis/mort/en>, accessed 15 September 2008).

Mathers CD et al. Counting the dead and what they died from: an assessment of the global status of cause of death data. *Bulletin of the World Health Organization*, 2005, 83:171–177.

Mahapatra P et al. Civil registration systems and vital statistics: successes and missed opportunities. *Lancet*, 2007, 370:1653–1663.

8 Mathers CD et al. Counting the dead and what they died from: an assessment of the global status of cause of death data. *Bulletin of the World Health Organization*, 2005, 83:171–177.

9 For guidelines on verbal autopsy, see: WHO Statistical Information System [website]. Geneva, World Health Organization, 2008 (<http://www.who.int/whosis/mort/verbalautopsystandards/en/index.html>, accessed 15 September 2008).

10 Setel PW et al. Sample registration of vital events with verbal autopsy: a renewed commitment to measuring and monitoring vital statistics. *Bulletin of the World Health Organization*, 2005, 83:611–617.

The Health Metrics Network has developed a resource toolkit for “stepping stones” to strengthening vital statistics systems.¹¹ The objectives are to develop and test innovative approaches to record vital events and identify strategic options appropriate to diverse country settings; to generate better data on mortality levels, trends, differentials and causes of death by age and sex, as well as on births; to encourage the counting of all vital events or, where this is not possible, the highest feasible level of representativeness of a sample of deaths; to enhance the use of mortality data for resource allocation, planning and evaluation; and to enhance in-country capacity to run and maintain national civil registration systems.

2.6.6 Surveys

Population-based surveys, health facility surveys or behavioral surveys are mostly used for data collection for outcome and impact indicators. Surveys require careful, detailed and long-term planning to be able to secure sufficient funding and adequate expertise (this is often underestimated). Program managers and partners should collectively discuss and endorse the data collection agenda for surveys and include it in the M&E plan (long-term) and annual workplan and budget (on a yearly basis). In this process, data needs that are carefully mapped and those that can be addressed in the same survey should be consolidated to avoid multiple disparate data collection efforts where possible. This will help managers and partners to leverage ongoing efforts and maximize opportunities to share expertise and costs. This will require strong leadership from the M&E working group or unit in the respective ministries.

Fig. 2 (page 22) illustrates how to map data collection plans, including surveys. Table 6 on the following page provides additional guidance to countries for planning and funding surveys. It lists major surveys with links to available resources for planning and provides practical examples of the costs involved.

¹¹ Health Metrics Network. Stepping stones to improving the monitoring of vital events [website]. Geneva, World Health Organization, 2008 (<http://www.who.int/healthmetrics/tools/logbook/en/move/web/index.html>, accessed 15 September 2008).
AbouZahr C et al. The way forward. *Lancet*, 2007, 370:1791–1799.

Table 6. Planning for major surveys – an overview

Measurement tools	Main characteristics	Examples of measurement methods used	Frequency	Information for planning
Health facility survey	Survey targeting health facilities to gather information on the availability of human resources, equipment, commodities and drugs and the type of services delivered	Site-based facility surveys (such as Service Provision Assessment for HIV)	Every 3–5 years	The Service Provision Assessment is part of the MEASURE DHS international program implemented by Macro International Inc. and funded by the United States Agency for International Development. ¹² At the country level, the United States Agency for International Development and/or other donors fund surveys. The cost varies widely depending on the scope and sample size (number of facilities). It requires sufficient sample size (number of health facilities) to be analyzed in subgroups, by type of facility, and/or region.
		Service Availability Mapping (SAM)	Six-monthly	Its main application is at the subnational or district level, where district health management teams can use the results of the Service Availability Mapping ¹³ in conjunction with WHO's HealthMapper ¹⁴ application.
General population-based surveys	A survey based on sampling of the general population, aiming to represent the characteristics, behavior and practices of that population. It requires sufficient sample size to provide precise indicators and to be analyzed in subgroups by age, sex and region.	Multiple Indicator Cluster Survey (MICS)	Every 3 years	Multiple Indicator Cluster Surveys ¹⁵ are typically carried out by government organizations, with the support and assistance of UNICEF and other partners. Technical assistance and training for the surveys are provided through a series of regional workshops, covering: questionnaire content, sampling and survey implementation, data processing, data quality and data analysis and report writing and dissemination.
		Demographic and Health Surveys (DHS), some of which include HIV testing for estimating HIV prevalence	Every 3–5 years	The cost varies considerably depending on the type and scope of survey, type of biomarkers included and sample size. However, the scope of the AIS and MIS is limited compared with the DHS. With identical sample size and same type of biomarker, an AIS or MIS is therefore significantly less expensive than a DHS.
		AIDS Indicator Survey (AIS), a subset of the DHS focusing only on HIV; some AIS include HIV testing	Every 2–3 years	A package containing guidelines, questionnaires and manuals to support carrying out the MIS as well as recommended tabulations for analyzing the data is available. ¹⁶
		Malaria Indicator Survey (MIS), which can be combined with an AIS	Every 2–3 years	
		TB disease prevalence survey to determine the prevalence of pulmonary TB at a defined point in time in a country	Every 5–10 years	A typical national TB disease prevalence survey can cost between US\$ 0.5 million and US\$ 2 million, depending on the sample size and human resource costs in a country. ¹⁷

12 Service Provision Assessments [website]. Calverton, MD, MEASURE DHS, 2008 (<http://www.measuredhs.com/aboutsurveys/spa.cfm>, accessed 15 September 2008).

13 Service Availability Mapping (SAM) [website]. Geneva, World Health Organization, 2008 (<http://www.who.int/healthinfo/systems/serviceavailabilitymapping/en/index.html>, accessed 15 September 2008).

14 The HealthMapper [website]. Geneva, World Health Organization, 2008 (http://www.who.int/health_mapping/tools/healthmapper/en/index.html, accessed 15 September 2008).

15 Multiple Indicator Cluster Survey/MICS 3 [website]. New York, United Nations Children's Fund, 2008 (http://www.childinfo.org/mic3_background.html, accessed 15 September 2008).

16 The RBM Partnership Monitoring Evaluation Reference Group (MERG): Survey and Indicator Guidance Task Force [website]. Geneva, Roll Back Malaria, 2007 (<http://www.rollbackmalaria.org/merg.html>, accessed 15 September 2008).

17 Budget components [annex]. In: Generic protocol for school tuberculin survey. The Hague, KNCV Tuberculosis Foundation, 2007 (<http://www.kncvtbc.nl/Site/Components/SitePageCP/ShowPage.aspx?ItemID=c2739d3a-8f52-482b-8d01-b55e09edf2ed&SelectedMenuItemID=2588b0df-6a8f-4c37-9a96-4e6811c834c4>, accessed 15 September 2008).

Dye C et al. Measuring tuberculosis burden, trends, and the impact of control programs. *Lancet Infectious Diseases*, 2008, 8:233–243.

Glaziou P et al. Tuberculosis prevalence surveys: rationale and cost. *International Journal of Tuberculosis and Lung Disease*, 2008, 12:1003–1008.

Assessing tuberculosis prevalence through population-based surveys. Manila, WHO Regional Office for the Western Pacific, 2007 (<http://www.wpro.who.int/publications/publications.htm>, accessed 15 September 2008).

18 Behavioral surveillance surveys: guidelines for repeated behavioral surveys in populations at risk of HIV. Arlington, VA, Family Health International, 2000 (<http://www.fhi.org/en/HIVAIDS/pub/guide/bssguidelines.htm>, accessed 15 September 2008).

19 Interim recommendations for the surveillance of drug resistance in tuberculosis. Geneva, World Health Organization, 2007 (http://www.who.int/tb/publications/mdr_surveillance/en/index.html, accessed 15 September 2008).

Abdel Aziz M et al., eds. Guidelines for the surveillance of drug resistance in tuberculosis. 2nd ed. Geneva, World Health Organization, 2003 (http://www.who.int/tb/publications/mdr_surveillance/en/index.html, accessed 15 September 2008).

20 TB/HIV Working Group of the Global Partnership to Stop TB and the UNAIDS/WHO Working Group on Global HIV/AIDS/STI Surveillance. Guidelines for HIV surveillance among tuberculosis patients. 2nd ed. Geneva, World Health Organization, 2004 (<http://www.who.int/tb/publications/2004/en/index.html>, accessed 15 September 2008).

21 Budget components [annex]. In: Generic protocol for school tuberculin survey. The Hague, KNCV Tuberculosis Foundation, 2007 (<http://www.kncvtbc.nl/Site/Components/SitePageCP/ShowPage.aspx?ItemID=c2739d3a-8f52-482b-8d01-b55e09edf2ed&SelectedMenuItemID=2588b0df-6a8f-4c37-9a96-4e6811c834c4>, accessed 15 September 2008).

Table 6. Planning for major surveys – an overview (continued)

Measurement tools	Main characteristics	Examples of measurement methods used	Frequency	Information for planning
Special population-based surveys	Repeated cross-sectional surveys in selected populations over time. They use reliable methods to track HIV risk behavior over time as part of an integrated surveillance system that monitors various aspects of the epidemic.	Behavioral surveillance survey to track trends in HIV-related knowledge, attitudes and behavior	Every 4–5 years in the general population; every year in subpopulations among whom HIV prevention initiatives are most concentrated	<p>The cost of collecting behavioral data varies considerably from country to country; it depends on the number of respondents, the geographical coverage, the sampling design and the frequency and methods of data collection. Behavioral surveillance surveys are less expensive than nationally representative household surveys (partly because sample sizes are much smaller and geographical coverage more limited), but they usually are more frequent. Initial rounds of behavioral surveillance surveys, which may include formative research to determine the most appropriate population groups, and extensive training and mapping work, may be more expensive than subsequent rounds. As behavioral surveillance surveys become a routine part of M&E of the national response to HIV, costs drop because more experience is gained about how to efficiently sample and interview subpopulation groups.</p> <p>The publication <i>Behavioral surveillance surveys: guidelines for repeated behavioral surveys in populations at risk of HIV</i>¹⁸ provides a one-stop reference to help public health officials set up and manage systems that provide reliable trends in HIV risk behavior. Information is also provided to help those who will be implementing the surveys themselves.</p>
	To estimate the burden of drug-resistant TB using standardized methods to compare data across and within regions, monitor trends in resistance, evaluate the performance of TB control programs and advise on drug regimens	Anti-TB drug resistance surveys; can be conducted countrywide or at the subnational level (state, province, oblast or city)	Every 3–5 years	<p>Drug resistance surveys require sufficient sample sizes among new and re-treatment TB cases. They also require laboratories that can perform culture and drug susceptibility testing (at least to first-line anti-TB drugs). The laboratories involved in the drug resistance surveys should be quality assured by a supranational reference laboratory.</p> <p>The cost of drug resistance surveys varies between US\$ 80 000 and US\$ 120 000 depending on the size of the sample, the type of technical assistance required and whether or not it covers testing of second-line anti-TB drugs.</p> <p>Two WHO publications provide information for planning drug resistance surveys.¹⁹</p>
	To estimate the burden of HIV-related TB in situations where routine HIV testing of everyone with TB is not happening in low-prevalence settings	Periodic or sentinel surveillance of HIV prevalence in TB cases at the national level	Every 2–3 years	In order to assist countries with planning and conducting these surveys, WHO has published <i>Guidelines for HIV surveillance among tuberculosis patients</i> ²⁰ in English, French, Russian and Spanish. The guidelines include a checklist for making cost estimates (Box 4 in the guidelines).
		TB infection survey (“tuberculin survey”), usually carried out as a school survey or a community survey targeting only children	Every 5–10 years	To assist countries in planning and conducting this survey, a generic protocol with a budget sheet is available from KNCV Tuberculosis Foundation. ²¹

References 18-21 are described on the bottom of page 28

2.7 Monitoring program outcome and impact

The analysis of program achievements culminates in the monitoring of outcomes and impact with the objective of assessing whether interventions are making a difference and are done on a large enough scale (Fig. 1, page 14). At the outcome level, this includes assessing the coverage of the interventions (such as for malaria) or the change in behavior in the targeted population groups (such as for HIV). This often relies on population-based surveys, although coverage can also be assessed in terms of the number of people reached with services if the denominator (that is, those who need services) for the target population can be determined or reliably estimated.

Commonly used measures for monitoring impact are mortality, incidence, prevalence and survival. Impact measurement usually relies on three main sources of information:

- 1) *clinical, hospital or sentinel site records: these data allow the assessment of survival post-treatment, case notification and disease-related mortality for specific populations;*
- 2) *Civil registration, which provides information on mortality and cause of death; and*
- 3) *population-based surveys for assessing prevalence and mortality.*

Mortality tends to be the gold standard for assessing the impact of a disease control program, as it captures prevalence, incidence and survival dimensions. Mortality also measures the reduction of disease-attributable mortality in the target population. However, mortality data are collected from civil registration systems, and the number of high-burden countries with reliable registration systems is limited. A survey (such as assessing all-cause mortality among children younger than five years), possibly using verbal autopsy, is another method of collecting death-related data. Verbal autopsy is, however, often associated with various levels of bias. Table 2 (page 19) lists examples of data collection methods that can lead to outcome and impact monitoring.

Since the main objective of measuring impact and outcome is to assess the change in disease burden, change in coverage or behavior related to the interventions, having baseline data before program implementation is essential for comparison. Part 2

of this toolkit presents indicators and methods for measuring outcome and impact.

Importantly, impact measurement is often complicated by the fragmentation of information systems by disease-specific programs or projects. Maximizing the integration of different systems across a disease and even programs is essential, as the instruments for data collection are often the same. This can be achieved, for example, by aligning global survey agendas with national health planning timetables. Harmonizing such timetables among the respective diseases would allow resources to be used even more efficiently. This requires institutionalizing the impact measurement agenda under national leadership and ensuring sustainable investment in systems to measure impact. This includes filling gaps in health information systems, supporting the implementation of surveys and strengthening vital and community registration systems. Box 4 summarizes the steps needed to improve impact measurement efforts at the country level.

Box 4. Priorities in improving impact measurement at the country level

- *Institutionalize the national impact measurement agenda in the M&E plan and annual workplan through the support of a multisectoral M&E technical working group*
- *Define and implement strategies to build capacity in impact measurement*
- *Capitalize on existing data in the country (through adequate storage, dissemination and use), including developing the capacity to analyze and manage data*
- *Improve the planning of surveys and special studies and align schedules according to national needs*
- *Enhance routine data collection systems as well as civil registration and surveillance systems, as impact measurement draws from all those sources*
- *Use triangulation to cross-check from different sources and confirm the obtained data*
- *Optimize funding flows to meet national needs and fill gaps in the resources needed for collecting impact data*

2.8 Evaluation and operations research

Managing the response requires frequent collection and analysis of data on the epidemic situation and the local response to assess whether the right things are being done, whether they are done right (Fig. 1, page 14) and whether there are better ways of doing them. This may include assessing the costs and benefits of the different interventions and their feasibility given the available human and financial resources. Matching the response to the current (and evolving) epidemiology of the diseases, the findings from the strategic information and the resources available will enable program planners to set priorities among interventions. It will also provide an opportunity to set ambitious, realistic and measurable targets.

In addition to data from the routine data collection system and regular surveys and surveillance system, adequately managing the response therefore relies on information from timely planned activities of evaluation and research that will further enhance the analysis of program performance. Evaluation and research should be seen as essential components of a comprehensive M&E system. They compile qualitative and quantitative data into evidence-based information, which is essential in the decision-making processes.

Operations research can be viewed as an interface between M&E and knowledge management. Its purpose is to produce practically applicable knowledge that managers can use for improving the operational quality of the program implementation and/or for scaling up services. If evaluation focuses on whether a change in results can be attributed to a program, operations research focuses on whether the program operations are efficient, whether interventions follow the most effective design or how to best leverage additional opportunities to scale up services, including for particularly vulnerable people. Most importantly, the endpoint of operations research is to provide concrete suggestions on how to translate the knowledge produced into action. Thus, operations research is the means for continually improving a program's operational quality. Operations research is becoming increasingly important given the rapidly evolving evidence about new disease control interventions and the introduction of new technologies. Operations research helps program managers in assessing whether adopting these new interventions and technologies would improve the efficiency of a program.

Operations research can be performed as a diagnostic, evaluation or intervention study or it may apply other research methods and designs. Not all operations research topics can be specified during program design, as the needs in some operations research studies may arise during program implementation. The operations research studies can be designed to address project-level, community-level or even national-level issues. The multi-partner *Framework for operations and implementation research in health and disease control programs*²² is a set of comprehensive guidelines for program managers, program implementers, researchers and policy-makers. It brings together all practical information on how to design and manage operations research projects, how to disseminate their results and how to practically use operations research for scaling up health services and improving program quality.

Countries should consider potential operations research needs in their national planning schedules and earmark sufficient funds in the M&E budget.

22 Framework for operations and implementation research in health and disease control programs. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (<http://www.theglobalfund.org/documents/me/FrameworkForOperationsResearch.pdf>, accessed 15 September 2008).

3. Strengthening the M&E system

3.1 Moving the M&E agenda

Progress has been made towards establishing M&E systems and in eliminating duplication of efforts and rationalizing M&E activities. Nevertheless, much still needs to be done in helping countries to strengthen their M&E capacity. Table 7 on the opposite page provides a snapshot of where M&E systems are today and identifies steps that should enable program managers to produce data based on which sound program decisions can be made and to ultimately measure the progress towards fighting the diseases. The development of Table 7 on page 33 has been informed by the ongoing work with stakeholders at the country level. Many of the agenda items listed for the next five to ten years are based on requests from partners and have been confirmed by the findings from the recent Global Fund Five-Year Evaluation.

Global and national efforts have been made over the past years to increase financial resources for M&E to the widely recommended 5–10 percent of the overall program budget. It is urgent to allocate some of these resources to ensure support for the activities listed below.

3.2 Addressing data quality issues

Data quality includes various dimensions, such as:

- *accuracy: the data measure what they are intended to measure;*
- *reliability: the measures do not change according to who is using them and when or how often they are used;*
- *precision: the data have the necessary detail;*
- *completeness: all-inclusive and not partial;*
- *timeliness: up-to-date and available on time;*
- *integrity: no deliberate bias or manipulation; and*
- *confidentiality: clients are assured that their data will be maintained according to national and/or international standards for data.²³*

Although increasing attention is being paid to the quality of data produced by M&E systems, these efforts need to be strengthened further. Without reliable data, program management will be based on less than optimal information, lead to wrong decisions and eventually result in wasting scarce resources. Limited data quality also has implications for the availability of funds from donors. Countries should develop and adopt a data quality framework and incorporate data quality assurance in routine data collection mechanisms. In addition, regular data quality audits should be performed to complement routine quality assurance procedures. Using both methods will help to identify gaps earlier on and plan for timely remedial actions. Methods such as the Data Quality Audit Tool²⁴ have been developed in collaboration with partners. A Routine Data Quality Assessment Tool (RDQA) is being developed for use by countries to facilitate quality assurance of their routine data. Continued training and supportive supervision should be an integral part of the quality assurance process.

²³ Data Quality Audit Tool: guidelines for implementation. Chapel Hill, NC, MEASURE Evaluation, 2008 (<http://www.cpc.unc.edu/measure/tools/monitoring-evaluation-systems/data-quality-assurance-tools/dqa-auditing-tool-implementation-guidelines.pdf>, accessed 15 September 2008).

²⁴ Data quality assurance tools [website]. Chapel Hill, NC, MEASURE Evaluation, 2008 (<http://www.cpc.unc.edu/measure/tools/monitoring-evaluation-systems/data-quality-assurance-tools>, accessed 15 September 2008).

Table 7. The M&E agenda for the next 5–10 years

Area	M&E today	M&E agenda over the next 5–10 years
Routine data monitoring (health facility-based and community-based)	Existing data collection systems do not always include data from the public sector, private sector and civil society Information generated by programs at the community level is still poor and incomplete	A high percentage of data collected from the private sector and civil society are included in the national reporting, which will enable a comprehensive view of the sector's performance Having a set of indicators, tools and the M&E system adapted to monitor and evaluate community-level service delivery (subsection 2.6.3)
Civil registration	In many countries civil registration systems are not functioning at their full capacity to monitor overall and cause-specific mortality	Sufficient investment is being made to strengthen the civil registration system, using the money allocated through partners, so that reliable vital statistics are produced in each country (subsection 2.6.5)
Surveys	Overlap and duplication exist in the surveys implemented. Too much information is collected that is not subsequently used for decision-making	An efficiency gain in resources, in particular costs and time, by better planning and designing the surveys needed to respond to program and donor needs (subsection 2.6.6)
Measuring the quality of services delivery	Measurement of the quality of services delivered is often not embedded in program management	Having a set of indicators, tools and the M&E system adapted to monitor the quality of service delivery, both at the health facility and community levels (subsection 3.3)
Monitoring of service delivery among populations most at risk and by sex	Data for groups most at risk are often not fed back into the program and used for planning and decision-making Addressing gender is limited to disaggregating data and indicators by sex	Strategic information from programs is generated by identifying the drivers of the disease and identifying the populations most at risk (including gender considerations) and used at all levels for program planning, resource allocation and improved monitoring (subsections 3.4 and 3.5)
Generating strategic information	Lack of analytical capacity at the country level to generate strategic information to support new initiatives	Capacity is built to analyze, interpret and use data and information (subsection 3.6) An annual review process is institutionalized with a high level of participation from stakeholders (subsection 3.7)
Evaluation and operations research	Focus is on monitoring and reliance on routine system and quantitative data	Regular evaluations are established (including operations research) to complement existing information, in particular in such areas as gender equality, quality of services, identifying and reaching the population groups most at risk and assessing the program impact (subsection 2.8)
M&E of M&E	Many countries have an M&E plan, but it is not always implemented, implementation is not followed up routinely or the resources needed are not allocated	Regular M&E system assessment is used to identify priorities for strengthening the M&E system and to allocate resources efficiently Implementation of M&E plans and workplans is followed up as part of the program review process (subsection 3.8)
Data quality	No clearly defined data quality framework at the country level. Ad hoc attempts to check inconsistencies in data collection and reporting	Agreed data quality framework included in the M&E plan with regular monitoring and supervision, on-site verification and data quality audits (subsection 3.2)

3.3 Monitoring the quality of services

The quality of services provided affects the outcomes of various health programs. Activities and services that are of poor quality and not delivered according to recognized standards will have suboptimal results, even with high coverage. This section outlines the importance of measuring the quality of services and provides recommendations on how to address the challenges associated with it. It also provides references on several quality management methods, tools and guidelines that have been developed to help improve quality.²⁵

3.3.1 Why measure quality?

Service quality can be measured with three mutually complementary objectives.

1. Improving quality at the service provision level.

This concerns providing services with established international or national standards of care. Depending on the type of service, standards may be defined in various ways: standard operating procedures (such as standard operating procedures for blood safety), guidelines (such as WHO guidelines on initiating antiretroviral therapy based on CD4 count) and protocols (such as malaria treatment protocols with artemisinin-based combination therapy).

2. Improving program outcomes. *In some cases, the achievement of program outcomes could be used as a proxy to assess the quality of services. Poor performance of the outcome indicator should trigger program managers to initiate detailed assessment of the quality of specific services using the output and coverage indicators.*

3. Improving accountability. *Quality can also be measured and used as a barometer for decision-makers and donor agencies to demonstrate the overall quality of their portfolios at the national, regional and global levels and to monitor changes in quality over time or compare between programs, countries and regions.*

3.3.2 Strengthening the measurement of the quality of services

Service quality is the degree to which health services increase the likelihood of desired health outcomes and are consistent with current professional knowledge. Measuring the quality of services is an integral part of the M&E system. In addition to specific qualitative indicators, many quantitative indicators currently used by programs inherently measure quality. An agreed core set of indicators to measure the quality of services is currently being developed, and more guidance will be available soon.

Defining and enforcing quality standards, continuously improving them and measuring the quality of services remains a challenge due to the complex dynamics of health care delivery, the varying levels at which care might be evaluated and the necessity to consider the different perspectives of the key stakeholders. Despite these challenges, the measurement of the quality of services should be strengthened by:

- *developing an accountability framework including entities responsible for specific aspects of service quality, the conditions under which accountability applies, levels of accountability and trade-offs between professional and personal accountability;*
- *establishing the explicit criteria by which health service performance will be assessed: standards, procedures, guidelines, protocols, skill descriptions and terms of reference;*
- *selecting a subset of indicators for routine reporting; and*
- *facilitating the monitoring of quality as part of the M&E system: for example, routine M&E, quality audits and data quality assurance.*

²⁵ Service provision assessments [website]. Calverton, MD, MEASURE DHS, 2008 (<http://www.measuredhs.com/aboutsurveys/spa.cfm>, accessed 15 September 2008).

The Quality Assurance Project: healthcare & workforce improvement [website]. Bethesda, MD, Quality Assurance Project, 2008 (<http://www.qaproject.org>, accessed 15 September 2008).

Performance measurement and quality improvement resources [website]. Washington, DC, Public Health Foundation, 2008 (http://www.phf.org/infrastructure/phfpage.php?page_id=55&pp_id=52, accessed 15 September 2008).

The HIV/AIDS Program: HIVQUAL Continuous Quality Program [website]. Rockville, MD, Health Resources and Services Administration, United States Department of Health and Human Services, 2008 (<http://hab.hrsa.gov/special/hivqual.htm>, accessed 15 September 2008).

Quality information & improvement: tools & resources [website]. Rockville, MD, Agency for Healthcare Research and Quality, United States Department of Health and Human Services, 2008 (<http://www.ahrq.gov/qual/qualix.htm#tools>, accessed 15 September 2008).

3.4 Monitoring service delivery for population subgroups

Interventions addressing population groups thought to be at highest risk of acquiring (and, as applicable) transmitting a disease need to be given priority. These population groups should also be a priority for efforts in the M&E of national and subnational programs. The choice of target populations for interventions and thus for M&E efforts should ultimately be based on assessment of the level of disease prevalence and population size, behavioral risk factors and potential responses. Although categorizing these population groups most at risk (which, for HIV, is mostly based on their behavior) has been useful especially for targeting prevention and treatment interventions, not all individuals at risk belong to one group, and not all individuals in a given group are at high risk of contracting the disease. This overlap must be considered in planning, reporting and analyzing information.²⁶

For HIV, population groups in which behavioral risk factors are concentrated include sex workers; clients of sex workers; injecting drug users; and men who have sex with men. For TB, population groups most at risk include prisoners, migrants and people living with HIV. For malaria, children younger than five years and pregnant women are at increased risk of contracting the disease. In addition, other groups may have an increased risk of infection in a given community or country. These additional population groups vary by disease, country and setting. It is equally important to identify and target such groups for prevention and treatment interventions and, therefore, M&E activities.

3.5 Addressing gender in program monitoring

Targeting populations most at risk with programmatic and M&E activities also requires addressing gender in these efforts. Gender refers to the economic, social, political and cultural attributes and opportunities associated with being male or female; sex refers to those that are biologically determined. In different societies, girls and boys, women and men are influenced by gender norms, are valued differently and have unequal opportunities and life chances. Because of social (gender) and biological (sex) differences, women and men face different health risks and experience different responses from health systems, and their health-seeking behavior and health outcomes differ. As power is distributed unequally in most societies, women most typically have less access to and control over health information, care and services and resources to protect their health and those of their children. Gender norms can also affect men by assigning them roles that encourage risk-taking behavior and cause them to neglect their health or those of their families. Moreover, gender interacts with race, class, caste and other types of social stratification and varies from country to country.²⁷ It often results in unequal benefits among social groups as well as between women and men. Issues related to gender in any given disease vary greatly between countries, requiring different approaches and responses, but gender relations particularly affect sexually transmitted infections.

A gender-sensitive approach in health program planning recognizes both sex and gender differences and strives to achieve equal access for both women and men to treatment and services that respond to the disease situation. Analysis should focus on how differences inherent to women and men may affect equal access to health services. The findings of such analysis should subsequently guide program planning and implementation.²⁸ Disaggregating epidemiological data by sex and age is a natural starting-point to understand the disease and how both sexes are affected. When health systems cannot provide sex- and age-disaggregated data, they need to be strengthened to be able to do so.

26 A framework for monitoring and evaluating HIV prevention programmes for most-at-risk populations. Geneva, UNAIDS, 2007 (http://data.unaids.org/pub/Manual/2007/20070420_me_of_prevention_in_most_at_risk_populations_en.pdf, accessed 15 September 2008).

27 The text in this paragraph is based on: Strategy for integrating gender analysis and actions into the work of WHO. Geneva, World Health Organization, 2007 (http://www.euro.who.int/document/gem/final_strat_sep07.pdf, accessed 15 September 2008).

28 Integrating gender into HIV/AIDS programme in the health sector: tool to improve responsiveness to women's needs. Geneva, World Health Organization, 2008.

At this stage, this edition of the toolkit proposes no additional standard indicators that directly measure equity in access or provision of health care for the three diseases or health systems strengthening.^{29,30} Countries are encouraged to use national indicators, ideally drawn from the national M&E plan, and proceed to more comprehensive analysis based on information generated by disaggregated data (sex, age groups and geographic regions). Interpretation of the results obtained should take into account epidemiological and cultural background information. Such an analysis should be an essential component of the annual review process.

3.6 Generating strategic information

Countries need to be able to generate the necessary strategic information to refine their knowledge about the diseases and take stock of what remains to be done to achieve impact. Fig. 1 (page 14) illustrates the questions that need to be addressed to improve the use of data and to therefore strengthen evidence-based programming and learning and resource allocation. Data that have continuously been collected need to be periodically consolidated and assessed using data triangulation methods at key milestones in the national M&E agenda, such as at the mid-term and annual reviews.

Generating strategic information as described above requires building strong in-country analytical capacity at the national and subnational levels. Strengthening analytical capacity is a long-term process, and investment should be planned to respond to the various needs at all levels of the health care system. Various training and capacity-building packages in partnerships with regional universities and training centers are available that can be tailored to the needs of the country.³¹

3.7 Institutionalizing the annual review process

The annual review is a comprehensive, systematic assessment of the overall national response to a disease carried out jointly with relevant stakeholders and partners and as an integral part of a national strategic programming cycle for this disease. The annual review collects results for all indicators for the year and includes a self-assessment of progress, barriers, successes and failures. It allows program managers to improve decision-making, set priorities among interventions and generate resources. In addition, donors use the results of annual review as a source of contextual information to interpret the results achieved versus the targets.

The annual review brings together all stakeholders to jointly and transparently assess the performance and to review budgets and expenditure. To make the annual review more powerful, it should be guided by a performance matrix with identified targets and time frames. This matrix should cover the entire relevant components and be approved by all stakeholders involved in supporting the program.

High-quality routine and non-routine data should be made available for this review to inform the analysis and decision-making process. The use of data from evaluation and operations research should be encouraged and, increasingly, the analysis of equity in access to services should be addressed, taking into account specific age groups and gender and the review of quality services delivery. Moreover, the review process is an opportunity to follow up on the progress in implementing the annual workplan, including specific interventions aimed at strengthening the health system (in particular, strengthening the M&E system). It also offers a forum to share information on trends and best practices among all stakeholders.

29 For possible gender indicators, please see: Transforming the national AIDS response: mainstreaming gender equality and women's human rights into the "three ones". New York, United Nations Development Fund for Women, 2008 (http://www.unifem.org/gender_issues/resources.php?WebSectionID=2, accessed 15 September 2008).

30 Part 2 of the toolkit provides more information on publications related to gender.

31 Training and capacity building [website]. Chapel Hill, NC, MEASURE Evaluation, 2008 (<http://www.cpc.unc.edu/measure/training>, accessed 15 September 2008).

The findings of the review are summarized in a review team report that is shared with the relevant stakeholders for consensus and follow-up. Successful follow-up will benefit from a robust planning and preparatory phase of the review with relevant partners and stakeholders. This is when commitment to and ownership of the annual review process and the review recommendations can be generated.

It is advisable to nominate a technical steering group that guides and oversees planning and implementation of the elements of the annual review and follow up on recommendations. Box 5 lists the key elements of the annual review and steps involved in the planning process.

Box 5. Key elements of the annual review and planning for implementation

1. Planning for implementation: steering or advisory committee

- *Establish a technical working group to oversee the annual review*
- *Develop terms of reference for the review*
- *Mobilize human and financial resources*
- *Constitute the review team of consultants*
- *Develop terms of reference for the team*
- *Prepare contracts with clear outputs and expectations*
- *Prepare implementation plan for the review*
- *Plan logistics – field visits, workshops or meetings and transport*
- *Plan for the follow-up*

2. Data collection

3. Data utilization: analysis and synthesis of findings

4. Data dissemination: feedback and follow-up

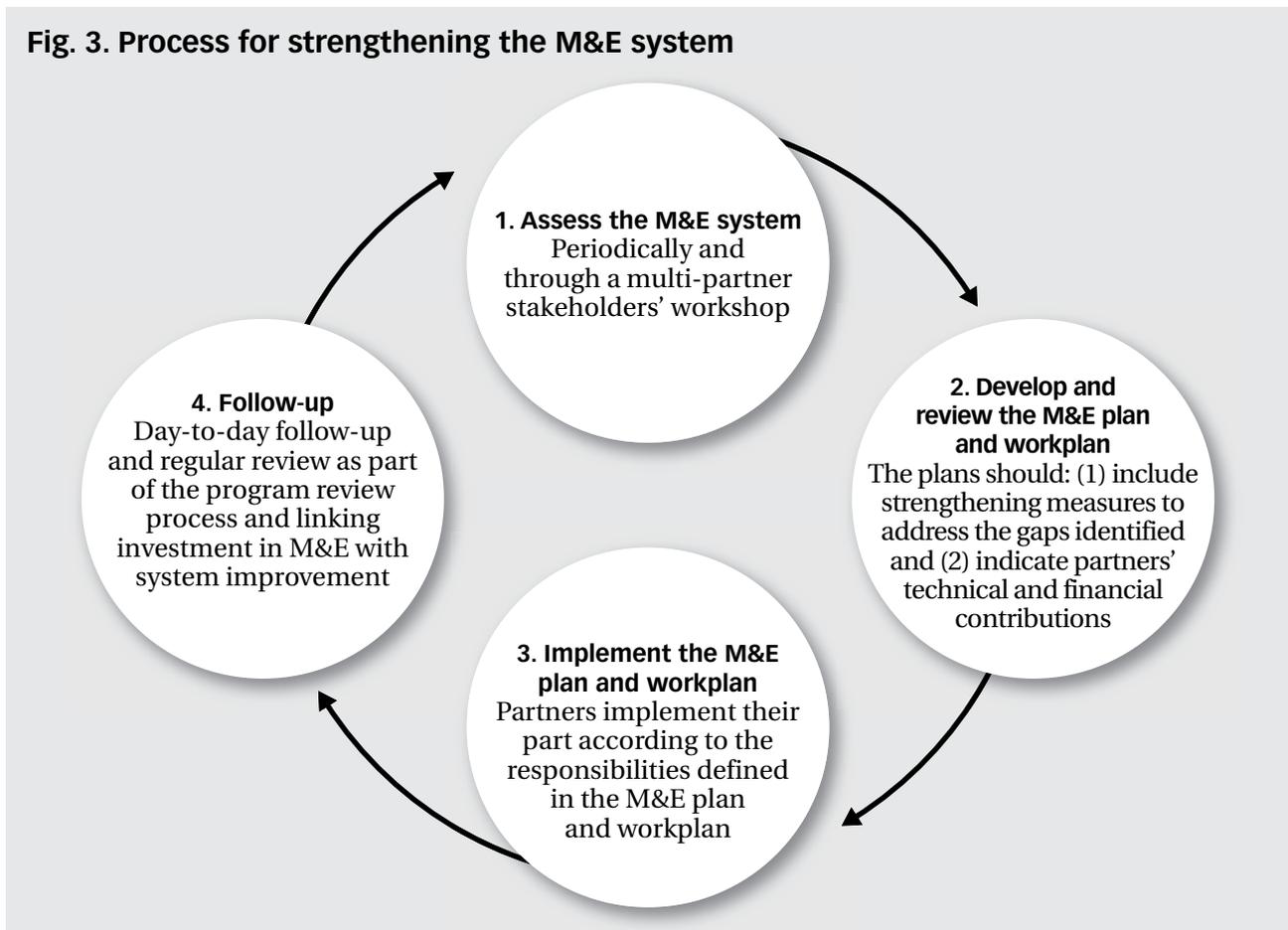
5. Data utilization to inform policy and program direction

3.8 M&E assessments and follow-up

Strengthening country-level M&E systems requires continual effort. Countries should be able to monitor performance regularly and then define ways to improve weak areas. Strong M&E systems yield high-quality, timely and relevant data for decision-making. Investing in strengthening a national M&E system is therefore important, as it will eventually save resources that may otherwise be spent in ineffective programs or duplicating activities by various stakeholders. This section outlines the main steps in strengthening M&E systems and tools to support the process.

The process of strengthening M&E systems includes: (1) periodic assessment of the national M&E system by stakeholders; (2) developing or reviewing the M&E plan and workplan based on the results of the assessment; (3) implementing the (updated) M&E plan and workplan; and (4) regularly following up the implementation status of the M&E plan or workplan (Fig. 3).

Fig. 3. Process for strengthening the M&E system



3.8.1 Assessing the M&E system

Strengthening a country's M&E system should be guided by country-led periodic and systematic diagnosis of existing challenges as well as strengths and opportunities. This can ideally be achieved through a participatory approach, such as a stakeholder assessment workshop, using tools specifically designed for this purpose (Box 6). Such systematic assessment should identify the strengthening measures needed to address the weaknesses of the M&E system, build on existing strengths and ensure the timeliness and quality of data for reporting, program management and policy actions. Conducting the assessment through a consultative process or stakeholder workshop contributes to harmonizing and aligning data collection, reporting systems and other M&E activities. It also ensures ownership of the M&E plan and respective workplan by the various stakeholders that technically and financially contribute to the implementation of the national M&E system. Further, site visits, including on-site data verification and facility censuses, can help to produce a sound diagnosis of the strengths and weaknesses of the national M&E system.

Box 6. What assessment tools should be used to assess M&E systems?

Several M&E assessment tools produced by technical working groups are available to assess M&E systems. The Global Fund, in collaboration with its partners, designed the M&E Systems Strengthening Tool.³² This tool provides a framework for countries to systematically diagnose their M&E system (for HIV, TB and malaria) and to agree on and plan for implementation of activities to strengthen the M&E system.

Global partners in HIV including the Global Fund have developed a unified approach to building M&E capacity at the country level using an organizing framework for a functional national M&E system. In this regard, a harmonized tool for assessment of all 12 components of a national M&E system is currently being pilot tested and will be available in early 2009. Once finalized, the harmonized assessment tool would replace all the existing tools for assessment of the overall national HIV M&E system. In addition, operational guidance was developed on selecting appropriate tools for assessment of specific components of the M&E system.³³

During the past two years, many countries have assessed their M&E systems to identify strengths and weaknesses and define appropriate measures to address weak areas. Review of the assessment reports revealed that the four common M&E challenges are related to data management process and data quality, human resource capacity and, in particular, analytical capacity and use of data.³⁴ However, more needs to be done for countries to take full advantage of the participatory approach to self-assessment of the national M&E system. Box 7 on page 40 summarizes the challenges of undertaking assessments.

32 M&E Systems Strengthening Tool. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (http://www.theglobalfund.org/en/performance/monitoring_evaluation, accessed 15 September 2008).

33 Organizing framework for a functional national HIV monitoring and evaluation system. Geneva, UNAIDS, 2008 (<http://siteresources.worldbank.org/INT/HIVAIDS/Resources/375798-1132695455908/GROrganizingFrameworkforHIVMESystem.pdf>, accessed 15 September 2008).

34 Based on a review of 58 M&E assessment reports from: M&E systems strengthening tool. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2007 (unpublished).

Box 7. Major challenges in the assessment process

- *Limited preparation for the assessment: preparation of in-country stakeholders to pre-review the assessment tool and existing M&E resources such as the national M&E plan and workplan and budget*
- *Misunderstanding of the purpose of the assessment: the tool is not seen as a basis for capacity-building*
- *Incomplete results: the M&E workplan is not comprehensive and costed and lacking timelines: the activities are not specific and/or time bound, most are not fully costed and the role of partners for financial and technical support is not included*
- *Lack of documentation on the assessment process, creating difficulty in evaluating the quality of the assessment results*

3.8.2 Developing and reviewing the M&E plan and workplan (including the M&E budget)

Once the assessment is completed and strengthening measures identified, these need to be incorporated into the existing M&E plan and workplan (with associated budget estimates and with clear responsibilities for all the stakeholders). The processes of developing M&E plans and workplans should involve all relevant partners. This will enable clear attribution of roles, responsibilities and oversight in implementing the agreed M&E plan and workplan. If the country does not have an M&E plan or workplan, these documents should be developed. For M&E activities that cannot be covered from existing resources, countries are strongly encouraged to include these as part of their proposal to the Global Fund or funding requests to other partners.

The M&E workplan and budget should include all costs at the national and subnational levels that are related to data collection, registration, verification, processing, analysis and reporting; surveys, evaluation and research; human resources; logistics for training and field supervision; technical support; information technology equipment and systems; and any other costs associated with M&E.

3.8.3 Implementing the M&E workplan

Implementing the M&E plan and workplan is the reason for performing an assessment. The government and partners need to allocate resources and implement activities based on the responsibilities assigned in the M&E plan and workplan. Specific steps to ensure that the workplan gets implemented include:

- *adding M&E responsibilities from the workplan to job descriptions of M&E staff;*
- *regular oversight by the M&E technical working group; and*
- *securing (and not just identifying potential sources of) the necessary M&E funding.*

3.8.4 Following up the implementation of the M&E plan and workplan, including M&E budget and expenditure

Despite the increased attention to assessment of and investment in M&E systems, evidence is limited on what has actually improved. Trends in the strengthening of M&E systems have thus not been documented very successfully. Progress made in implementing the M&E workplan should be regularly reviewed: this is the M&E of M&E. Similar to tracking program implementation, the investment in M&E needs to be linked to improvements in the M&E system over time (Box 8 on page 41). Countries should identify the most appropriate way of tracking progress in strengthening the M&E system, preferably as part of a country's disease program review process (such as joint annual reviews). All stakeholders need to be involved in the M&E of M&E.

Box 8. M&E country profiles: linking M&E investment with system performance

The Global Fund is developing a systematic approach to capturing and summarizing findings from M&E assessments and other sources such as the M&E plan, data quality assessment reports and other relevant reports. These summaries will be published as M&E country profiles and reflect the M&E capacity of HIV, TB and malaria programs in countries where the Global Fund has investments. These country profiles will then serve as a platform for sharing information on M&E systems. The profiles will be an important source of information to identify which countries, disease components and M&E areas need more support. In addition, they enable the tracking of trends over time on the performance of M&E systems at the country level. The profiles will also be shared with the respective countries for the following purposes: (1) to validate the information captured; (2) to provide countries with information on M&E areas that need to be strengthened further with the objective of encouraging countries to either reprogram or submit additional funding requirements in their next proposal submitted to the Global Fund; and (3) to facilitate a harmonized approach to strengthening the M&E system (such as pooled funding or technical support in areas that need to be strengthened).

Additional information will be sought from stakeholders to enhance the completeness and quality of the profiles. For example, M&E expenditure is a specific area that could potentially rely on the UNAIDS national AIDS spending assessment. The Global Fund has shared preliminary findings from analyzing M&E assessments in the past two years with UNAIDS. Such collaborative efforts will be intensified and extended across the three diseases.

The M&E country profiles will provide qualitative information on the strength of a specific country's M&E system along three broad areas.

1) Are there plans for an M&E system?

- *Is there a national M&E plan and/or indicator measurement framework (sometimes also called a results framework)?*
- *Is there an outline of a data collection system and data management mechanism?*
- *Have the M&E resource needs been estimated?*
- *Is there an outline of information products and dissemination mechanisms?*
- *Is there a thorough strategy for capacity-building?*

2) Are resources available?

- *Is the number of M&E personnel adequate ("adequate" here refers to being in accordance with the national requirements)?*
- *Is adequate infrastructure, such as forms, registers, computers, Internet connections and information management systems, in place at different levels?*
- *Is an M&E budget available? To what extent does it cover the identified needs?*

3) Is the M&E system functioning?

- *Is the program reporting timely (to the Global Fund as a proxy for the overall capacity on reporting)?*
- *How are information products disseminated and used?*
- *What data quality issues are there?*
- *How much money is spent on M&E?*

3.8.5 Tracking M&E budget and expenditure

The M&E budget is widely recommended to be up to 10 percent of the overall program budget (Table 8). This is a general recommendation, but exact allocation should be based on a robust plan that addresses specific M&E needs. Several stakeholders, including the government, usually contribute to the overall M&E budget.³⁵ Sufficient money should be allocated and secured to address such key areas as: strengthening the health information system, human resource capacity-building and funding the civil registration system, technical support, operations research and evaluation, as these costs are often underestimated.

Just as budget and expenditure for program implementation are tracked, resource allocation and expenditure for M&E should be tracked. Tracking the overall national M&E budget and spending (from all sources) is more informative in showing the resource gaps than tracking grant- or donor-specific allocation and expenditure. Tracking the M&E budget and expenditure with consistent and comprehensive cost categories using routine country systems will contribute to a more complete picture of investment in M&E and enable linkage to improvements in the M&E system.

3.8.6 Requesting M&E technical support

Strengthening M&E systems has increased the demand for M&E technical support. Getting good-quality technical support on time has often been a bottleneck to efforts to strengthen M&E systems; implementing these steps will reduce the possibility of this bottleneck.

- **Define M&E technical support needs very early.** *The earlier the need for technical support is considered, the more appropriate the support will be. Ideally, technical support needs should be identified when developing the M&E plan and during subsequent preparation of the workplan.*
- **Develop the scope of work based on the weaknesses identified in a coordinated way.** *M&E system assessments and the Global Fund M&E country profiles provide information about M&E system weaknesses, which is the starting-point for developing a scope of work. Once developed, share the scope of work with the M&E technical working group to avoid overlaps or gaps.*

- **Define and allocate the budget needed for technical support.** *The M&E budget (recommended to be 5–10 percent of program resources) should also be used to fund M&E technical support as appropriate.*
- **Identify the most appropriate technical support providers.** *Many suppliers of technical support are available to countries. To identify high-quality technical support providers appropriate to their needs, program managers can contact technical partners such as WHO country offices, UNAIDS country offices, regional support teams, the United States Government, the Global HIV/AIDS Monitoring and Evaluation Team of the World Bank and country coordination mechanism members. The disease-specific sections of the toolkit provide additional references to technical support and links to related websites.*

Table 8 provides brief guidance on how to draft requests for technical support.

Table 8. Drafting justification for technical support

Points for consideration	Explanation
Reason for requesting support	Briefly explain what the issue is. This could be expressed as questions to which you want answers.
Why the issue should be addressed with the help of technical support	Explain the reason why you need external technical support: need for specific skills; adequate experience and/or time that may not be available in-house; the need to address the issue with an independent body; or other factors or some combination of these.
Outcomes and benefits	What are the possible results and benefits of successful technical support? Will it lead to clear answers to the issues identified? Will the answers lead to clear decisions and actions?
Define the time schedule for technical support	Set a realistic time by which the technical support is required and define its duration, taking into account the logistical and decision-making processes that may affect the timeline.

³⁵ 2008 report on the global AIDS epidemic. Geneva, UNAIDS, 2008 (http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp, accessed 15 September 2008).

4. Global Fund M&E principles and requirements

4.1 Performance-based funding and M&E

The Global Fund aims to “raise funds, spend them and help prove their contribution to fight the diseases” in partnership with other international and national organizations, and crucially with those that implement the programs and projects supported by the Global Fund.

Performance-based funding is central to the Global Fund mechanism, to ensure that raising, spending and proving the contribution of funds are closely related. Funds are released when progress against agreed targets is met. This requires that:

- *overall goals be clearly formulated;*
- *services be clearly defined, grouped into service delivery areas and related to goals;*
- *a reliable M&E system be in place; and*
- *indicators be chosen, targets set and progress reported regularly.*

Performance is based on how well indicators can be measured, documented and verified against agreed targets to achieve the goals of the proposal. There are therefore very strong incentives to have clear, simple, measurable and well-communicated results on a regular basis. Wider measures of progress should also be reported, but core performance will rely on a few clear and meaningful targets.

Performance-based funding helps ensure that money is well spent relative to project goals and, ultimately, that services are provided to those affected by disease. The funds raised do not belong to the Global Fund nor to the programs supported but to the people who urgently need services. Performance-based funding also develops an evidence base and platform to advocate sustained and dependable funding (Box 9).

Box 9. Performance-based funding framework

The Global Fund's system for performance-based funding aims:

- *to ensure that money is spent on services for people in need;*
- *to relate disbursements to the achievement of targets;*
- *to provide incentives to focus on results and timely implementation; and*
- *to free up committed resources from non-performing programs for reallocation to programs in which results can be achieved.*

4.2 Tracking performance

In order to facilitate performance-based funding, the Global fund tracks relevant performance targets and achievements by using a clear set of indicators and targets taken from the original proposal and built into the grant agreement.

The information collected is used at three main stages of performance evaluation.

- **Regular disbursements (every six months as the default).** *Agreement on a few indicators of progress is used for regular financial release every three or six months. Funds are released based on disbursement requests accompanied by progress updates of the results versus targets with an explanation or self-assessment from the program. Programs supported by the Global Fund do not need to set targets and report results for every indicator in every reporting period. The reporting period should be aligned with the national information system. Programs supported by the Global Fund need to explain why any results deviate from the targets.*
- **Annual reviews (every 12 months).** *These collect the results for all indicators for the year and include a self-assessment of progress, barriers, successes and failures. The Global Fund uses these updates to report on progress in program implementation across its portfolio and as a key source of contextual information to interpret the minimal performance focus of results versus targets. The Global Fund does not request a specific report and can use existing annual reviews or yearly program reports.*

- Phase 2 evaluation (from 18 to 20 months).** *Funding is committed for a first period of two years. After 18 months, the program makes a submission for Phase 2 funding to cover up to an additional 3 years (a total of 5 years of funding). An overall review of performance is used as a basis for the Secretariat of the Global Fund to recommend further funding into Phase 2. This includes a comprehensive report on results versus targets and versus the goals of the proposal and on the delivery of key services relevant to fighting the three diseases. Self-assessment by the program is an important element, including the possibility to suggest changes in the program based on experience. Although targets should not be changed, the Global Fund considers explanations of why results deviate from the targets in rating performance. A scorecard is prepared combining the aggregate results with independent verification and assessment of data on the performance of the programs supported by the Global Fund. The scorecard becomes the basis for the Phase 2 funding decisions taken by the Board.*

Although performance-based funding of programs supported by the Global Fund reaches a critical milestone at the Phase 2 funding stage, the measurement and evaluation system starts at the beginning of a grant when recipients and the Global Fund agree on indicators and targets and make them part of the first grant agreement.

Targets are tracked at every stage in the process: defined in the grant proposal, incorporated into the grant agreement (in the performance framework), progress reported before each disbursement (progress update), in annual reviews and consolidated in the request by the country coordination mechanism for continued funding for Phase 2, into Phase 2 reporting and beyond Phase 2. Performance-based funding occurs continually throughout the life of the Global Fund grant.

The aim of performance-based funding is to use reported results actively as the basis for self-assessment and decisions in programs and at the Global Fund. Results versus targets are only the basis of a performance rating. As important are the self-assessment and explanation of progress by the program and corrective measures proposed to ensure rapid learning and scaling up of programs. Overall performance incorporates both the hard quantitative elements of results versus targets and

the qualitative assessment of progress and important contextual factors.

Finally, country ownership provides the basis for performance-based funding. Targets should be derived from country proposals and agreed by both sides in the grant agreement.

4.3 Using the toolkit for a program supported by the Global Fund

The M&E toolkit should be used to guide the proposal application, to finalize the performance framework in which indicators and targets are incorporated and to guide reporting throughout the grant life cycle. It is used to choose the limited set of indicators from the more extensive M&E plan for which targets are set as a basis of reporting to the Global Fund. It is important to distinguish between levels of M&E, the more extensive set of indicators needed to manage a program and the few indicators needed for donor and international reporting.

The Global Fund aims to reach people with high-quality services to affect the control of three diseases. As the program becomes established, reporting shifts to information on the increased number of people reached and then outcome and impact indicators. The Global Fund recognizes that this requires strengthening not just M&E systems but health systems in general, and the toolkit therefore includes guidance on strengthening M&E systems as well as overall health systems. Indicators and service delivery areas related to health systems strengthening have been included. These can be included in disease components for HIV, TB and malaria.

A central aim is to increase coverage of the prevention, treatment and care of HIV, TB and malaria and to be able to measure the coverage. To show this internationally across many countries and programs, a few high-level standard indicators of the people reached by services in programs supported by the Global Fund are highly valued. In addition, changes to population behavior and disease impact are reported over time, in collaboration with country partners.

4.4 Reporting to the Global Fund

Programs or projects should have clearly defined goals and objectives. This is the starting-point of reporting to the Global Fund. To achieve these goals and objectives, service delivery areas should be clearly defined and, from these service delivery areas, a few indicators should be selected. These indicators need to be reliable and measurable on a regular basis. The consistency of goals and services delivered is important to be able to evaluate, over the medium term, progress in fighting the three diseases in terms of impact and behavior change.

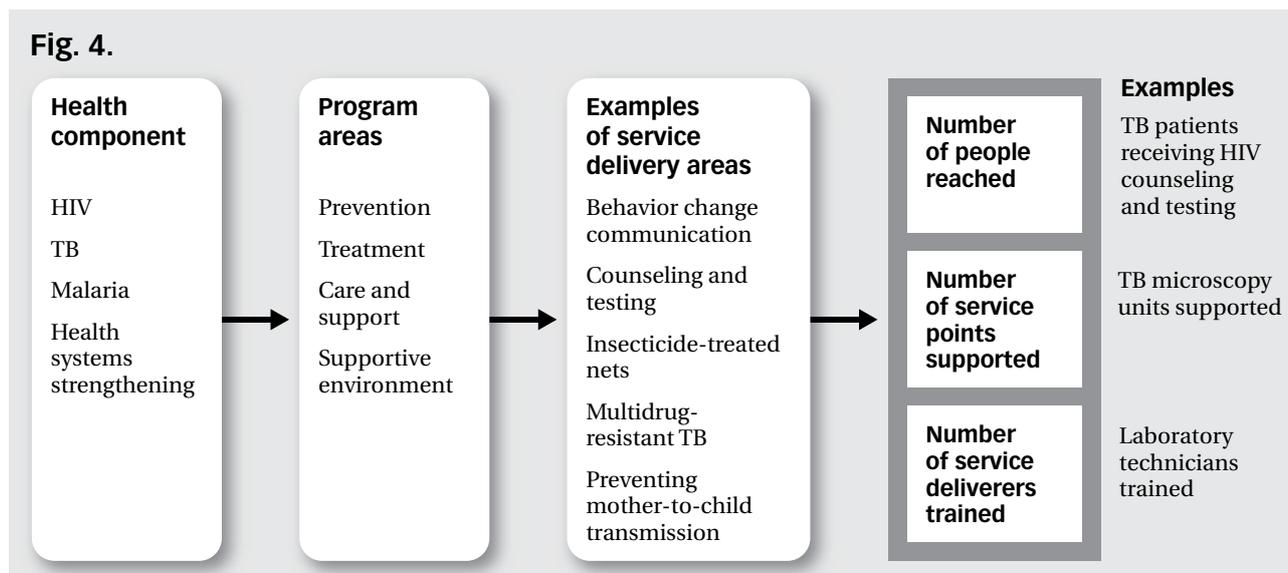
Overall goals are broad and overarching: for example, “reducing HIV-related mortality”, “reducing the burden of TB” and “reducing the transmission of malaria”. For each goal, impact indicators must be chosen.

Objectives need to be clearly described for each goal. An objective describes the intention of the programs for which funding is sought and provides a framework under which services are delivered. Examples of objectives include “improving survival rates among people with advanced HIV infection in four provinces”, “reducing the transmission of TB among prisoners in the ten largest prisons” and “reducing malaria-related morbidity among pregnant women in seven rural districts”.

The next step, and the core of regular performance-based funding, is to identify key services to be delivered and to provide indicators with targets that can be measured and can show regular programmatic progress for each service. Under each objective, indicators are therefore grouped under their respective service delivery areas (a service delivery area corresponds to a specific service that is provided).

A program has one or two goals. Each goal has an objective, each objective includes several service delivery areas, and each service delivery area is evaluated on one or more indicators.

Fig. 4 illustrates the relationship between disease components, service delivery areas and indicators.



Programs supported by the Global Fund should leverage existing national M&E systems in countries. These systems are fundamental for reporting to the Global Fund. The information that will be collected for program management and M&E purposes at the country level (many more indicators) should be clearly distinguished from what is submitted to the Global Fund to assess programmatic performance (focused on 5–15 key indicators). The indicators reported to the Global Fund should be a simplified set from the overall M&E plan. To provide this information, the country needs to have strong M&E systems that can capture the required data.

4.5 Selecting indicators for Global Fund reporting

The indicators in programs supported by the Global Fund are selected and targets are set based on the activities proposed by the countries and included in the performance framework. The performance framework forms an integral part of the formal grant agreement.

Programs supported by the Global Fund should report on a small set of indicators for defined service delivery areas in accordance with achieving their goals and objectives. Performance-based funding is usually undertaken with a focus on 5–15 output indicators (Box 10). In addition, the performance framework must include relevant impact and outcome indicators with baselines and targets. Adequate funds must be allocated for the data collection and reporting of these indicators. The outcome and impact data are increasingly important to access funding beyond Phase 2 of a program supported by the Global Fund. To receive funding beyond Phase 2, programs supported by the Global Fund need to demonstrate strong performance and early signs of impact.

Planning for the measurement of outcome and impact indicators should begin earlier on (preferably at the stage of writing a grant proposal), as the measurement of these indicators is resource-intensive. Joint efforts between all stakeholders, national and international, are necessary when measuring the impact and outcome of a program. Countries should draw on existing surveillance systems and surveys to avoid the duplication of efforts.

Box 10. Tips on choosing indicators

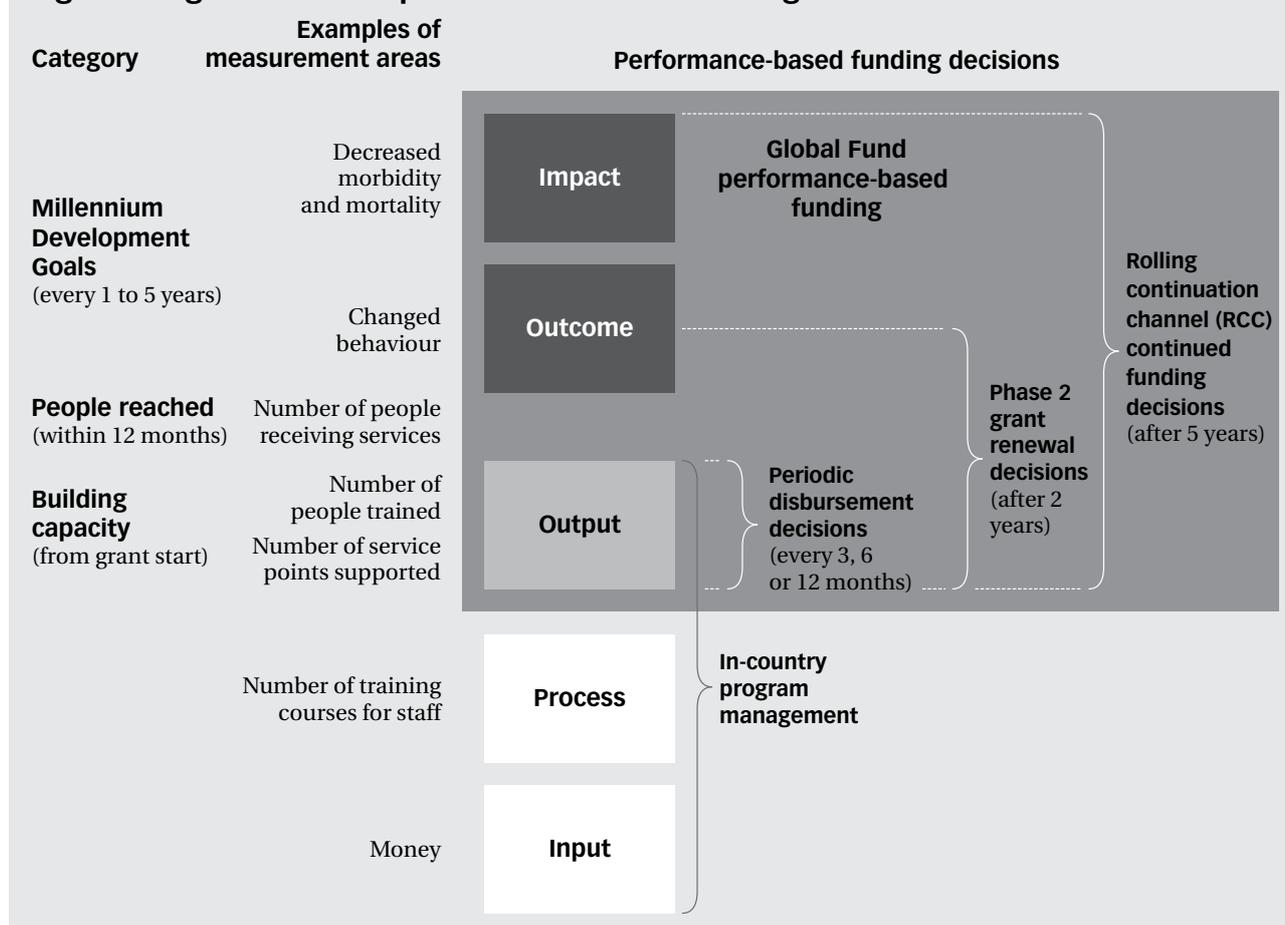
Indicators should:

- *be able to measure performance and provide useful strategic information;*
- *be consistent with the proposed objectives and activities;*
- *be few in number: up to 15 output or coverage indicators and 2–5 impact or outcome indicators;*
- *be clear, with well-defined numerators and denominators (ideally using standard definitions) to avoid different interpretations during their measurement and double counting;*
- *be consistent with the M&E plan and be supported by the workplan and budget;*
- *be selected according to the pace of implementation and frequency of data collection so that results are available by month 18 of the grant life-cycle for continuation of funding into Phase 2 and by month 42 for beyond Phase 2;*
- *be harmonized across multiple grants for the same disease and same activity; and*
- *include the “top ten” indicators relevant to the program.*

There should also be a balance between indicators that could be reported on a routine basis and those reported through sentinel surveillance or surveys.

Fig. 5 on page 47 illustrates the indicators used at different stages of the grant life-cycle. Reporting on indicators should be aligned to the frequency of measurement and in accordance with in-country data collection plans.

Fig. 5. Using indicators in performance-based funding



4.6 The top ten indicators

The Global Fund has selected a set of top ten service delivery activities in collaboration with partners (Table 9 on the following page). The related indicators are used by the Global Fund to report on internationally and regularly across the entire portfolio. They are for frequent reporting and for regular disbursement of funds. These indicators should be incorporated into the grant reporting wherever the services are provided.

Similarly, the top ten outcome and impact indicators (Table 10, page 49) are the key most frequently reported indicators for medium-term reporting (every one to five years). The Global Fund recommends using these indicators as relevant to the program and consistent with the data collection schedules in the countries. Existing surveys should be leveraged and data analyzed as part of a national collective effort. Programs should draw as far as possible from existing surveillance information, including impact evaluation studies implemented in countries. If these surveys do not exist, the Global Fund program funds should be used to fill in gaps, and investment in both monitoring

and evaluation is strongly encouraged.

As the top ten service delivery activities represent core program areas, achieving targets based on these indicators is of particular importance when decisions about continuous funding by the Global Fund are made. In cases where other services (and therefore indicators) are more or equally relevant to achieving the overall program goal, the Global Fund performance evaluation system will consider the results achieved accordingly.

Note that the indicators under top ten service delivery activities do not measure the coverage of services. This is due to the frequently encountered difficulty in defining denominators for target populations (such as populations most at risk). The Global Fund does, however, recommend that information on coverage be included in the performance framework (that is, the number and percentage value of an indicator) where it is available and reliable. The interpretation of the results reported under the top ten service delivery activities takes into account the context and the limitations of the information provided.

Table 9. Top ten indicators for routine Global Fund reporting

	Disease	Indicators for routine Global Fund reporting
1	HIV	Number of adults and children with advanced HIV infection currently receiving antiretroviral therapy
2	TB	Number of (a) new smear-positive TB patients detected, (b) new smear-positive TB patients who were successfully treated and (c) laboratory-confirmed MDR-TB patients enrolled in second-line anti-TB treatment
3	Malaria	Number of (a) insecticide-treated nets or re-treatment kits distributed to people and (b) households (or structures or walls) in designated target areas sprayed by indoor residual spraying in the past 12 months
4	Malaria	Number of people with fever receiving antimalarial treatment according to national policy (specify artemisinin-based combination therapy versus other therapy)
5	HIV	Number of women and men aged 15–49 years who received an HIV test in the last 12 months and who know their results
6	HIV	Number of HIV-positive pregnant women who received antiretrovirals to reduce the risk of mother-to-child transmission
7	HIV	Number of condoms distributed
8	HIV, TB and malaria	Number of people benefiting from community-based programs: specify (a) care and support including orphan support, home-based management of malaria and directly observed therapy (DOT); (b) behavior change communication outreach activities including specific target groups; and (c) disease prevention for people most at risk (except behavior change communication)
9	HIV/TB	Number of TB patients who had an HIV test result recorded in the TB register
10	Health systems strengthening for HIV, TB and malaria	Number of people trained for improved service delivery in HIV, TB and malaria (specify (a) health facility or (b) outside facility)

Table 10. Top ten indicators for medium-term outcome and impact^a

	Disease	Indicators recommended for generalized epidemics and high-endemicity areas ^b	Indicators recommended for concentrated epidemics and low-endemicity areas ^b
1	HIV	Percentage of women and men aged 15–24 years who are infected with HIV	Percentage of populations most at risk who are infected with HIV
2	HIV	Percentage of adults and children with HIV known to be receiving treatment 12 months after initiation of antiretroviral therapy (extend to two, three and five years as the program matures)	
3	HIV	Reduced mother-to-child transmission of HIV: percentage of infants born to mothers who are HIV infected	
4	HIV	Percentage of people aged 15–49 years with more than one sexual partner in the past 12 months reporting the use of condoms during their last sexual intercourse	Percentage of populations most at risk with more than one sexual partner in the past 12 months reporting the use of condoms during last sexual intercourse
5	TB	TB case detection rate and treatment success rate	
6	TB	TB prevalence rate: estimated number of TB cases (all forms) per 100 000 population	
7	Malaria	All-cause mortality rate among children younger than five years of age	Malaria-specific mortality: proportion of deaths attributed to malaria among children younger than five years of age (or other target groups)
8	Malaria	Number of (confirmed) malaria cases seen by health workers (in facilities and/or outreach)	a. Annual parasite index b. Slide-positive or rapid diagnostic test-positive rate
9	Malaria	People sleeping under an insecticide-treated net the previous night (specify the target population: all household residents, children younger than five years of age, pregnant women)	
10	Health systems strengthening	All-cause mortality rate among children younger than five years of age	

^a The indicator tables in Part 2 and the relevant descriptions provide details on the top ten group of indicators.

^b For the purpose of selecting top ten indicators that are most appropriate to the regional and country-specific epidemic situation, notably in HIV and malaria, they are presented in two different categories: (1) HIV – generalized epidemic versus concentrated epidemic or low prevalence; and (2) malaria – stable malaria versus unstable malaria. However, this should not preclude a country from reporting on impact or outcome indicators (especially for HIV) that are otherwise useful for monitoring their programmatic response.

For more information on the M&E of Global Fund–supported programs, including the completion of a performance framework, please see the Global Fund *Monitoring and evaluation manual*.³⁶

4.7 Frequently asked questions

1. What are the Global Fund M&E requirements for grant signing?

When proposals submitted by countries applying for support from the Global Fund are being turned into grant agreements, M&E sets the stage for performance-based funding for the entire grant period. The M&E–related requirements at the time of grant signature consist of the following.

1. *Submission of the performance framework*
2. *Submission of the M&E plan*
3. *Assessment of the M&E system*

- *The principal recipient needs to complete the M&E self-assessment before grant signing; this enables the principal recipient to self-assess the national or program-specific M&E system, to identify M&E weaknesses and challenges and to develop a plan (with a budget) to strengthen the M&E system.*
- *The M&E self-assessment is followed by an independent review of the strengthening plan derived from this assessment. The local fund agent performs this review, assessing whether the nominated principal recipient has the capacity to collect, record and report programmatic data with appropriate quality control measures. It also includes an assessment of how the workplan and budget will strengthen M&E capacity within the proposed program. Based on the findings of the M&E self-assessment, the local fund agent completes the M&E section of the principal recipient assessment report before the grant is signed.*

More details on the specific requirements are available in the Global Fund *Monitoring and evaluation manual*³⁷ and in the relevant sections in this toolkit.

2. What is the difference between an M&E plan and a performance framework?

The performance framework is a legally binding document attached to the grant agreement. It focuses on a subset of indicators from the M&E plan that are used to measure the program's performance over the term of the program.

An M&E plan³⁸ is a document developed in consultation with major stakeholders that describes how the national M&E system works and how it will be strengthened throughout the duration of its term. At a minimum, the M&E plan should describe the following items or components:

- *name and definition of indicators, baseline values, multi-year targets, tools and methods used for data collection, frequency of data collection and the person or agency responsible for collecting data and reporting and analysis;*
- *information products: describe how the data collected and analyzed will be made available to stakeholders and the general public;*
- *data quality assurance;*
- *an annual M&E workplan (or as a component of the annual sector workplan) agreed among all stakeholders that describes M&E–related activities, responsibilities, budget and timing; and*
- *the M&E budget.*

This toolkit (subsection 2.4) provides more detailed information on the content of an M&E plan.

³⁶ Monitoring and evaluation manual. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (http://www.theglobalfund.org/en/performance/monitoring_evaluation, accessed 15 September 2008).

³⁷ Monitoring and evaluation manual. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (http://www.theglobalfund.org/en/performance/monitoring_evaluation, accessed 15 September 2008).

³⁸ Guidelines for submission of an M&E plan for Global Fund grants. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (http://www.theglobalfund.org/en/performance/monitoring_evaluation, accessed 15 September 2008).

3. Does the principal recipient need a Global Fund-specific M&E plan?

The Global Fund requires an M&E plan at the time of grant signature. In most cases, the principal recipient is required to submit only the national M&E plan (specific to a disease, for a combination of the three diseases or specific to the health sector overall) drawn up for monitoring the national strategy to which the program supported by the Global Fund contributes. However, the following are exceptions:

- *a multi-country grant – in this case, a specific regional M&E plan needs to be developed, aligned with the national M&E plans of all the countries concerned;*
- *the national M&E plan is not sufficiently detailed for Global Fund requirements – in this case, the principal recipient should prepare an annex to the national M&E plan to provide the missing information, and the Global Fund and the principal recipient will then agree on a timeline to produce an updated version of the national M&E plan that fully covers the scope of the national program or Global Fund-supported activities;*
- *the country does not have a national M&E plan and the process of developing one will take longer than the grant signature negotiation period – a provisional document can be drawn up and updated or replaced once the national M&E plan is developed; and*
- *the principal recipient is a civil society organization – in this case, the principal recipient submits an M&E plan that outlines the M&E activities in accordance with the guidelines of the M&E plan and describes how they are integrated within the national M&E system.*

4. Can the targets set in the proposals be changed during grant implementation?

Targets must be in accordance with those indicated in the proposal submitted to the Global Fund and generally cannot be changed during implementation. Targets can only be revised upwards or downwards during the program in exceptional circumstances, and according to the policy set-up at the Global Fund Secretariat level,³⁹ which is briefly described below:

- *when the original intended targets were greatly underestimated – this is usually apparent during the Phase 2 process, when results are overachieved with a given budget (then the targets need to be increased for the second phase of the program);*
- *when updated and reliable data available through internationally recognized surveys and surveillance systems show that baselines need to be adjusted downwards or upwards, and as a consequence, targets should be adjusted – this also applies when disease trends or population estimates have changed, which modify assumptions based on which target projections were made at the time of proposal writing;*
- *when the sources of funding for the program activities change (such as adjustments in financial and in-kind contribution partners) and/or the prices of goods or services fluctuate substantially; and*
- *when an obvious mistake (such as incorrect assumptions or mathematical errors) was made in the proposal.*

In most cases, requests for revising targets must be supported by relevant technical documentation and/or validated by technical agencies such as WHO or UNAIDS. Important change of activities and targets in scope and scale will require consultation with the Global Fund Technical Review Panel.

³⁹ The Global Fund has a policy on change in the scope and scale of Board-approved proposals.

5. How should a country plan for an application to funding for beyond Phase 2?

Funding beyond Phase 2 (also known as the rolling continuation channel) provides an alternative channel for strongly performing grants to receive continued funding (for six years instead of the five years for round-based grants) for existing activities (where appropriate to the current disease context) and to broaden the package of interventions to which the expiring grant was contributing. It provides an incentive to make an application under the “beyond Phase 2” channel for further funding for the same interventions to which the original grant was contributing or a broader package. This programmatic broadening includes a change in the scale and/or scope of interventions to allow the program to align with changing country needs and to create the most effective and sustainable disease prevention and control programs. In addition, a qualified applicant is required to demonstrate that the proposal's goals and objectives will contribute to the potential for impact on the relevant disease and show sustainability.

Planning for funding beyond Phase 2 requires scheduling impact measurement early enough during grant implementation to be able to demonstrate results in time. This includes clear indicators, high-quality baselines and targets and funding mechanisms for data collection and analysis. Qualified applicants can generally request to continue activities under the earlier grant proposal. Where necessary, however, these earlier activities can (and in relevant cases, should) be altered to respond to changing information on the epidemiology of the disease(s). Similar to the application for a regular funding round, a performance framework for the next six years needs to be submitted as part of the required documentation. Based on this, a performance framework will be developed for the first three years of the rolling continuation channel grant based on the same principles as applying for a Phase 2 grant. The *Global Fund Monitoring and evaluation manual*⁴⁰ summarizes key points in the preparation of a performance framework for beyond Phase 2.

The funding for beyond Phase 2 and subsequent rounds have led in some countries to a project-based approach in program funding and implementation. To systematically increase coverage of services to populations in need and thereby to contribute to the overarching program goal, countries should prepare a holistic proposal based on a comprehensive needs assessment that is epidemiologically sound.

For more frequently asked questions on funding beyond Phase 2, please see the Global Fund website.⁴¹

6. When can a program move to report on national targets?

The request for reporting on national targets should ideally be made at the time a proposal is submitted. However, a principal recipient may proceed to the change at the time of Phase 2 or request this beyond Phase 2 as well. National targets can be reported on outside a sector-wide approach (see question 7) and only for selected relevant indicators of the Global Fund performance framework, if the following conditions are fulfilled:

- *existence of a valid national disease control or health sector strategy with multi-year targets;*
- *the Global Fund is supporting an essential element of the service delivery areas drug provision, human resources, infrastructure including clinics, laboratory and testing facilities and/or health distribution and logistics system;*
- *the Global Fund contributes significant financial resources to the national program;*
- *the financial contributions of the government and the partners are mapped; and*
- *the national program is performing well and there are no track records of data quality issues.*

40 Monitoring and evaluation manual. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (http://www.theglobalfund.org/en/performance/monitoring_evaluation, accessed 15 September 2008).

41 Rolling continuation channel frequently asked questions. Version 4. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (http://www.theglobalfund.org/en/files/apply/rcc/RCC_FAQ.pdf, accessed 15 September 2008).

7. How can the results in a sector-wide approach be reported?

In the context of a sector-wide approach, the availability of comprehensive information from an M&E system is equally important for national governments and donors as in traditional funding arrangements, as it provides information on progress towards achieving national health goals and for deciding the investment of resources. In a sector-wide approach, the following conditions need to be met for the principal recipient to report on national targets to the Global Fund.

- *There must be a valid national disease control or health sector strategy with multi-year targets.*
- *There must be a national M&E plan consistent with the national strategy and in accordance with the Global Fund requirements for the M&E plan.*
- *There must be a performance matrix/or framework (also called a result framework) drawn from the M&E plan that presents all indicators used for monitoring the progress of program implementation. The performance matrix or framework can be for the whole health sector or can be disease specific. Whatever option is chosen, it should comply with the quality standards established through the Global Fund M&E requirements. If this performance framework only contains high-level outcome and impact indicators, the Global Fund may ask the principal recipient to provide additional indicators that better address the Global Fund-supported activities. The Global Fund will agree with the principal recipient and the common funding mechanisms partners on which disease-specific indicators and indicators of the health systems strengthening the mid-year and annual reviews will consider.*
- *To implement performance-based funding, regular mid-year and annual performance reviews should be performed in collaboration with other partners, largely along the principles of performance review of any other program supported by the Global Fund. Mid-year and yearly results have to be presented within at least three to six months of the end of the reporting period and should include explanations for potential deviations from targets. In that process, the Global Fund, similarly to other partners, will consider mid-year and/or annual disease-specific reports or additional surveys; contextual information related to the health sector and/or health systems (procurement, financial, M&E and human resources); overall sector performance; and defined exceptional circumstances that are beyond the control of the principal recipient. If the mid-year results are not provided within the required time frame of three to six months, the Global Fund will not be able to proceed to timely and full-amount disbursements.*
- *Based on rolling three-year targets, the annual review process will agree on (1) the need for adjusting targets (over the next two years) and (2) the targets for year 3 of the next three-year period. In general, however, the targets set in the performance framework for the next three years cannot be changed. If targets need to be changed, the same conditions apply as to other Global Fund grants.⁴²*

The process for Phase 2 assessment for grants managed under a common funding mechanism is fully drawn from the annual review process. The timing of this assessment should be aligned with the reporting cycle of the common funding mechanism. The documentation required for the Phase 2 application is the same as for other grants; however, it is drawn from existing national figures and reports.

⁴² The Global Fund has a policy on change in the scope and scale of Board-approved proposals.

8. What is the Global Fund data quality framework?

The Global Fund, along with partners, has developed a framework to assess M&E systems and especially the quality of the data reported.

- **M&E Systems Strengthening Tool.** *This is a framework for countries to diagnose, in a participatory process, their M&E systems with the aim of building capacity and identifying strengthening measures to focus the grant M&E budget on specific areas in the M&E plan that need funding. Strengthening measures should support strengthening the national M&E plan and national M&E workplan.*⁴³
- **On-site data verification.** *This method provides guidance to the Global Fund local funding agents for performing on-site data verification at the service delivery points. The method consists of aggregating data from primary records and comparing recounted numbers with the results contained in summary reports up to the national level. On-site data verification is performed once per year for each grant, ideally combining assessments for the same indicators across grants for the same disease. In addition to the routine data verification, an ad hoc data verification exercise may be required where problems in data quality exist. In a standard reporting template, the local funding agent summarizes the findings and recommendations for remedial actions that should contribute to strengthening data collection mechanism and overall data quality.*
- **Independent Data Quality Audit Tool (DQA).** *This method provides independent and external evaluation of data quality, including assessing data management systems in countries and in-depth verification of the quality of reported data for key indicators at selected sites. Data quality audits are performed each year for about 5 percent of the whole grant portfolio of the Global Fund. These are selected either randomly or when the program managers, the Global Fund or other in-country stakeholders perceive data quality problems. The final audit report summarizes the findings of the audit team and includes recommendations to improve data quality directly linked to the audit findings.*

These three tools build on each other and thus offer a comprehensive approach to data quality during the grant life-cycle. Ideally, before triggering an independent data quality audit, Global Fund grant recipients should have previously completed the M&E Systems Strengthening Tool and undergone at least one on-site data verification by a local fund agent. This would ensure countries several opportunities to identify and resolve potential weaknesses in their data management and reporting systems before the data quality audit is implemented.

To enable systematic data quality assurance of relevant program M&E in countries, several partners are in the process of developing the Routine Data Quality Assessment Tool (RDQA), an adapted version of the independent Data Quality Audit Tool.

9. How can the gender sensitivity of Global Fund-supported programs best be monitored?

In response to the increasing need for programs to take a gender-sensitive approach, the Global Fund is asking its applicants to provide a comprehensive picture of their epidemic, how it affects men and women and boys and girls differently and how their programs will address potential inequality. This requires that national strategies have already adopted a gender-sensitive approach that is also ideally reflected in annual workplans and budgets. In preparing these, countries must not only know their epidemic and the gender-related vulnerability but also disaggregate data by sex and age. This information is required to develop a programmatic response appropriate to the prevailing situation.

The Global Fund will request programs to submit, annually or biennially (depending on the situation), disaggregated quantitative data for key services delivered to beneficiaries. This information should be complemented by qualitative data that describe the progress made towards reaching gender equality compared with the baseline situation outlined in the proposal. Applicants may, in addition, consider disaggregating data on access to health services in the public and the private sector and in rural and urban settings. Such additional information would further reveal potential gaps and hence contribute to defining an evidence-based programmatic response.

43 Carrying out an M&E self-assessment. In: Monitoring and evaluation manual. Geneva, Global Fund to Fight AIDS, Tuberculosis and Malaria, 2008 (Module 4; http://www.theglobalfund.org/en/performance/monitoring_evaluation, accessed 15 September 2008).

Disaggregating data is the first step in understanding the epidemic in a country, but this does not provide complete information. Disaggregated data do not identify and examine, for example, factors related to the underlying social and behavioral reasons for differences in accessing health services. The Global Fund, therefore, strongly encourages program managers and policy-makers to use grant resources for implementing qualitative methods of M&E, such as evaluation studies and operations research.

Performance tracking of programs supported by the Global Fund will not require data disaggregated by sex and/or age unless the activities are specifically targeted to either sex- or age-specific groups. In these cases, Global Fund principal recipients will have to report on them at the agreed frequency, ideally in accordance with the national reporting schedule.

10. How does the Global Fund implement the principles of the Paris Declaration on Aid Effectiveness in M&E?

The Global Fund was set up to deliver effective aid to achieve impact against the three diseases. As one of the signatories to the Paris Declaration on Aid Effectiveness, the Global Fund is committed to the full set of its principles: country ownership, alignment, harmonization, managing for results and mutual accountability. The following key elements illustrate how the Global Fund puts the Paris Declaration principles into practice in M&E.

Ownership and alignment

- *Countries are encouraged to base their request for funding on their national disease strategies or health sector strategy. Grant reporting periods are aligned to coincide with mid-term and annual reviews.*
- *Whenever possible, indicators and targets are drawn from the national list of indicators and the characteristics of performance frameworks (such as the frequency and timing of indicator reporting) are aligned to the national M&E plan (if it exists).*
- *Unless the principal recipient and country coordinating mechanism have good reasons to propose otherwise, the Global Fund uses the existing national health information system and existing data collection tools and surveys. Global Fund money is invested to strengthen these systems.*

Harmonization with partners

- *M&E coordination bodies, structures and processes that are already functioning are used for overseeing Global Fund programs.*
- *The Global Fund welcomes sector reviews and draws necessary contextual information and programmatic and financial reports from this process.*
- *Existing M&E system assessments are being used and can replace the need to use the M&E Systems Strengthening Tool.*

Managing for results and accountability

- *Achieving results through the principle of performance-based funding is the main focus of the Global Fund.*
- *The Global Fund requests sound performance frameworks that enable transparency and accountability.*
- *The recipient countries can use as much grant funding as needed to strengthen M&E systems, including the health management information system, analysis capacity and operations research and surveys.*

11. How do countries with weak M&E systems report to the Global Fund?

Several countries, such as those under recurrent civil war or governmental instability, do not have a reliable national M&E system to report timely results. In such cases, a simple, interim project-specific M&E system should be established. It should be a simplified system that covers the key service delivery areas. The development of one unified national system should, however, remain a key priority and, as such, simultaneous long-term measures to strengthen and develop a national M&E system should be initiated. The required resources, including technical support, should be budgeted in the Global Fund application.

12. What are the key aspects to consider when preparing a performance framework for a regional program?

Similar to any other grant, the performance framework forms a part of the grant agreement for a regional grant. The principal recipient should consider the following when preparing a performance framework.

- *Use the regional disease control strategy and regional M&E plan and its respective indicators. If there is no regional M&E plan, then prepare a grant-specific plan that describes the M&E systems (in place or to be put in place) for the Global Fund-supported regional or multi-country grant.*
- *The availability of national data and the feasibility of collecting and aggregating it at the regional level should be kept in mind.*
- *In particular, ensure monitoring of impact and outcome indicators at the respective national levels to report aggregated data at the regional level. Studies may need to be performed across borders to assess the situation of specific target groups such as migrants or truck drivers. This will require collective action and a high level of collaboration across the countries involved.*

13. What is grant consolidation?

Grant consolidation refers to the merging of two or more grants implemented by the same principal recipient for the same disease into one grant. This includes combining the workplans, procurement plans, budgets and performance frameworks of various grants and developing one consolidated grant agreement. The following steps need to be followed when developing a performance framework for a consolidated grant:

- *harmonizing indicator definitions across the grants and rationalizing the total number of indicators, selecting those that reflect the key activities supported by the consolidated program;*
- *combining the targets for identical output indicators and harmonizing the impact and outcome indicators and targets across the grants, aligning the respective reporting periods; and*
- *updating the baselines for output and outcome or impact indicators according to the latest reported results in accordance with the national surveys and surveillance system.*

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