

BASIC TERMINOLOGY AND FRAMEWORKS FOR MONITORING AND EVALUATION

UNAIDS Monitoring and Evaluation Fundamentals



UNAIDS
JOINT UNITED NATIONS PROGRAMME ON HIV/AIDS

UNHCR
UNICEF
WFP
UNEP
UNFPA
UNODC
ILO
UNESCO
WHO
WORLD BANK

BASIC TERMINOLOGY AND FRAMEWORKS FOR MONITORING AND EVALUATION

FORWARD

Dear Colleagues,

I would like to welcome you to the UNAIDS Monitoring and Evaluation Fundamentals series. As the response to the global HIV epidemic continues to evolve, monitoring and evaluation (M&E) has become more important than ever. Determining what programs do or do not work; implementing programs with proven cost-effectiveness; monitoring progress towards achieving targets; and ensuring accountability are objectives which are especially important now in the HIV response, as well as in other health and development areas. Thus, it is increasingly important that M&E is better understood, communicated in simplified language, and conducted in a coordinated and sustainable manner that generates information that can be easily used. Further, it is essential that M&E addresses the needs of and involves all key stakeholders right from the start and that results are made publicly available and utilized strategically in policy-making, planning, and program improvement.

This series provides a common sense introduction to a range of M&E issues. It covers the fundamentals and their practical applications and includes techniques and tools for managing M&E of the HIV epidemic and response. Although the series uses HIV as its focus, the M&E fundamentals are also relevant to other areas of public health and development. As such, these books may also be useful in strengthening national M&E systems designed to track progress in other health and development goals, such as those outlined in the United Nations Millennium Development Goals (MDGs).

I hope you find this series useful and welcome your feedback and suggestions on this and future topics for the series.

With my best regards,
Deborah Rugg, PhD
Chief, UNAIDS Monitoring and Evaluation Division

ACKNOWLEDGEMENTS

This book was compiled by Greet Peersman (Payson Center for International Development, Tulane University, USA) and Deborah Rugg (M&E Division, UNAIDS, Switzerland). With special thanks to Michel Caraël (Free University Brussels, Belgium) for providing editorial review and comments.

This book draws on the following publications:

- Global AIDS Program. Monitoring & Evaluation Capacity Building for Program Improvement. Field Guide. Atlanta: Centers for Disease Control and Prevention, Global AIDS Program, 2003
- Rugg D, Peersman G, Caraël M (Eds). Global advances in HIV/AIDS monitoring and evaluation. New Directions for Evaluation 103, 2004.
- UNAIDS. Organising Framework for a Functional National HIV Monitoring and Evaluation System. Geneva: UNAIDS, 2008a.
- UNAIDS. Glossary of Monitoring and Evaluation Terms. Geneva: UNAIDS, 2008b.

CONTENTS

GETTING STARTED	09
THE FUNDAMENTALS	11
What is monitoring and evaluation?	12
What is the foundation of monitoring and evaluation?	15
What is a program logic model?	18
What is the purpose of monitoring and evaluation?	22
What types of data need to be collected?	25
What are the basic questions a national M&E system should address?	33
SUMMARY	47
QUESTIONS TO CONSIDER	55
GLOSSARY	59
LEARNING MORE ABOUT MONITORING AND EVALUATION	71
REFERENCES	77

GETTING STARTED

Monitoring and evaluation (M&E) is an essential part of any program, large or small. It can tell us whether a program is making a difference and for whom; it can identify program areas that are on target or aspects of a program that need to be adjusted or replaced. Information gained from M&E can lead to better decisions about program investments. Additionally, it can demonstrate to program implementers and funders that their investments are paying off.

In the field of public health, understanding a complex epidemic such as the HIV epidemic, and determining the effectiveness and efficiency of the programmatic response requires a sustainable, comprehensive, strategic, multi-method M&E system. In such systems, M&E terms are often used in idiosyncratic ways. This inconsistent use of terms is particularly confusing as M&E professionals and program managers use guidance documents, attempt to coordinate and implement joint M&E plans, and communicate across the range of organizations and disciplines involved in M&E. This book will introduce some of the most commonly used terms in M&E. Establishing a common language should help to clarify meanings and foster a better overall understanding of M&E. Frameworks or models¹ are often used to communicate the rationale and underlying principles of M&E and to provide a foundation for organizing the array of M&E activities that need to be undertaken as part of the national M&E system. The literature in M&E of HIV is full of frameworks -published in articles, text books, reports, guidance documents and manuals-intended to address different aspects of designing and conducting M&E. We have synthesized and reduced this list to six essential

1 The terms 'frameworks' and 'models' are often used interchangeably but both refer to a basic conceptual structure that is used to explain a complex issue and/or to outline a possible course of action or a preferred approach to solve a problem.

organizing frameworks. Understanding each of these frameworks and how they relate, will generate the basic knowledge to approach the development of an effective national HIV M&E system.

This book is not intended to be a fully comprehensive introduction nor a how-to guide for HIV M&E. It is intended to provide the very basics: a concise explanation of the commonly used terms and frameworks in current M&E practice to encourage a common understanding between M&E professionals, policy-makers and program managers alike. Although this book uses HIV as its focus, the M&E fundamentals described here, are also relevant to other areas of public health and development.



THE FUNDAMENTALS

What is monitoring and evaluation?

What is the foundation of monitoring and evaluation?

What is a program logic model?

What is the purpose of monitoring and evaluation?

What types of data need to be collected?

What are the basic questions a national M&E system should address?

WHAT IS MONITORING AND EVALUATION?

Monitoring is the routine tracking and reporting of priority information about a project² or program³: its inputs, activities, outputs, outcomes and impacts.

Evaluation is the systematic collection of information about the activities, characteristics and outcomes of a specific program to determine its merit or worth. If a program is judged to be of merit, it is also important to determine whether it is worth its cost. Evaluation provides credible information for improving programs, identifying lessons learned, and informing decisions about future resource allocation.

Monitoring and evaluation (M&E) in the HIV response includes many different components, methods and activities, but in general can be defined as acquiring, analysing and making use of relevant, accurate, timely and affordable information from multiple sources for the purpose of program improvement (DeLay et al, 2006). M&E is the cornerstone of an evidence-based approach to the decision-making required for designing and implementing effective HIV prevention, treatment and care programs. Monitoring and evaluation activities are inextricably linked but differ in purpose and design; monitoring and evaluation complement one another [Box 1]. Monitoring gives information on where a policy, program or project is at any given time. It can provide a “snapshot” of the situation or program status. Evaluation provides information on whether or not specific

- 2 Project—an intervention designed to achieve specific objectives within specified resources and implementation schedules, often within the framework of a broader program.
- 3 Program—an overarching national or sub-national response to a disease. A program generally includes a set of interventions used to attain specific global, regional, country, or sub-national objectives; involves multiple activities that may cut across sectors, themes and/or geographic areas.

programs or interventions⁴ are “working” (i.e., achieving intended objectives or targets) and why objectives or targets are or are not achieved. Evaluation complements monitoring: when a monitoring system observes that program efforts are off track, then good evaluative information can help clarify the realities and trends noted (Zall Kusek and Rist, 2004).

Large scale monitoring activities are intended to track the HIV epidemic and the response, periodically taking stock to understand the magnitude, trends, and changing patterns over time. They provide information that is useful in understanding the direction the epidemic is taking, in targeting resources and interventions, and in determining the degree of service coverage for populations in need. Monitoring can also be useful on a smaller scale for tracking the implementation of specific services as well as their immediate effects.

Systematic evaluation activities are intended to build on the findings from monitoring activities. They do so by providing additional information to determine the scope, quality, intensity, efficiency, effectiveness, and overall impact of specific programs. Special evaluations can help policy-makers and program managers identify and understand factors that facilitate or hinder the achievement of the objectives or specific targets of prevention, treatment, and care programs.

4 Intervention—a specific activity or set of activities intended to bring about change in some aspect(s) of the status of the target population (e.g., HIV risk reduction, improving the quality of service delivery).

BOX 1. COMPLEMENTARY ROLES OF MONITORING AND EVALUATION

Monitoring	Evaluation
Clarifies program objectives	Analyzes why intended results were or were not achieved
Links activities and their resources to objectives	Assesses specific casual contributions of activities to results
Translates objectives into performance indicators and set target	Explores implementation process
Routinely collects data on these indicators, compares actual results with targets	Explores unintended results
Reports progress to managers, policy-makers and/or donors and alerts them to problems	Highlights accomplishments or program potential; provides lessons learned; offers recommendations for improvement

[Source: Zall Kusek J, Rist R. Ten steps to a results-based monitoring and evaluation system. A handbook for development practitioners. Washington D.C.: The World Bank, 2004: p.14]

The Glossary starting on page 30 defines the most commonly used terms in M&E. Using these terms in a consistent manner will help to foster a better overall understanding of M&E between M&E professionals, policy-makers and program managers.

WHAT IS THE FOUNDATION OF MONITORING AND EVALUATION?

The frameworks discussed in the next sections help to explain the rationale for conducting M&E and provide a foundation for identifying data needs; for organizing the array of M&E activities that need to be undertaken; and, for describing the responsibilities of those conducting M&E at different levels of the national HIV M&E system. Each framework can be used individually -to explain an aspect of HIV M&E which we have summarized as a Key Message- or in conjunction with some or all of the other frameworks to encourage a more comprehensive understanding of why M&E is important and how it should be approached. In this section, we briefly introduce each framework and explain how the different frameworks are linked.

An important first step in M&E is to clearly describe the program of interest. A Program Logic Model can be used to describe the main elements of a program and how these work together to reach the program's goals [see page 10]. This framework facilitates the planning and execution of the program, but also helps setting priorities for M&E. M&E data should be collected with the intention of being used (this is often referred to as the utilization-focused approach in M&E). The primary use of M&E data is for program improvement; some of these data will also be used to satisfy accountability purposes and to share information and lessons learned for broader public use [see page 13]. Typically, the types of data needed are: inputs required for implementing the program's activities, describing the activities themselves, and their outputs (i.e., immediate effects). For some of the programs, these outputs are then intended to lead to outcomes (i.e., intermediate effects) that in turn are intended to lead to impacts (i.e., long-term effects) [see page 15]. These data are gathered through routine monitoring and/or evaluation studies linked to a specific program or to the overall HIV response.

Not all programs need to conduct all types of M&E activities that may be part of the national HIV M&E system [see page 17]. First, the extent and cost of M&E activities should be commensurate to the size, reach, and cost of the program. Second, not all M&E activities are appropriate for a program or the stage of development at which the program happens to be at a given time. However, all programs are expected to conduct input and output monitoring, and most programs should also conduct some process evaluations, including quality assessments. Only some programs will be able to conduct outcome monitoring and rigorous outcome evaluations. Only in a few situations would impact evaluation (where distal effects are attributed to a specific program) be warranted and impact monitoring (typically involving disease surveillance) is the responsibility of the national level.

National governments are responsible for ensuring that routine monitoring as well as evaluation activities are adequately planned, budgeted and systematically implemented as part of the national HIV M&E system. As many different stakeholders are involved in M&E, it is important to foster coordination at all levels to minimize fragmentation and duplication of effort. Establishing a comprehensive national M&E system takes time; it is essential to use a strategic implementation approach guided by what data are needed to answer key questions about the HIV epidemic and response: identifying and describing the problem; understanding the potential response; monitoring and evaluating the national program; and ultimately, determining the effectiveness of the overall HIV response in reducing the HIV epidemic. This investigative and analytic process requires a range of M&E methods for data gathering, analysis and interpretation [see page 19]. From a systems perspective, the different components of the national HIV M&E system need to work to an acceptable standard for the system to function effectively and generate all the required data. These system components are not restricted to the technical

functions of M&E (data collection, verification, analysis and use), but also include the equally important organizational structures (human resources, partnerships, plans) [see page 22].

We refer to three levels in the national M&E system: the national, sub-national and service delivery (both facility and community-based) levels and indicate for which level each framework is most applicable. The first four frameworks are applicable to programs at all levels [see pages 10, 13, 15, 17]. The last two frameworks are particularly useful for national governments who are responsible for coordinating the national HIV M&E system [see pages 19, 22]. However, organizations at the sub-national and service-delivery levels will also find these frameworks useful, as they illuminate how their M&E activities contribute to the overall M&E system.

WHAT IS A PROGRAM LOGIC MODEL?

What? Explains a tool for describing the program or project to be monitored and/or evaluated

For whom? The national, sub-national, and service-delivery levels

An important first step in conducting M&E is to clearly describe the program of interest. This will facilitate the identification of data that will need to be collected to ensure a focus on good program management and program improvement. A Program Logic Model is a good tool to help describe the main elements of a program and how these elements work together to reach a particular goal. A Program Logic Model graphically presents the logical progression and relationship of the strategic program elements (inputs, activities, outputs, outcomes, impact) and their causal relationships, indicators, and the assumptions of risk that may influence success or failure of the program. Thus, the Model not only facilitates M&E of the program but also the planning and execution of the program itself. In developing a Logic Model, it may become evident that the program is too ambitious or not ambitious enough, or that logical connections between goals, objectives, and activities are missing.

As with many aspects of M&E, people use a variety of terms⁵ to describe Program Logic Models and their component parts. Similarly, there are many different ways to construct and a variety of visual schematics to portray Program Logic Models⁶. Logic Models may be used to describe an entire program, parts of a program (e.g.,

5 For example: blue print, causal chain, logical framework or logframe, model of change, program hypothesis, road map, results chain, theory of action.

6 For example: flow charts, maps, tables.

individual projects and interventions), or multiple related programs. Much of the benefit of constructing Program Logic Models comes from the iterative process of discussing, analyzing, and justifying the expected relationships and feed-back loops. Therefore, even though a Program Logic Model is often presented in a linear fashion [Figure 1], conceptually, they are more cyclical in nature.

Elements of a Program Logic Model, as shown in Figure 1, typically are:

Assumptions and context—relate to the social, political, and economic factors that exist in the locale where the program is being implemented and the influence of these on the potential success of the program. Stated assumptions are based on the thorough understanding of the contextual factors as well as theories and evidence-based knowledge that may be available from similar programs in the same locale.

Problem statement—describes the nature and extent of the problem that needs to be addressed.

Inputs, activities, outputs, outcomes, impacts—inputs required for implementing the program’s activities, describing the activities themselves, and then the immediate outputs. For some of the programs, the outputs are then intended to lead to outcomes that in turn are intended to lead to impacts [see page 15 for a more detailed description].

The Program Logic Model provides a good basis for the development of an M&E plan including the key questions stakeholders have about the program, the data needed to answer these, and the procedures that need to be put in place to ensure high quality data are collected in a timely fashion and used for decision-making.

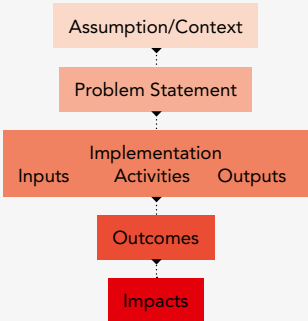
Program Logic Models are intended to represent the ideal. They describe the intended activities and their results if things go as planned. As such, these Models help to convey the way in which a program is supposed to run and what results can be expected barring unexpected barriers and changes. The reality of changes in funding, shifting priorities, unpredictable challenges, and other stumbling blocks can lead to program implementation and results that are different from what was intended. Logic Models can also be created after program implementation to describe what actually occurred and the results that were achieved, enabling comparison of planned and actual implementation and facilitating an assessment of why differences may have occurred.

KEY MESSAGE

Use a Program Logic Model to describe how the program elements work together to reach the program's goal and objectives and to identify M&E priorities

- Discuss, analyze, and justify the expected relationships of the program elements and identify feed-back loops to make program adjustments where needed
- Use Program Logic Models to compare planned and actual implementation and to assess why differences may have occurred

FIGURE 1. ELEMENTS OF A PROGRAM LOGIC MODEL



[Source: Global AIDS Program, GAP. Monitoring & Evaluation Capacity Building for Program Improvement. Field Guide. Atlanta: Centers for Disease Control and Prevention, GAP, 2003]

WHAT IS THE PURPOSE OF MONITORING AND EVALUATION?

What? Explains the fundamental utilization approach, the key purposes of M&E and how they overlap

For whom? The national, sub-national, and service-delivery levels

The first and perhaps the most important guiding principle for all M&E efforts is that information should be collected with the intention of being used for program improvement (Patton, 1997). Although data reporting for accountability remains an important priority to sustain funding, the capacity to collect pertinent, good quality, and timely data and to strategically use this information to improve programs is the cornerstone of an effective and efficient HIV response.

Program management is about making the correct decisions to achieve the program's goals and objectives. It involves good program planning (such as setting realistic goals and objectives and ensuring that program activities are in line with these), good program implementation (such as meeting timelines and ensuring the quality of the program) as well as good resource management (such as monitoring the use of funds and ensuring value for money) (GAP 2008). These management functions rely on the availability of the right kind of information about the program. There are many program aspects that one might like to collect data about. However, all data collection has costs in terms of time and often financial resources. It is important to decide what information is most needed to make necessary decisions about the program.

M&E data are also collected to justify the use of program resources vis-à-vis progress made and objectives achieved. Funders of programs are particularly interested in these data, as there is often a requirement for the program to show certain levels of performance in order to maintain the funders' support. Program beneficiaries are also keenly interested in knowing that the program targeted at them is effective and good value for money. Resources are always limited and there are many competing demands in public health. To avoid any duplication of effort and to reduce the data collection burden, data for accountability should be a sub-set of the data already collected for program management purposes. Sometimes, there may be a need for data serving a specific donor's needs, but those should be kept to a minimum so as not to overburden data collection resources.

Finally, there is also a moral obligation to share information and lessons learned for broader use. Data can be shared with program staff, funders, program beneficiaries, community members, policy makers, and other stakeholders (or people who have an interest in the program). Again, this should not involve additional data collection, but simply the sharing of program data relevant to each stakeholder's interests.

Figure 2 depicts a fundamental utilization approach, the key purposes of M&E, and how they should ideally overlap to maximize resources and reduce data collection burden.

KEY MESSAGE

Use a program-improvement, utilization-focused approach in collecting M&E data

- Focus on data needed for decision-making and good program management
- Incorporate data for accountability into existing data collection efforts
- Share data to ensure transparency and disseminate lessons learned for program improvement

FIGURE 2. THE PURPOSE OF MONITORING AND EVALUATION



[Source: Global AIDS Program, GAP. Monitoring & Evaluation Capacity Building for Program Improvement. Field Guide. Atlanta: Centers for Disease Control and Prevention, GAP, 2003; Rugg D, Peersman G, Carael M (Eds). Global advances in HIV/AIDS monitoring and evaluation. New Directions for Evaluation 103, 2004]

WHAT TYPES OF DATA NEED TO BE COLLECTED?

What? Explains a logical progression for collecting and analyzing monitoring data

For whom? The national, sub-national, and service-delivery levels

To determine the types of data needed, it is important to find out what stakeholders want to know about the program and thus, how data are intended to be used. There is a logical progression for collecting and analyzing the required information. The process starts with examining the required inputs (for example, financial resources) for implementing activities; the activities themselves (for example, HIV testing); and then the resulting outputs (i.e., immediate effects, such as number of people tested). Outputs are then intended to lead to outcomes (i.e., intermediate effects, such as risk behavior change) that in turn are intended to lead to impact (i.e., long-term effects, such as reduction in HIV incidence). The framework depicted in Figure 3 shows this paradigm with some illustrative indicators that may be collected.

The key program-relevant data are:

- **Inputs**—the financial, human, and material resources used in a program or intervention.
- **Activities**—actions taken or work performed through which inputs such as funds, technical assistance, and other types of resources are mobilized to produce specific outputs.
- **Outputs**—the immediate effects of program or intervention activities; the direct products or deliverables of program or intervention activities, such as the number of HIV counseling sessions com-

pleted, the number of people served, the number of condoms distributed.

- **Outcomes**—the intermediate effects of an intervention’s outputs, such as change in knowledge, attitudes, beliefs, behaviors.
- **Impacts**—the long-term, cumulative effects of programs or interventions over time on what they ultimately aim to change, such as a reduction in HIV infection, AIDS-related morbidity and mortality.

The data are organized into the following categories: program development data - collected during the assessment and planning stage; program-based data - collected during the implementation of a specific program; and, biological, behavioral, and social data - collected at the population or sub-population level; results at this level are rarely attributable to a single program or intervention. Sound evaluation logic dictates that it is essential to show that outputs have been achieved before starting to look for outcomes; and that adequate outcomes have been achieved before looking for impact. In addition to monitoring these types of data, select programs also conduct process and outcome evaluations and other special studies to complement the information obtained through monitoring data systems.

KEY MESSAGE

Determine data needed to monitor a program based on what the program is aiming to achieve and the nature and levels of the program

- Identify strategic program elements (inputs, activities, outputs, outcomes, impact) and their causal relationships or logical progression
- Not all programs are designed nor expected to directly change behavioral outcomes or disease impact
- Determine inter-dependencies between programs: one program's outputs may be another program's inputs

FIGURE 3. GENERIC M&E FRAMEWORK WITH ILLUSTRATIVE DATA

Assessment & Planning	Inputs (Resources)	Activities (Interventions, Services)	Outputs (immediate Effects)	Outcomes (Intermediate Effects)	Impacts (Long term Effects)
Situation Analysis Response Analysis Stakeholder Needs Resource Analysis Collaboration plans	Staff Funds Materials Facilities Supplies	Trainings Services Education Treatments Interventions	# Staff Trained # Condoms Provided # Clients Served # Tests Conducted	Provider Behavior Risk Behavior Service Use Clinical Outcomes Quality of Life	Social Norms HIV prevalence STI Incidence AIDS Morbidity AIDS Mortality Economic Impact
Program Development			Population-based Biological, Behavioral & Social Data		
Program-based Data			Population-based Biological, Behavioral & Social Data		

In addition to monitoring these data types, select programs conduct process & outcome evaluations

[Source: Rugg D, Peersman G, Carael M (Eds). Global advances in HIV/AIDS monitoring and evaluation. New Directions for Evaluation 103, 2004]

WHAT ARE KEY RESPONSIBILITIES IN MONITORING AND EVALUATION?

What? Explains who needs to be involved in which M&E activities in the national M&E system

For whom? The national, sub-national, and service-delivery levels

Not all programs and projects need to conduct all types of M&E activities that may be part of the national M&E system. However, all programs and projects are expected to participate in basic levels of M&E, including assessing needs and monitoring inputs and outputs once implementation begins. Expectations to conduct additional levels of M&E vary by the nature, size and maturity of the program or project. First, programs need to use their resources wisely, so, the extent and costs of M&E activities should be commensurate to the size, reach, and cost of programs. In short, M&E should never compromise or overtake program implementation⁷. Second, not all M&E activities are appropriate for programs or the stages of development at which programs happen to be at a given time. Evaluation logic suggests a staged approach. That is, most programs that conduct outcome evaluations should have implemented some level of process evaluation prior to this more rigorous assessment. Also, input and output monitoring data are essential for informing process evaluation, and outcome monitoring data are pre-requisite to outcome evaluation (Rugg and Mills, 2000; Rugg et al., 2004).

7 As a rule of thumb: M&E should account for 5% to 10% of the total programmatic budget.

Figure 4 (also referred to as the 'M&E pipeline' diagram) reflects the varying expectations for M&E among different programs and projects. The framework suggests that:

- All programs (national, sub-national and service-delivery levels) and projects should conduct basic program input and output monitoring for the purposes of good program management and for selecting a few indicators to report to key stakeholders to whom the program is accountable.
- Most programs and projects should also periodically conduct some basic process evaluations. This component often includes implementation assessments, quality assessments, basic operations research, case studies, and cost analyses.
- Only some programs (usually the larger national or community-based programs) will be able to conduct outcome monitoring and rigorous outcome evaluations, not only because of the additional time, expertise, and resources that these methods require, but also because they are only relevant to the more established programs (outcome monitoring) or programs for which there is insufficient evidence that they work (outcome evaluation) as they are new or innovative or simply have never been evaluated.
- Only in a few situations would impact evaluation be warranted in which an attempt is made to attribute long-term effects (impact) to a specific program. These are usually done at national or sub-national levels under the auspices of the government as they require large population sizes and considerable resources. However, monitoring the unlinked distal impacts (impact monitoring) can feasibly be done through surveillance systems and repeated population-based biological and behavioral surveys. All programs should be aware of these national and sub-national data and know how these data

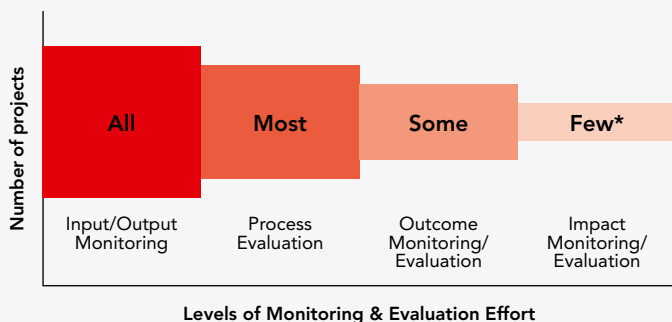
are relevant to their program. Comparing local program results with national and sub-national data provides a basis for determining program effectiveness. Such data also allows for determining the overall success or collective effectiveness of all programs that constitute the national HIV response. At this stage, triangulation of multiple data sources is important (see An Introduction to Triangulation in the UNAIDS M&E Fundamentals Series, 2009). Long-term effects should be interpreted in the context of results from process and outcome evaluations and from existing survey data and output monitoring.

KEY MESSAGE

Be strategic: not every program needs to implement all types of M&E activities to be part of the national M&E system

- Ensure M&E resources are commensurate to the size, reach, and cost of the program
- Ensure M&E activities are appropriate for the stage of development of the program
- Ensure the basics are covered: All programs need to undertake input and output monitoring for good program management
- Interpret long-term effects (impact) in the context of results from process and outcome evaluations

**FIGURE 4. STRATEGIC PLANNING FOR M&E:
SETTING REALISTIC EXPECTATIONS**



* Diseases impact monitoring is synonymous with disease surveillance and should be part of all national-level efforts, but cannot be easily linked to specific projects

[Source: Global AIDS Program, GAP. Monitoring & Evaluation Capacity Building for Program Improvement. Field Guide. Atlanta: Centers for Disease Control and Prevention, GAP, 2003; Rugg D, Peersman G, Carael M (Eds). Global advances in HIV/AIDS monitoring and evaluation. New Directions for Evaluation 103, 2004]

WHAT ARE THE BASIC QUESTIONS A NATIONAL M&E SYSTEM SHOULD ADDRESS?

What? Explains the fundamental questions a national HIV response should be able to answer and the associated data collection methods that need to be put in place

For whom? The national level

The investigation of any public health problem starts with asking pertinent questions that serve to initiate and organize the response: ‘What is the nature of the problem, who is it affecting, and what is the extent of it?’; ‘What factors are contributing to the problem and, what can be done to alleviate it?’. Once an appropriate programmatic response has been determined, questions are focused on: ‘Is the program working and, is the program reaching enough people to reduce the impact of the problem or, ideally, eliminate it?’ Figure 5 provides an overview of the key questions about HIV and AIDS, and the variety of data collection methods⁸ that need to be put in place to gather the right information and as such represents a basic organizing framework for HIV M&E. These basic questions provide a simple and pragmatic way to organize the resources necessary to build a comprehensive national M&E system (Rugg et al., 2004).

Each step in this diagram (also known as the “M&E staircase” diagram) is the foundation for the next step in the investigative or analytic process:

⁸ See the Glossary starting on page 30 for definitions.

- The first step is problem identification. In the case of HIV and AIDS, we initially seek to identify the nature, magnitude, and course of the overall epidemic and related sub-epidemics. This information typically comes from surveillance systems, special surveys, and epidemiological studies. This first step may also include questions about the nature and magnitude of the programmatic response to date. Situation analysis, gap analysis, and response analysis are the typical information-gathering activities⁹ that seek information about program status from, for example, related documents, informant interviews, and field observations.
- In the second step, we seek to determine the contributing factors and determinants of risk for infection. This information is usually obtained from knowledge, attitude, and behavior surveys; epidemiological risk factor studies; and determinants research. The results help in the targeting and design of appropriate interventions.
- The third step focuses on what interventions might work under ideal circumstances in rigorous research-driven protocols (efficacy trials) or under specific field conditions (effectiveness studies). Typical evaluation methods include intervention outcome studies with control or comparison groups, operations research, health services research, formative research, and other special studies, including mixed methods designs where both rigorous qualitative and quantitative methods are used.
- The fourth step involves determining what specific interventions are needed and what resources need to be available to implement them. This question is usually addressed in a gap or needs

9 The methods used in this first step are also used in the last step when we determine overall impact and collective effectiveness of combined program efforts at the national level, thus closing the loop in the iterative process of program planning, implementation, and evaluation.

analysis using data from existing programs or from the national health management information system. It is particularly important that this step is based on the previous step so that only interventions with evidence of effectiveness are implemented or scaled up. It is also important to use the epidemiological data gathered earlier to ensure interventions are targeted at the populations and geographical areas of need.

- The fifth step seeks to assess the quality of program implementation. Process monitoring, process evaluations, and other forms of quality assessments (such as supervisory visits, observations, using standards and checklists) are typically performed at this step.
- Similarly, the sixth step seeks to examine the extent of program outputs, answering questions of “how many” and whether the program is implemented as planned. Typically this information is routinely collected from health and other management information systems.
- The seventh step examines program outcomes and answers questions about program effectiveness. Outcome evaluations are employed at this stage to determine if, and by how much, programs achieved their intended outcomes.
- The final step focuses on determining overall program effects and collective effectiveness. Building on the answers to the questions at previous steps, information from population-based surveys and other surveillance activities are once again used to answer these questions. Triangulation methodologies are typically used here (see *An Introduction to Triangulation in the UNAIDS M&E Fundamentals Series, 2009*).

In addition, the systematic collection of program-related qualitative data assists in interpreting program outcomes and impact and contributes to the understanding of what is or is not working and how to improve program performance. Such information could also identify unexpected results and community perceptions that influence program results but cannot be answered using indicator trend data alone. It is the combination of these complementary data collection activities that help to answer the simple, yet fundamental questions that must be answered in any public health response, namely: “Are we doing the right things?”; “Are we doing them right?”; and, “Are we doing them on a large enough scale to make a difference?”.

While it is ideal to go through each of the steps in their logical order, this is often not possible in the real world. The basic message here is that it is important to gather information in each of these areas in order to have a complete picture of the HIV epidemic (or other health problem) and the effectiveness of the response. If a step is missed, the overall effectiveness of the HIV response may be diminished. Thus, the ultimate goal is to be able to answer all questions (i.e., work through all steps) regardless of the order in which they are tackled.

KEY MESSAGE

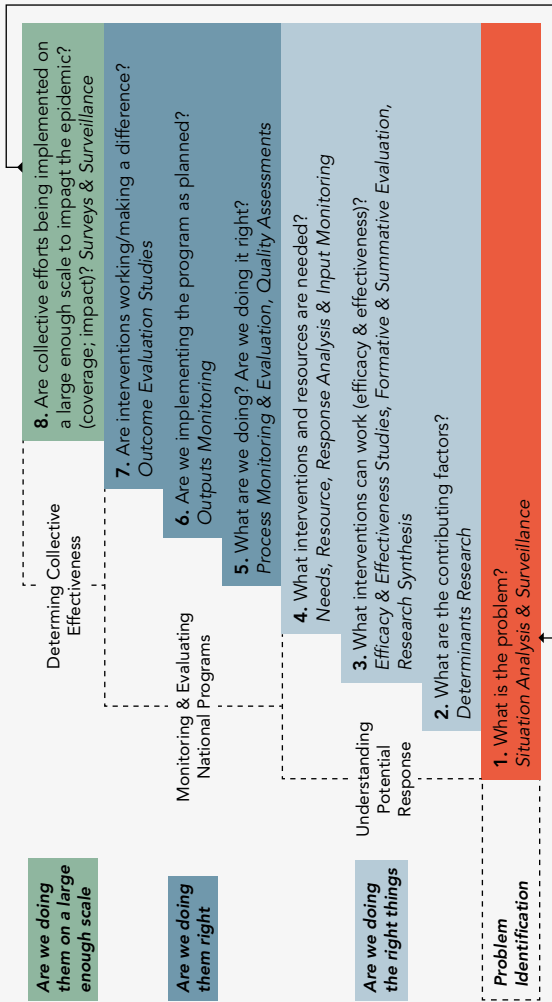
Approach information needs from a public health questions perspective, i.e., one that provides the essential data necessary to halt and reverse the health problem in an effective and efficient manner

Approach data collection activities by first planning how the data will be used for good program management

Develop a plan for what data is needed and regularly revisit it to address any data gaps

Work iteratively and build on what is already in existence before launching new efforts

FIGURE 5. A PUBLIC HEALTH QUESTIONS APPROACH TO HIV AND AIDS MONITORING AND EVALUATION



[Source: Rugg D, Peersman G, Carael M (Eds). Global advances in HIV/AIDS monitoring and evaluation. New Directions for Evaluation 103, 2004]

WHAT DOES A FUNCTIONAL NATIONAL M&E SYSTEM LOOK LIKE?

What? Explains the main components of a national M&E system that need to be in place and work to an acceptable standard for the overall system to function effectively

For whom? The national level

Understanding a complex problem such as the HIV epidemic and determining the effectiveness and efficiency of the programmatic response requires a sustainable, comprehensive, strategic, multi-method M&E system. Such a system should effectively integrate the information from monitoring key indicators with findings from selected evaluation studies and qualitative methods to help us understand better the progress and success of the overall HIV response. Establishing one national HIV M&E system (also called for in the 'Three Ones'¹⁰) is challenging since the system needs to function across different sectors (e.g., Ministry of Health, Ministry of Education, Ministry of Social Welfare), different service delivery areas (e.g., prevention of mother-to-child transmission of HIV, antiretroviral treatment, palliative care), and different levels of implementation (national, sub-national, and service-delivery levels). Establishing such a system takes time. It is important to build on what is already in existence, and to first address the necessary human capacity and partnerships to support the collection of good quality data. Most importantly, it is crucial not to lose sight of the ultimate purpose of

¹⁰ The 'Three Ones' refer to: one national AIDS authority, one national AIDS strategic plan, and one national M&E system. See: UNAIDS. "Three Ones" key principles: "Coordination of National Responses to HIV/AIDS" Guiding principles for national authorities and their partners. Geneva: UNAIDS, 2004.

M&E: using data for decision-making. Hence, data use should be the central element of any M&E system.

Figure 6 presents the main components of the HIV M&E system. These 12 components are not 12 steps intended to be implemented sequentially; rather, 12 components that are needed and working at an acceptable level for the national M&E system to function effectively. M&E activities take place in an organizational context which includes factors that can inhibit or encourage sound practice. Therefore, the organizational structures (human resources, partnerships, plans) of the national HIV M&E system are as important as the technical aspects of M&E. However, not all components need to be implemented at all levels of the system; what is relevant at the national level, for example, may not be relevant at the service delivery level. Clearly, this is a blueprint for an ideal system and will take time to put in place; but even a partial system can generate important and useful information while a comprehensive system is under development.

People, partnerships and planning

1. Organizational structures with HIV M&E functions

For the national HIV M&E system to function effectively, a variety of organizations need to work together at different levels. Ideally, the system should be coordinated by one organization, such as the national AIDS coordinating authority (NAC) or its equivalent. In addition to human resources, there is also a need for financial resources, as well as basic infrastructure, equipment and supplies.

2. Human capacity for HIV M&E

Not only is it necessary to have dedicated and adequate numbers of M&E staff, it is essential for these staff to have the right skills for the work. Human capacity building should focus on all levels of the system. M&E capacity building should focus not only on the techni-

cal aspects of M&E, but also address skills in leadership, financial management, facilitation, supervision, advocacy and communication.

3. Partnerships to plan, coordinate, and manage the HIV M&E system

It is important that all stakeholders in HIV M&E work together and avoid duplication of effort. This requires establishing partnerships and formal communication and collaboration mechanisms.

4. National multi-sectoral HIV M&E plan

A wide variety of stakeholders should participate in the development and regular updating of the national M&E plan, including sub-national authorities and representatives from civil society. The objectives of the national M&E plan should be explicitly linked to the HIV National Strategic Plan to ensure that relevant data are collected to measure the progress in the country's HIV response. The national M&E plan should describe a 3-5 year implementation strategy for the components of the M&E systems, indicate resource requirement estimates and outline a strategy for resource mobilization. The national M&E plan should be reviewed and updated regularly to make adjustments in data collection needs associated with revisions of the National Strategic Plan, and to strengthen M&E system performance based on periodic M&E assessments.

5. Annual costed national HIV M&E work plan

For the national HIV M&E plan to be operationalised, an annual costed national M&E work plan needs to be developed that describes the priority M&E activities for the year with defined responsibilities for implementation, costs for each activity, identified funding, and a clear timeline for delivery of outputs. This work plan represents the joint work plan that integrates the HIV M&E activities of all relevant stakeholders.

6. *Advocacy, communications, and culture for HIV M&E*

It is important to simplify and demystify M&E, create a supportive M&E culture, and reduce any fear or negative connotations regarding M&E. A communication and advocacy strategy for M&E can help to achieve these objectives. The strategy needs to be multi-dimensional, with tailored messages for different audiences, including the general public.

Collecting, verifying, and analyzing data

7. *Routine HIV program monitoring*

The national and sub-national authorities need a routine system to track the demand for and supply of HIV services. Standardized data from all providers, including facility and community-based HIV service providers, should be collected on a routine basis. To guide decision-making at all levels, the data needs of different stakeholders should be determined and the data made available in a timely fashion.

8. *Surveys and surveillance*

Biological and behavioral surveillance and surveys are essential to determine the drivers and the spread of the HIV epidemic in each country. HIV surveillance and HIV surveys may focus on the general population, most-at-risk populations or both. The need for surveys, as well as, the specific focus and content of each survey should be considered within the context of each country's epidemic. Protocols and data collection tools should be based on international standards to obtain high-quality data and to ensure that results from repeated surveys can be compared over time within a given country, as well as across countries. This information should be complemented with data obtained from other social and behavioral science methods including rigorous qualitative data.

9. National and sub-national HIV databases

An information system consists of the infrastructure (hardware), a database (software), and skilled individuals to use the databases to capture, verify, transfer, analyze, and share data. Clear roles and responsibilities need to be established at national, sub-national, and service-delivery levels to ensure an appropriate and timely data flow between the different levels. A national HIV database is not a prerequisite for a functional national HIV M&E system. However, an electronic data management system allows for the information to be captured in a way that facilitates data verification, data sharing, and data use.

10. Supportive supervision and data auditing

For sound decision-making, it is important to be confident about data quality. Regular data quality checks and provision of feed-back are important mechanisms to improve or sustain data quality.

Supportive supervision refers to overseeing and directing the performance of others and transferring the knowledge, attitudes, and skills that are essential for successful M&E of HIV activities. Data auditing is the process of verifying the completeness and accuracy of reported aggregate HIV program data.

11. HIV evaluation and research

Appropriate use of evaluation and research data ensures that the planning of the HIV response is based on the best available evidence and guides ongoing program improvement. Establishing a national process for identifying evaluation and research gaps relevant to the National Strategic Plan and for coordinating partners helps ensure that evaluation studies are relevant to the country's needs and provide actionable results; that such efforts are coordinated to avoid duplication of effort; and that study results are shared widely and available for use in decision-making within the country of origin as

well as beyond, where relevant (see A National Evaluation Agenda for HIV and AIDS in the UNAIDS M&E Fundamentals Series, 2009).

Using data for decision-making

12. Data dissemination and use

The most important reason for conducting M&E is to provide the data needed for guiding policy formulation and program operations. A detailed data use plan should be included in the national M&E plan; this plan should link data needs and data collection efforts with specific information products for different audiences, as well as a timetable for dissemination. It should also include activities to encourage data use. A functional M&E system collates and presents the data in a way that facilitates data use at all levels, including the general public and beneficiaries of HIV services.

KEY MESSAGE

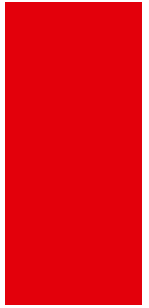
Build on what is already in existence and first address human capacity and strategic partnerships

- Define and regularly assess the expected performance (objectives, results) of the M&E system
- Work towards a fully functional national HIV M&E system by putting in place all components and ensuring they work to an acceptable standard, but be pragmatic as this will take time to accomplish

FIGURE 6. ORGANIZING FRAMEWORK FOR A FUNCTIONAL NATIONAL M&E SYSTEM



[Source: UNAIDS. Organising Framework for a Functional National HIV Monitoring and Evaluation System. Geneva: UNAIDS, 2008a]

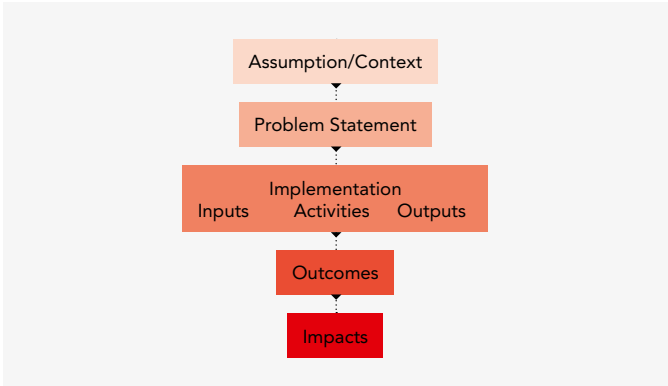


SUMMARY

This book introduced a common language and explained six concepts and frameworks that form the foundation of HIV M&E. It is hoped that this will help foster a better overall understanding of M&E and help guide better M&E plans and more sustainable M&E activities and systems, which in turn will generate the essential strategic information needed to improve specific programs and guide the overall HIV response. Below is a concise summary of the messages contained in the six organizing concepts and frameworks address.

Main Message #1

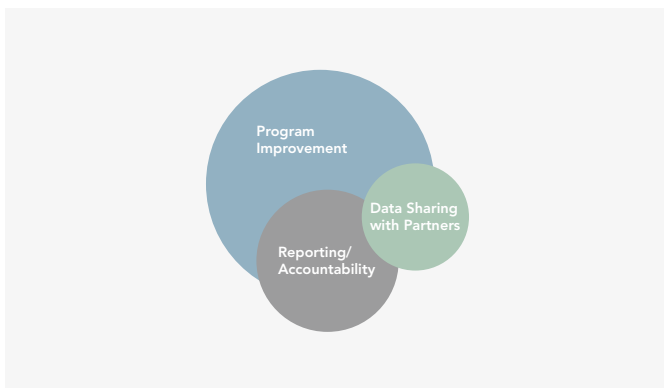
Before M&E can be approached, the program needs to be clearly described. A Program Logic Model describes the main elements of a program and how these work together to reach the program’s goal. A Program Logic Model facilitates the planning and execution of the program, as well as the identification of key questions about the program and the data to be collected for program management and improvement.



[Source: GAP, 2003]

Main Message #2

Data should be collected with the intention of being used. The primary purpose of M&E data should be program improvement. Data for accountability remain an important priority but are ideally already collected as part of the data needed for program improvement. To maximize learning and to ensure wider accountability, it is essential to share key information with partners, program beneficiaries and the wider public.



[Source: GAP, 2003]

Main Message #3

Typically, the types of data needed to measure program progress and achievements are: inputs required for implementing the program's activities, describing the activities themselves, and their immediate outputs. The outputs are then intended to lead to outcomes that in turn are intended to lead to impacts. Evaluation logic dictates that it is essential to show that outputs have been achieved before starting to look for outcomes; and that adequate outcomes have been achieved before looking for impact.

Assessment & Planning	Inputs (Resources)	Activities (Interventions, Services)	Outputs (Immediate Effects)	Outcomes (Intermediate Effects)	Impacts (Long term Effects)
Situation Analysis	Staff	Trainings	# Staff Trained	Provider Behavior	Social Norms
Response Analysis	Funds	Services	# Condoms Provided	Risk Behavior	HIV prevalence
Stakeholder Needs	Materials	Education	# Clients Served	Service Use	STI Incidence
Resource Analysis	Facilities	Treatments	# Tests Conducted	Clinical Outcomes	AIDS Morbidity
Collaboration plans	Supplies	Interventions		Quality of Life	AIDS Mortality Economic Impact

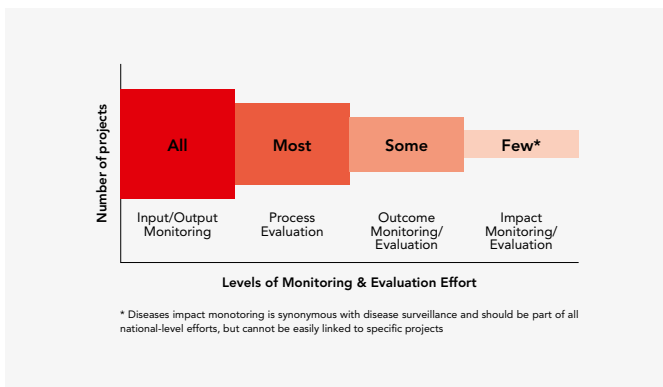
Program Development **Program-based Data** **Population-based Biological, Behavioral & Social Data**

In addition to monitoring these data types, select programs conduct process & outcome evaluations

[Source: Rugg et al., 2004]

Main Message #4

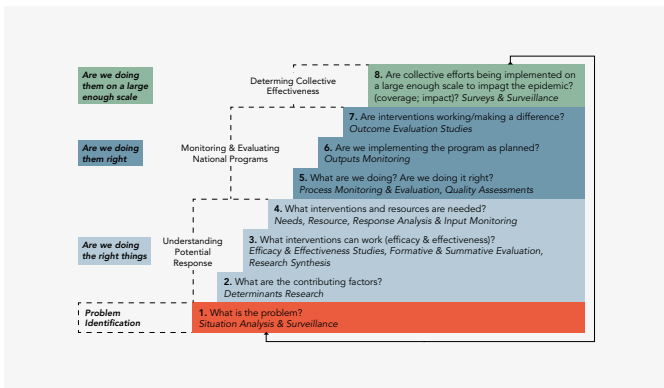
Not all programs need to conduct all types of M&E activities. All programs are expected to conduct routine monitoring of inputs and outputs. Most programs should also conduct some basic process evaluations informed by data from input and output monitoring. Only some programs will be able to conduct outcome monitoring and outcome evaluations. Evaluation logic dictates that programs that conduct outcome evaluations should have implemented some level of process evaluation and have done some outcome monitoring first. Only in a few situations is impact evaluation warranted. Impact monitoring is the responsibility of the national level.



[Source: Rugg et al., 2004]

Main Message #4

Asking key questions about the HIV epidemic and the response is a pragmatic approach to taking stock of what is known and what data gaps need to be addressed. A range of M&E methods need to be employed to obtain data to identify and describe the problem; understand the potential response; monitor and evaluate the national program and, ultimately determine the effectiveness of the response in reducing the epidemic or health problem. This is typically the responsibility of the national level.



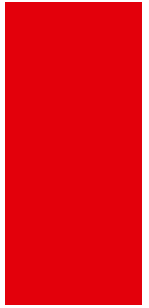
[Source: Rugg et al., 2004]

Main Message #5

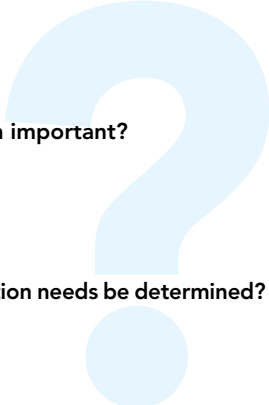
Taking a systems perspective, this framework identifies the main M&E system components that need to be present and work to an acceptable standard for the national M&E system to function effectively. The organizational structures of the system are as important as the technical aspects, but not every component needs to be implemented at each level of the system. As it will take time to build such a comprehensive system, it is important to systematically build on what already exists, guided periodically by assessments of M&E system performance that lead to coordinated plans for improvement and multi-agency technical assistance.

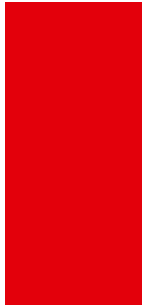


[Source: UNAIDS, 2008a]



QUESTIONS TO CONSIDER

- **What is the difference between monitoring and evaluation?**
 - **Why is monitoring and evaluation important?**
 - **How can specific data and information needs be determined?**
 - **How can priorities be set for monitoring and evaluation activities?**
 - **What determines the type of monitoring and evaluation that a program should undertake?**
 - **How do monitoring and evaluation responsibilities at the national level differ from those at the service delivery level?**
- 



GLOSSARY

Accountability. Responsibility for the use of resources and the decisions made, as well as the obligation to demonstrate that work has been done in compliance with agreed-upon rules and standards and to report fairly and accurately on performance results vis-a-vis mandated roles and/or plans.

Activity. Actions taken or work performed through which inputs such as funds, technical assistance, and other types of resources are mobilized to produce specific outputs.

Audit. An independent, objective quality assurance activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to assess and improve the effectiveness of risk management, control and governance processes.

Baseline. The status of services and outcome-related measures such as knowledge, attitudes, norms, behaviors, and conditions before an intervention, against which progress can be assessed or comparisons made.

Benchmark. A reference point or standard against which performance or achievements can be assessed.

Beneficiaries. The individuals, groups, or organizations, whether targeted or not, that benefit directly or indirectly, from the intervention.

Coverage. The extent to which a program/intervention is being implemented in the right places (geographic coverage) and is reaching its intended target population (individual coverage).

Data. Specific quantitative and qualitative information or facts that are collected and analyzed.

Effectiveness. The extent to which a program/intervention has achieved its objectives under normal conditions in a real-life setting.

Efficacy. The extent to which an intervention produces the expected results under ideal conditions in a controlled environment.

Efficiency. A measure of how economically inputs (resources such as funds, expertise, time) are converted into results.

Evaluation. The rigorous, scientifically-based collection and analysis of information about program/intervention activities, characteristics, and outcomes that determine the merit or worth of the program/intervention. Evaluation studies provide credible information for use in improving programs/interventions, identifying lessons learned, and informing decisions about future resource allocation.

Epidemiology. The study of the magnitude, distribution and determinants of health-related conditions in specific populations, and the application of the results to control health problems.

Facility survey. A survey of a representative sample of facilities that generally aims to assess the readiness of all elements required to provide services and other aspects of quality of care (e.g., basic infrastructure, drugs, equipment, test kits, client registers, trained staff). The units of observation are facilities of various types and levels in the same health system. The content of the survey may vary but typically includes a facility inventory and, sometimes, health worker interviews, client exit interviews, and client-provider observations.

Goal. A broad statement of a desired, usually longer-term, outcome of a program/intervention. Goals express general program/intervention intentions and help guide the development of a program/

intervention. Each goal has a set of related, specific objectives that, if met, will collectively permit the achievement of the stated goal.

Health information system (HIS). A data system, usually computerized, that routinely collects and reports information about the delivery and cost of health services, and patient demographics and health status.

Impact. The long-term, cumulative effect of programs/interventions over time on what they ultimately aim to change, such as a change in HIV infection, AIDS-related morbidity and mortality. Note: Impacts at a population-level are rarely attributable to a single program/intervention, but a specific program/intervention may, together with other programs/interventions, contribute to impacts on a population.

Impact evaluation. A type of evaluation that assesses the rise and fall of impacts, such as disease prevalence and incidence, as a function of HIV programs/interventions. Impacts on a population seldom can be attributed to a single program/intervention; therefore, an evaluation of impacts on a population generally entails a rigorous design that assesses the combined effects of a number of programs/interventions for at-risk populations.

Impact monitoring. Tracking of health-related events, such as the prevalence or incidence of a particular disease; in the field of public health, impact monitoring is usually referred to as “surveillance”.

Incidence. The number of new cases of a disease that occur in a specified population during a specified time period.

Indicator. A quantitative or qualitative variable that provides a valid and reliable way to measure achievement, assess performance, or reflect changes connected to an intervention.

Note: Single indicators are limited in their utility for understanding program effects (i.e., what is working or is not working, and why?). Indicator data should be collected and interpreted as part of a set of indicators. Indicator sets alone can not determine the effectiveness of a program or collection of programs; for this, good evaluation designs are necessary.

Inputs. The financial, human, and material resources used in a program/intervention.

Input and output monitoring. Tracking of information about program/intervention inputs (i.e., resources used in the program/intervention) and program/intervention outputs (i.e., results of the program/intervention activities).

Note: Data on inputs and outputs usually exist in program/intervention documentation (e.g., activity reports, logs) and client records which compile information about the time, place, type and amount of services delivered, and about the clients receiving the services.

Intervention. A specific activity or set of activities intended to bring about change in some aspect(s) of the status of the target population (e.g., HIV risk reduction, improving the quality of service delivery).

Logical framework. Management tool used to improve the design of interventions. It involves identifying strategic elements (inputs, outputs, activities, outcomes, impact) and their causal relationships, indicators, and the assumptions of risks that may influence success and failure. It thus facilitates planning, execution, and monitoring and evaluation of an intervention.

Monitoring. Routine tracking and reporting of priority information about a program / project, its inputs and intended outputs, outcomes and impacts.

M&E plan. A multi-year implementation strategy for the collection, analysis and use of data needed for program / project management and accountability purposes. The plan describes the data needs linked to a specific program / project; the M&E activities that need

to be undertaken to satisfy the data needs and the specific data collection procedures and tools; the standardised indicators that need to be collected for routine monitoring and regular reporting; the components of the M&E system that need to be implemented and the roles and responsibilities of different organisations / individuals in their implementation; how data will be used for program / project management and accountability purposes. The plan indicates resource requirement estimates and outlines a strategy for resource mobilization.

Note: A national HIV M&E plan is a multi-sectoral, 3-5 year implementation strategy which is developed and regularly updated with the participation of a wide variety of stakeholders from national, sub-national, and service delivery levels.

M&E work plan. An annual costed M&E plan that describes the priority M&E activities for the year and the roles and responsibilities of organizations / individuals for their implementation; the cost of each activity and the funding identified; a timeline for delivery of all products / outputs. The work plan is used for coordinating M&E activities and assessing progress of M&E implementation throughout the year.

Note: A national HIV M&E work plan is an annual plan which is developed with the participation of those stakeholders that have roles and responsibilities for the M&E activities identified in the work plan.

Objective. A statement of a desired program/intervention result that meets the criteria of being Specific, Measurable, Achievable, Realistic, and Time-phased (SMART).

Outcome monitoring. Tracking of variables that have been adopted as valid and reliable measures (i.e., indicators) of the desired program/intervention outcomes. Outcome monitoring does not infer causality; changes in outcomes may be attributable to multiple factors, not just a specified program/intervention.

Note: With national AIDS programs, outcome monitoring is typically conducted through population-based surveys (i.e., representative of the target population, not necessarily the general population).

Outcome—short-term and medium-term effect of an intervention's outputs, such as change in knowledge, attitudes, beliefs, behaviors.

Outcome evaluation. A type of evaluation that determines if, and by how much, intervention activities or services achieved their intended outcomes. An outcome evaluation attempts to attribute observed changes to the intervention tested. Note: An outcome evaluation is methodologically rigorous and generally requires a comparative element in its design, such as a control or comparison group, although it is possible to use statistical techniques in some instances when control/comparison groups are not available (e.g., for the evaluation of a national program).

Outputs. The results of program/intervention activities; the direct products or deliverables of program/intervention activities, such as the number of HIV counseling sessions completed, the number of people served, the number of condoms distributed.

Performance. The degree to which an intervention or organization operates according to specific criteria/standards/guidelines or achieves results in accordance with stated goals or plans.

Population-based survey. A type of survey which is statistically representative of the target population, such as the AIDS Indicator Survey (AIS), the Demographic and Health Survey (DHS).

Prevalence. The total number of persons living with a specific disease or condition at a given time.

Program. An overarching national or sub-national response to a disease. A program generally includes a set of interventions marshaled to attain specific global, regional, country, or subnational objectives; involves multiple activities that may cut across sectors, themes and/or geographic areas.

Process evaluation. A type of evaluation that focuses on program/intervention implementation, including, but not limited to access to services, whether services reach the intended population, how services are delivered, client satisfaction and perceptions about needs and services, management practices. In addition, a process evaluation might provide an understanding of cultural, socio-political, legal, and economic contexts that affect implementation of the program/intervention.

Program evaluation. A study that intends to control a health problem or improve a public health program or service. The intended benefits of the program are primarily or exclusively for the study participants or the study participants' community (i.e., the population from which the study participants were sampled); data collected are needed to assess and/or improve the program or service, and/or the health of the study participants or the study participants' community. Knowledge that is generated does not typically extend beyond the population or program from which data are collected.

Program records. Program documentation (e.g., activity reports, logs) and client records which compile information about program inputs (i.e., resources used in the program) and program outputs (i.e., results of the program activities). Examples include budget and expenditure records, logs of commodities purchased and distributed, client records which compile information about the time, place, type and amount of services delivered, and about the clients receiving the services.

Project. An intervention designed to achieve specific objectives within specified resources and implementation schedules, often within the framework of a broader program.

Qualitative data. Data collected using qualitative methods, such as interviews, focus groups, observation, and key informant interviews. Qualitative data can provide an understanding of social situations and interaction, as well as people's values, perceptions, motivations, and reactions. Qualitative data are generally expressed in narrative form, pictures or objects (i.e., not numerically).

Note: The aim of a qualitative study is to provide a complete, detailed description.

Quality assurance. Planned and systematic processes concerned with assessing and improving the merit or worth of an intervention or its compliance with given standards.

Note: Examples of quality assurance activities include appraisal, results based management reviews, evaluations.

Quantitative data. Data collected using quantitative methods, such as surveys. Quantitative data are measured on a numerical scale, can be analysed using statistical methods, and can be displayed using tables, charts, histograms and graphs.

Note: The aim of a quantitative study is to classify features, count them, and construct statistical models in an attempt to explain what is observed.

Relevance. The extent to which the objectives, outputs, or outcomes of an intervention are consistent with beneficiaries' requirements, organisations' policies, country needs, and/or global priorities.

Reliability. Consistency or dependability of data collected through the repeated use of a scientific instrument or a data collection procedure used under the same conditions.

Results. The outputs, outcomes, or impacts (intended or unintended, positive and/or negative) of an intervention.

Results based management (RBM). A management strategy focusing on performance and achievement of outputs, outcomes and impacts.

Second-generation surveillance. HIV surveillance that not only tracks HIV prevalence but also uses additional sources of data to increase the understanding of trends of the epidemic over time. It includes biological surveillance of HIV and other sexually transmitted infections as well as systematic surveillance of the behaviours that spread them.

Sentinel surveillance. Ongoing, systematic collection and analysis of data from certain sites (e.g., hospitals, health centers, ante-natal clinics) selected for their geographic location, medical specialty, and populations served, and considered to have the potential to provide an early indication of changes in the level of a disease.

Stakeholder. A person, group, or entity who has a direct or indirect role and interest in the goals or objectives and implementation of a program/intervention and/or its evaluation.

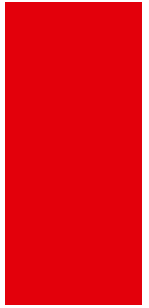
Surveillance. The ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health. Surveillance data can help predict future trends and target needed prevention and treatment programs.

Target. The objective a program/intervention is working towards, expressed as a measurable value; the desired value for an indicator at a particular point in time.

Target group. Specific group of people who are to benefit from the result of the intervention.

Validity. The extent to which a measurement or test accurately measures what is intended to be measured

[Source: UNAIDS. Glossary of Monitoring and Evaluation Terms. Geneva: UNAIDS, 2008b]



LEARNING MORE ABOUT MONITORING AND EVALUATION

There are numerous publications on M&E and a range of websites dedicated to / including M&E documents. To list just a few websites linked to major multi- and bi-lateral agencies and international organizations [in alphabetical order; document focus and availability as indicated]:

African Evaluation Association (AfrEA):

<http://www.afrea.org/content/index.cfm?navID=5&itemID=324>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

AIDS ACTION EUROPE:

<http://www.aidsactioneurope.org/index.php?id=143>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund):

http://www.theglobalfund.org/en/links_resources/library/ http://www.theglobalfund.org/en/performance/monitoring_evaluation/

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

Global HIV M&E Information:

<http://www.globalhivmeinfo.org>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

International Development Resource Centre (IDRC):

http://www.idrc.ca/en/ev-26266-201-1-DO_TOPIC.html

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

International Organisation for Cooperation in Evaluation (IOCE):

<http://internationalevaluation.com/index.shtml>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

Joint United Nations Programme on HIV/AIDS (UNAIDS):

<http://www.unaids.org/en/KnowledgeCentre/Resources/Publications/>

<input checked="" type="radio"/> HIV M&E focus	<input type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

Organization for Economic Co-operation and Development (OECD):

<http://www.oecd.org/pages/0,2966,>

[en_35038640_35039563_1_1_1_1_1,00.html](http://www.oecd.org/pages/0,2966,en_35038640_35039563_1_1_1_1_1,00.html)

<http://www.oecd.org/document/40/0,3343,>

[en_21571361_34047972_34702568_1_1_1_1_1,00.html](http://www.oecd.org/document/40/0,3343,en_21571361_34047972_34702568_1_1_1_1_1,00.html)

<input type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

Portail francophone de l'évaluation:

<http://evaluation.francophonie.org/>

<input type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

PREVAL (Monitoring and Evaluation for Rural Development):

<http://www.preval.org/>

<input type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

United Kingdom Department for International Development (DFID):

<http://www.dfid.gov.uk/aboutdfid/>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

United Nations Children's Fund (UNICEF):

<http://www.unicef.org/evaldatabase/index.html>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

United Nations Evaluation Group (UNEG)

<http://www.uneval.org/index.cfm>

<input type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

United States Agency for International Development (USAID)

<http://evalweb.usaid.gov/>

<input type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

United States Centers for Disease Control and Prevention (CDC):

<http://www.cdc.gov/nchstp/od/gap/default.html>

<http://www.cdc.gov/eval/resources.htm>

<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

World Bank (WB)

<http://www.worldbank.org/ieg/>

<input type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

<http://gametlibrary.worldbank.org>

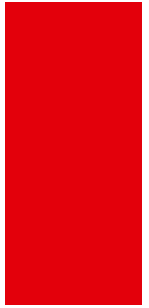
<input checked="" type="radio"/> HIV M&E focus	<input checked="" type="radio"/> M&E Focus	<input type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

World Health Organization (WHO):

<http://www.who.int/hiv/pub/en/>

<input checked="" type="radio"/> HIV M&E focus	<input type="radio"/> M&E Focus	<input checked="" type="radio"/> Other Focus
<input checked="" type="radio"/> Full Text	<input type="radio"/> Abstract	<input checked="" type="radio"/> Free download

[Source: Inventory of electronic HIV and M&E resources. Monitoring and Evaluation Reference Group, M&E Capacity-building Technical Working Group, M&E Resource Library Task Team. Geneva: UNAIDS, 2008c]



REFERENCES

CIDA, Canadian International Development Agency. *Results-based management in Canadian International Development Agency*. Gatineau: CIDA, 1999.

CDC, Centers for Disease Control and Prevention. *Framework for program evaluation in public health*. MMWR, 1999; 48(No. RR-11):1-40.

DeLay P, Massoud N, Rugg D, Stanecki K, Carael M. Strategic information for HIV programmes. In: *The HIV pandemic. Local and global implications*. Beck E, Mays N, Whiteside A, Zuniga J. (Eds). Oxford: Oxford University Press, 2006: pp.146-163.

DAC, Development Assistance Committee. *Results-based management in the development co-operation agencies: a review of experience. Background report*. Paris: DAC, Working Party on AID Evaluation, 2001.

GAP, Global AIDS Program. *Monitoring & Evaluation Capacity Building for Program Improvement. Field Guide*. Atlanta: Centers for Disease Control and Prevention, GAP, 2003.

GAP, Global AIDS Program. *Monitoring and Evaluation for Program Managers. Participant Manual*. Atlanta: Centers for Disease Control and Prevention, GAP and Macro International Inc, 2008.

Patton, Quinn M. Utilization Focused Evaluation. *The New Century Text (3rd Edition)*. Thousand Oaks: Sage Publications, 1997.

Rugg D, Mills S. *Development of an Integrated Monitoring and Evaluation Plan*. In: Rehle T, Saidel T, Mills S, Magnani R (Eds.). *Evaluating Programs for HIV/AIDS Prevention and Care in Developing Countries*. Arlington: Family Health International, 2000.

Rugg D, Peersman G, Carael M (Eds). *Global advances in HIV/AIDS monitoring and evaluation*. New Directions for Evaluation 103, 2004.

Rugg D, Carael M, Boerma T, Novak J. Global Advances in Monitoring and Evaluation of HIV/AIDS: *From AIDS Case Reporting to Program Improvement*. In: Global Advances in Monitoring and Evaluation of HIV/AIDS, Rugg D, Peersman G, Carael M (Eds). New Directions for Evaluation, 2004: 103: p.33-48.

UNAIDS. *Organising Framework for a Functional National HIV Monitoring and Evaluation System*. Geneva: UNAIDS, 2008a.

UNAIDS. *Glossary of Monitoring and Evaluation Terms*. Geneva: UNAIDS, 2008b.

UNAIDS. *Inventory of electronic HIV and M&E resources*. Geneva: UNAIDS, Monitoring and Evaluation Reference Group, M&E Capacity-building Technical Working Group, M&E Resource Library Task Team, 2008c.

World Bank. *Note on Results Based Management*. Washington D.C.: World Bank, Operations Evaluation Department, 1997.

Zall Kusek J, Rist R. *Ten steps to a results-based monitoring and evaluation system*. A handbook for development practitioners. Washington D.C.: The World Bank, 2004.

NOTES

Publications in this series

Basic Terminology and Frameworks
for Monitoring and Evaluation
(2010)

An Introduction to Indicators
(2010)

A National Evaluation Agenda for HIV
(2010)

An Introduction to Triangulation
(2010)

ABOUT THE MONITORING AND EVALUATION FUNDAMENTALS SERIES

With the advent of the global financial crisis affecting most countries around the world, monitoring and evaluation (M&E) has become more important than ever before. Determining what programs do or do not work; implementing programs with proven cost-effectiveness; monitoring progress towards achieving targets; and ensuring accountability are objectives which are especially important now in the HIV response, as well as in other health and development areas. Thus, it is increasingly important that M&E is better understood, communicated in simplified language, and conducted in a coordinated and sustainable manner that generates information that can be easily used. Further, it is essential that M&E addresses the needs of and involves all key stakeholders right from the start and that results are made publicly available and utilized strategically in policy-making, planning, and program improvement.

This series provides a common sense introduction to a range of M&E issues. It covers the fundamentals and their practical applications and includes techniques and tools for managing M&E of the HIV epidemic and response. Although the series uses HIV as its focus, the M&E fundamentals are also relevant to other areas of public health and development. As such, these books may also be useful in strengthening national M&E systems designed to track progress in other health and development goals, such as those outlined in the United Nations Millennium Development Goals (MDG).