Introduction

This document is intended to help trainers teach program managers, staff, and other decision-makers the fundamental elements and techniques of monitoring and evaluation (M&E), with a focus on population and health programs.

The document is divided into three modules: an introduction to M&E; developing plans for M&E: frameworks; developing plans for M&E: indicators and data systems. Each module consists of a set of slides, accompanied by discussions and activities, that cover basic theoretical and practical approaches to M&E in terms suitable for a variety of population and health interventions. Group exercises are an important part of the training modules and provide participants with "hands-on" experience in M&E planning, design, and decision-making. The aim of these modules is to provide a comprehensive curriculum for training others in improving the design and implementation of their own M&E activities.

These modules have grown out of experience gained by MEASURE *Evaluation* staff over more than five years of training health and population professionals in the US, Africa, Latin America, and Asia.

For whom are these training modules intended?

The primary target group is trainers in M&E of population, health, and nutrition programs. The training modules may be used in a workshop or an academic setting, and should be tailored to fit the needs of a given audience by adding modules, by going into more depth on certain aspects of the M&E process, and/or by adapting examples given in the modules.

Participants may be anyone with interest in or responsibilities regarding M&E of population, health and nutrition programs. Participants should have a basic level of knowledge about how programs or projects work and why M&E is important. These modules can be used to train a group of people working on M&E of different projects or the same project.

How much time is recommended for these training modules?

Time required for each of the three modules may vary depending on the time allotted for the training event and on the depth required of the training. The three modules may be completed in two days of 7 hours each day, Modules 1 & 2 on the first day and Module 3 on the second. However, group work is an important part of the process of gaining skills in M&E using these modules, and more time for group work and feedback allows for a better understanding to develop among all participants of the process of planning for M&E. For this reason, four days for all three modules is recommended.

What if we want more training?

MEASURE *Evaluation* continues to hold training workshops that offer a fuller exposure to many of the issues introduced in these modules, as well as covering substantive and state-of-the-art M&E approaches to specific areas of population, health, and/or nutrition concern. For further information on these courses, their content and scheduling, contact measure@unc.edu or see <http://www.cpc.unc.edu/measure/training/training.html>.

Additionally, a second version of these materials is under development within the MEASURE *Evaluation* project. This second version will also offer fuller exposure to issues and substantive concerns in the crucial area of PHN M&E, and Best Practices in this field.

Format of Training Modules:

Each page is organized with the slide at the top of the page and the the following information below:

Speaker Notes
Speaker notes are provided as suggested commentary on each slide, for the use of trainers or discussion leaders/facilitators in workshop sessions.

Additional Background
Additional background notes provide additional commentary for trainers' reference and further reflection.

Examples
Examples or illustrative comments are provided occasionally for reference or discussion.

Activities
Where appropriate, supplementary activities or small discussion group exercises are suggested, to serve as potential aids toward ensuring all participants fully engage in hands-on M&E practice, or discussion and debate of controversial or complex issues. A supplementary section of these training materials explain the function and design of M&E Case Studies. These are intended to be used as ongoing Small Group Exercises that will complement the slide presentations of the M&E workshop materials.

Speaker Notes

Welcome to the introductory session of this Training Workshop for Monitoring and Evaluation, or M&E, of Population, Health, and Nutrition programs. In terms of technique, many approaches and much of the expertise we will cover in these sessions could apply equally well to Monitoring & Evaluation of any kind of programs. We focus, however, on Health, and aid and assistance programs, and use substantive examples from different areas of health care -- family planning, safe motherhood, and AIDS, for example. Besides Population, Health, and Nutrition programs, main themes emphasized in this workshop include the importance of conceptual clarity, the design and use of frameworks, and the appropriate criteria for indicator selection, including data issues and concerns.

Throughout we will talk about programs, projects, and interventions in a more or less interchangeable fashion. The point is not to get bogged down in the details of differences among the various kinds of efforts to improve population health outcomes, but to gain an understanding of how best to measure **whatever** you are doing, in order to Monitor & Evaluate your efforts or effects, in order to improve your results.

Additional Background

The Core Modules provide a framework that trainers can use to structure a short workshop on Monitoring and Evaluation. These slides cover all of the critical elements needed to understand the basic benefits of carefully designing program monitoring and evaluation. Some background notes provide examples that the discussion leader may wish to raise with participants, while others have brief exercises to engage the class actively, sometimes in small groups tackling more complicated issues. If all of the activities are pursued with the participants, small groups of participants can work through the entire process of developing a Performance Monitoring and Evaluation Plan, either working with case studies or the actual programs of participants.

Additional resources are listed in a supplementary document section for trainers who may lack sufficient background in certain specifics of M&E techniques or substantive matters to investigate issues or answers further.

This training will provide participants an understanding of

- basic concepts and practices to use as they develop and implement performance monitoring and evaluation plans

- challenges and pitfalls to anticipate as they develop and implement performance monitoring and evaluation plans, along with helpful strategies for overcoming them

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Speaker Notes

First, let's consider together the goals of this workshop. The training goals here include providing participants with a general understanding of the ideals and ideal approaches to Monitoring and Evaluation of program performance, as well as realistic strategies for implementation of Monitoring and Evaluation. "M&E" activities should be an integral part of program design. It is good to understand M&E both from an ideal perspective, or what we would ideally prefer to have the best, most comprehensive M&E plans look like, and the ideal range of tasks they should be designed to accomplish. It is equally important to understand M&E from a more practical or pragmatic point of view, however, including how to deal with situations where you have limited resources, uncertain knowledge or shaky data, and other real-world constraints.

With these two sides of the M&E coin in mind, the ideal and the practical, this workshop blends instruction and activities to help participants develop or improve their understanding of concepts and practices that we have found typically to be most useful in developing and implementing strong M&E plans. This workshop also will help participants develop an understanding of challenges and pitfalls they should anticipate as they work on M&E "in real life", and helpful strategies for avoiding some of these potential problems.

Additional Background

Trainers should keep in mind throughout the workshop the importance of providing participants both with the highest standards for best quality M&E, and with pragmatic tools for managing their M&E efforts toward "best practices" under given constraints or circumstances. Participants should come away from the workshop with an ideal to strive toward and a recognition that on the ground or in the field they must be prepared sometimes to make other trade-offs.

TRAINING GOAL 1:

For participants to understand basic concepts and practices that
should be used in the development of sound and practical plans
for quality performance monitoring and evaluation

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Speaker Notes
The first Training Goal is for participants to understand basic concepts and
practices that should be used in the development of sound, practical plans for the
best quality of performance monitoring and evaluation.

Each Core Module presents concepts and practices helpful for participants to
consider when they are **designing** their own M&E plans. These concepts and
practices will be equally helpful for **using** their programs' M&E plans to manage
and improve the effectiveness of their interventions.

Additional Background
The modules are briefly described in upcoming slides. As an overview, they are: (1)
M&E purposes, components; (2) Framework components, uses; and (3) Indicators
and data -- selection, uses, implications.

TRAINING GOAL 2:

For participants to understand the complexities inherent in the
process of developing and implementing plans for performance
monitoring and evaluation, introducing a variety of strategies and
techniques that they may use in anticipation of or response to
these common challenges

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Speaker Notes

The second Training Goal is for participants to understand the complexities or other problematic issues that often make M&E such a challenge. Exploring problems and issues that may typically arise will help participants anticipate them, and perhaps avoid some pitfalls. Most usefully, providing an understanding of the usual kinds of complex challenges will help participants develop strategies and techniques they can use to cope with often unavoidable difficulties likely to occur in practice. Every program will have its own particular issues, but being sensitive to the most obvious or common M&E difficulties is a good start to building a strong M&E plan.

Each of the three modules that follow will present different approaches that participants will be able to use in understanding and overcoming challenges in designing their own M&E plans and in using them to manage and improve the effectiveness of their own programs.

Additional Background
This slide again emphasizes that the workshop's goal is to provide practical tools that participants can truly use to help them develop workable M&E plans in a variety of circumstances. There is no single process that uniformly creates an ideal M&E plan; there is no single ideal M&E plan that will fit every situation. Participants instead in this workshop will learn **how to think about** *monitoring and evaluation and thus how to think through for themselves the many tricky issues they will need to work around in order to adapt the M&E "ideal" to their program's circumstances, in helpful, pragmatic ways.*

Module 1: Introduction to M&E

– The purpose of Monitoring & Evaluation and M&E plan components

Module 2: Developing Plans for Performance Monitoring and Evaluation -- Frameworks

– M&E Frameworks' components and uses

Module 3: Developing Plans for Performance Monitoring and Evaluation -- Indicators and Data Systems

– Indicator selection and standards; Data considerations

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Speaker Notes
Besides those overall workshop goals, each of the three modules that will be completed in subsequent sessions have their own learning objectives, suited to the substance of those training sessions.

Module 1, the Introduction to M&E, leads participants through the purposes and the value of strong Monitoring and Evaluation as a fundamental part of any assistance or development program. Module 1 also covers the different components of M&E plans.

Module 2, on Developing Plans for Performance Monitoring and Evaluation, leads participants through a variety of Frameworks that may be used to match program design and implementation with the most constructive M&E design and implementation. Module 2 also covers the components and uses of M&E Frameworks.

Module 3, also on Developing M&E Plans, leads participants through the crucial details necessary for complete planning and M&E implementation. Module 3 focuses on the selection of indicators, including both ideal standards and practical considerations, and on the sources, types, and uses of data in the construction of strong sets of indicators for monitoring and evaluating program activities, impacts, and outcomes.

Additional Background
All of these objectives and topics will be fully discussed in the later sections.

1: INTRODUCTION TO M&E

The first module covers:

- the purposes of performance monitoring and evaluation

- components of plans for performance monitoring and evaluation

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Speaker Notes
The second module explains the importance and uses of Frameworks in the process of developing plans for program Monitoring and Evaluation.

This second module discusses the specifics of conceptual, logical, and strategic or results frameworks, including explanation of issues that are most important to consider in designing frameworks that will be truly useful tools throughout the process of developing M&E plans.

Additional Background
Details are covered in the slides for this module.

3: DEVELOPING PLANS FOR MONITORING AND EVALUATION: INDICATORS & DATA SYSTEMS

The third module covers:

- characteristics of ideal indicators

- criteria for the practical selection of sound indicators

- indicator definitions and metrics

- data needs and collection strategies for quality M&E

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Speaker Notes

The third module explores the importance and uses of Indicators and Data Systems in the process of developing good plans for program Monitoring and Evaluation.

This final module will specifically cover the ideal characteristics of indicators. It also covers the criteria to use in making practical selections from among possible indicators, to find and use the ones that best suit your program, that will be sound and yet practical. This module also covers important issues for defining good indicators and determining correct, precise metrics for their accurate calculation, as well as further considerations in terms of data needs and collection strategies to ensure high quality M&E.

Additional Background
Details will be covered in the slides for this module.

Participant Introductions

An important element of learning in this training course will be <u>learning from each other</u>. Participant contributions are actively encouraged!

Add ideas and information from your own experiences, ask questions, and discuss issues that arise in further detail. Discussions may continue during meals, in your small groups, possibly late into the evenings!

Before further exploring our M&E topics, then, let's get to know each other a little better.

Speaker Notes

As you may know from your preparations and materials for this workshop, an important resource for this training course is the opportunity for everyone here to learn from each other. At most times and on most topics, presenters will actively encourage contributions from all participants. You should think about the topics and add your own ideas or information from your own experiences to the classroom discussions. You may wish to ask questions for clarification or for further information during sessions, and participate in further discussions of many of these topics in greater detail during the rest of our time together. Discussions may spring up in class, over lunch or at breaks, in your small groups, or in other informal gatherings during this workshop. There will be a lot to think about, so there will be a lot to discuss!

Now, before getting into the details of our M&E topics, this will be a good time to get to know each other a little better, since getting acquainted will facilitate all of these future discussions.

Additional Background:
The speaker may wish to get the momentum going by introducing himself in a casual or conversational way at this time, even if a more formal introduction was provided earlier in the workshop agenda. Things appropriate to include could be: descriptions of previous experiences in assistance programs, experiences in workshops and other training fora, experiences in different countries or in the region where the current training workshop is being held, or any other relevant experience, education, or expertise.

Then go on to the next slide and let the participants contribute some comments on their backgrounds.

Participant Introductions

Introduce yourselves to each other through your
  answers to the following questions:

What is your name?

Where are you from?

For whom do you work, and what is your position?

  Why are you interested in M&E training? What are your
  goals for the training? For instance, what would you like to
  understand better or to be able to do better after
  completing this M&E workshop or manual?

<u>Speaker Notes</u>
On the screen are topics you may include in your introductions. If you have other
comments or questions, feel free to cover other subjects related to the workshop that you
feel might interest others. Let's go around the room and meet each other.

<u>Additional Background</u>
*Allow each participant to introduce him or herself, with time for a few comments or
digression, but do not allow any one person to go on too long. If a person begins to wander
far beyond issues suitable for this introductory session, cheerfully cut that monologue off,
perhaps stating there will be time to get into more detail later on. Be sure to ask
participants to remind you again, later, of their goals or questions if these are not fully
addressed in the later sessions. Make notes on introductions and goals if it will help you to
remember these details, and start getting to know the participants yourself.*
*If other instructors or workshop leaders are present, let them introduce themselves as well;
the best time for that would probably be after all of the participants have had a chance to
talk.*

<u>Activities</u>
   Alternative: Split participants into pairs and have each interview the other; then
go around the room with the pairs presenting each other to the group. Let
participants speak for themselves about their goals or "burning issues" they are
hoping to explore in the training.
   Alternative: Document the various goals as participants list them. After everyone
has introduced themselves, review goals (by category if the group is large) on a
flipchart or blackboard, noting those that are already included in workshop plans and
others that can be met during the training with a little tweaking. For special needs or
goals, that don't fit into workshop plans exactly, identify options for obtaining
additional information or other resources for those participants.
Distribute or review the full workshop agenda, as appropriate, in order to ensure that
topics of particular interest to participants will be adequately covered.

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<... take a break ...>
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Additional Background
_Once the participants have introduced themselves, this may be a good point to take a tea
or coffee break, or break for the day if the workshop's morning agenda was filled with
logistics or formalities. This allows an opportunity for mingling in case some of them have
heard others mention topics, goals, or interests in their introductions that they wish to
pursue in informal conversations. Informal interaction of the participants helps ease
classroom and small group interactions which are very important to the learning process
in this workshop._

Activities:
After the introductions, distribute a brief questionnaire that allows them to report,
anonymously, on their levels of skills and knowledge in relevant M&E areas. (An
example is provided in the Appendix.) They should complete the forms and return
them before the first Module begins, so that instructors or facilitators for the Core
Modules can appropriately target their explanations and examples for each
participant group. The survey can be repeated at the end of the training schedule in
order to evaluate whether or not the program was able to focus appropriately and
meet participant needs.

Module 1

Introduction to M&E

<u>Speaker Notes</u>
Now we begin our first module, Introduction to Monitoring and Evaluation.

<u>Additional Background</u>

If the workshop reconvenes on the following day for this module, consider setting aside some time for all of the participants to re-introduce themselves briefly. Name, country, organization and/or M&E responsibilities should suffice, or you could use one of the Alternative introductory methods suggested in the slide notes for the previous (introductory) session.

Awareness of the background and interests of participants can facilitate getting the most out of the workshop. During these three core modules especially, the person(s) presenting these materials and leading small-group activities should put some energy into encouraging comments and discussion from among the participants according to their background and/or relevant experiences. Having early feedback is essential in a longer workshop to ensure that the level of detail and the speed of presentation as the days go by are appropriately gauged to the interests and experience levels of the particular group of participants who are involved in the workshop. Too slow or overly detailed may bore and alienate an advanced group, while too fast or overly condensed may confuse or frustrate a group of relative beginners.

Introducing themselves again may seem redundant but if you have the time available on Day 2, it will be useful. This may also facilitate the comfort level for shyer participants so that they will be more likely to contribute when the full group is assembled.

Speaker Notes
As mentioned in the overview, previously, this module introduces the fundamentals of Monitoring and Evaluation, explaining its value as a tool for measuring program performance. This module is designed to achieve the following two learning objectives:

First, to provide a general understanding of the overall purposes of performance monitoring and evaluation, and

Second, to describe and explain the components of M&E plans.

Activities:
If participants are fairly advanced, and relatively familiar with M&E basics from their previous experiences or current jobs, the presenter can solicit ideas from the group regarding M&E purposes and M&E plan components. Flipcharts or a chalkboard can be used to organize the various ideas that participants may volunteer. As this presentation progresses, then, the presenter should add insights or remarks on connections or parallels between offered by members of the group and ideas included in subsequent slides. This is a useful way both to validate the working knowledge that many participants may bring to the training, to be honed with technical skills and additional development, and also to demonstrate that the workshop is and should be a structure within which participants and facilitators will all learn from one another.

THE PURPOSE OF MONITORING AND EVALUATION

The purpose of monitoring and evaluation
is to measure
program effectiveness

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<u>Speaker Notes</u>
The purpose of Monitoring and Evaluation is to measure program effectiveness. Ideally, Monitoring and Evaluation tools can be used to demonstrate to planners and other decision makers that program efforts have truly had measurable impacts on the outcomes of interest. We hope, impacts that are measureable improvements! In other situations, M&E can indicate where resources are being used most efficiently versus where some new strategies for resource allocation might need to be considered.

Most information presented here is relevant for both performance monitoring and evaluation, in the sense that they are both useful approaches to measuring program effectiveness. Many M&E experts, however, maintain a strict distinction between monitoring results versus evaluating impact or analyzing program effectiveness. In this more technical sense, monitoring tools are those used to track ongoing results of a program or project's activities. Evaluation tools, on the other hand, are used to assess or to analyze the impact of programs or projects in order to understand the conditions that help or hinder their success. Both are essential tasks helping managers and implementers acquire the information and understanding needed to make informed decisions regarding the most effective and efficient use of resources within their context of operations. Monitoring and evaluation together provide data and perspective necessary to guide strategic planning, to design and implement programs and projects, and to allocate, and re-allocate, resources in better ways.

<u>Additional Background</u>
*Conceptual distinctions between monitoring and evaluation can be quite important. For instance, it is particularly important to incorporate explicit plans for evaluation in new types of programs or new program contexts. For practical reasons, the core of this workshop focuses on the common ground, that M **and** E both provide crucial information for improving the efficiency and effectiveness of health interventions. Participants should be discouraged from getting bogged down initially in the details of what kind of M&E fits a "monitoring" definition versus the definition of "evaluation". At this level, the important point to emphasize is that projects and programs must direct attention to ensuring that accurate measurement of their activities' results, through good M and/**or** E, is an integral part of project "success".*

USES OF MONITORING AND EVALUATION

Monitoring and evaluation helps program implementers:

- make informed decisions regarding operations management and service delivery

- ensure the most effective and efficient use of resources

- determine the extent to which the program/project is on track and to make any needed corrections accordingly

- evaluate the extent to which the program/project is having or has had the desired impact

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<u>Speaker Notes</u>
M&E helps you make informed decisions about your program operations. It helps you make the most effective and efficient use of resources. It helps you determine exactly where your program is right on track and where you need to consider making corrections. And M&E helps you come to objective conclusions regarding the extent to which your program's impact can be judged a "success".

M&E is indispensable because these tools inform planners, managers, and implementers whether or to what extent the program or project is operating effectively and according to expectations. By keeping track of specific areas of program performance, operational problems can be identified while they can still be corrected and thus ongoing performance can be improved. Meanwhile, managers can also keep track of the extent to which activities are having their desired effects. Results demonstrated through good monitoring and evaluation techniques enable decision makers also to correct strategies or even overcome unanticipated difficulties.

In other words, M&E improves the program's ultimate impact through better information and increased understanding even while activities are in progress. And as results are shared, the ongoing projects of others, and the future design of comparable activities and their implementation, likewise can all be improved.

<u>Additional Background</u>
*An important point here is that the significance and value of M&E is realized only through **use of the M&E data**. It is not important in and of itself to collect numbers, even the best numbers, nor is it abstractly important to construct the perfect indicators. If data is not reviewed and interpreted and then fed back into decision-making, M&E's ultimate purpose -- program improvement -- cannot be met. To be good M&E, it must be M&E that is actively used in problem-solving within the ongoing program, and in further steps of decision-making.*

Speaker Notes

As noted previously, there are important and sometimes quite complicated distinctions made between monitoring and evaluation. In this workshop, we simplify these distinctions into two functional areas. Monitoring activities are those that provide periodic results data that are immediately and directly related to specific program activities, such as counting the number of condoms that are distributed from warehouses to clinics through a Social Marketing Scheme. Evaluation or impact assessment involves further investigation or interpretation of results, often in order to understand how the program has had an impact, or the degree to which the program can take credit for any measured change in some overall outcome. In other words, evaluation activities go beyond the scope of the program to consider, and sort out the influence of, other factors. For instance, if men in rural areas do not use the socially-marketed condoms, it may be that they do not wish to pick them up at clinics for fear of being seen and suspected of promiscuity. Monitoring may reveal that not many condoms are not being taken by men, but it will require an evaluation activity to reveal that factors outside SM activities are the key issue. Then the program can perhaps be adjusted to deliver condoms to pharmacies or other outlets, as well as clinics, in rural areas.

Additional Background
Again, emphasis in discussion should be that both monitoring and evaluation are crucial activities for ensuring strong program performance and achievement of the desired objectives in the end.

Examples
Monitoring: Family planning managers may want to track the number of new acceptors of modern methods of contraception over time.
Evaluation: Family planning managers may want to determine how much of a recent increase in the measured use of a specific type of modern contraceptive method (new acceptors and continuing users, minus discontinuations) is due to their new promotion or marketing approach.

Activities
Ask participants: How have you used monitoring and evaluation data in the past? What problems did you encounter? What questions or issues are best raised and addressed through performance monitoring? What questions or issues might be better to raise and address through evaluation? Discuss.

PERFORMANCE MONITORING VS. EVALUATION

Performance Monitoring can:
- indicate whether the program/project is being implemented as planned
- identify changes over time in inputs, outputs, use of services, and some outcomes
- suggest problem areas and possible solutions

Evaluation can:
- identify changes over time in overall outcomes
- indicate the extent to which observed changes are the result of the program/project intervention

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<u>Speaker Notes</u>
One way to think of it is as Monitoring and Evaluation being two sides of the measurement coin. They both "buy" you better understanding of how your program is working.

Monitoring is the set of activities and data collection that allows an accurate understanding of specific program activities and the extent to which they are working according to plan, and areas where they may not be working out exactly according to prior expectations. Evaluation is the set of activities and data collection that allows an accurate understanding of the way the program is or is not working, in its real-worldcontext, and in conjunction with a range of other factors affecting activities and targets, including for instance the host government's health interventions or other activities, other donors and their activities, and social or environmental attributes that may fall beyond the scope of the health intervention.

<u>*Additional Background*</u>
The gist of these distinctions can also be illustrated by noting that monitoring is oriented toward measuring the details of many of the operational aspects of the intervention, such as inputs, processes, immediate impacts or effects, and overall outcomes. Evaluation, on the other hand, is oriented toward developing an analytical understanding of the program as it operates in the bigger picture of the real world, in other words deliberately encompassing a fuller and much more complicated range of factors at work in that context, with an aim of distinguishing the impacts of these other factors from the true effectiveness of the project's specific intervention.

ILLUSTRATION OF PERFORMANCE MONITORING
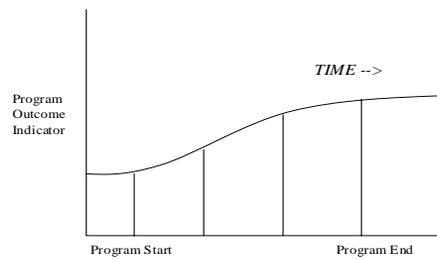
<u>Speaker Notes</u>
[Explain elements of the graph shown: vertical axis can be any monitoring indicator, horizontal axis is the time over which a program runs, and each bar represents the periodic measurement of the indicator over the lifetime of the program.]

As this graph illustrates, monitoring involves knowing a few key things about your outcomes of interest. Indicator data systems will be covered in the third core module, but for the purposes of understanding this picture, note that monitoring requires data to construct indicators for your outcomes of interest at several points. At a minimum, the program must have all data necessary to calculate your indicator's value before or near the start of the related intervention, and at or after the end of the intervention. Ideally, monitoring will measure the indicator at periodic intervals while the program is ongoing, both to track incremental program performance and to discover if activities or other factors need adjustment during the intervention in order to improve the ultimate outcome. For instance, if recurrent stock-outs occur, either augmenting supply levels or multiplying supply schedules could lead to a higher measured use due to the program in the final evaluation.
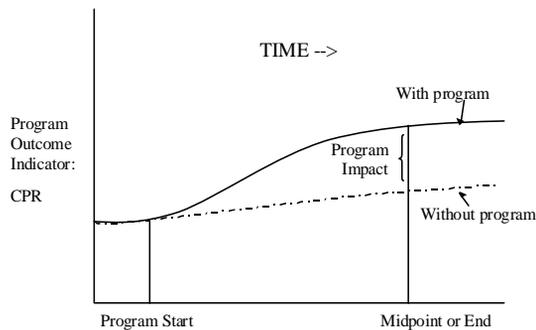
<u>*Additional Background*</u>
Note that monitoring does not involve determining or attributing the cause of a change in the measured indicator. Even cumulative data can be used to monitor performance -- the rate of change is not investigated, but rather notice taken of the overall change in the measured level of a relevant outcome over a period of time. Methodological issues are less complex than issues that need to be taken into consideration in designing and carrying out an evaluation analysis.

<u>Examples</u>
Outpatients seen (per day/week/month, per staff person, per facility, per service)
ORS packets distributed; mothers who report knowing when/how to use ORS
Workshops held; trainees trained; person/days of training; etc.

ILLUSTRATION OF EVALUATION (IMPACT ASSESSMENT)

TIME -->

With program

Program
Outcome
Indicator:

Program
Impact

CPR

Without program

Program Start   Midpoint or End

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Speaker Notes
[Explain new elements of the graph shown: evaluation is typically done midstream or after the completion of a project, rather than repeated at regular intervals throughout the program's active implementation. Note that the line indicating the level of the outcome indicator without the program will be an estimate rather than a measure, in all cases except a formal, controlled experiment. Therefore the difference in outcome with the program versus without is an analytical exercise rather than a direct measurement.]

Because attribution of results to a particular program/project intervention demands that alternative reasons for the results be investigated or controlled for, more extensive knowledge of sampling and statistical analysis are sometimes required for constructing evaluation indicators. While similarities between the evaluation process and monitoring, both requiring knowledge of baseline values and final values, often with an interim measurement during the project, evaluation crucially differs in that the goal is to make a determination of the amount of the change in outcome that is due to the program or intervention. In other words, pure numbers cannot tell the evaluation tale; evaluation is fundamentally an analytical exercise to help decision makers understand when, how, and to what extent the program is responsible for particular, measured impacts.

Examples
Population knowledge of IEC campaign messages
Quality of care provided by program-trained midwives
Collaborative networks of NGOs established

Activities
You may wish to combine this discussion activity with the previous slide, to cover Monitoring and Evaluation. Solicit further examples of both M and E indicators from participants. Should time frames vary? If there is interest, begin a preliminary discussion about indicator selection, with one possible topic being whether the examples that are provided are monitoring indicators, or evaluation indicators, or could be used for either depending on the program/context.

Planning for Monitoring and Evaluation is Crucial

- M&E requires the allocation of project resources
  - time
  - money
  - personnel
- Demonstrating program effects requires empirical proof
  - valid indicators and reliable data
  - baseline values and periodic re-measurement over the project's life
  - further analysis of unexpected or anomalous results
- Management utilization of M&E data requires commitment
  - the planning process is a learning process for administrators and other staff
  - planned resource expenditures yield more efficient resource usage

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Speaker Notes

It cannot be overemphasized that **planning** for M&E is crucial. One reason is that Monitoring and Evaluation activities themselves require the allocation of project resources, so these items must be built into the project's budgeting -- of time, money, and personnel -- from the beginning and through the end.

Secondly, only well-planned M&E will generate strong empirical proof that the activities of the project have indeed had demonstrable effects on the desired goals. Planning is required to develop valid indicators that will be backed up by reliable data, so that relevant indicators are measured before activities are rolled out for baseline data, and measured again periodically as the program matures, so lack of progress or unexpected results can be investigated further, and understood, while there is still time to make any needed corrections.

M&E planning is also crucial because the ultimate purpose of M&E is to have the information that is gathered fed back into subsequent decisions about the ways health-improvement activities are implemented. Better understanding of the needs of communities or countries through M&E of ongoing activities helps planners and policy-makers learn how to become more effective. Decision-makers and other stakeholders must have confidence in the M&E process so that they will use the data. The M&E planning process gives everyone an opportunity to learn about the value of M&E and its benefits, such as increasing the efficiency and effectiveness of resource usage throughout the life of the health program or intervention.

Additional Background
The first two points are fairly straightforward, while the third is a somewhat less obvious, or at least less commonly acknowledged and practiced. You may wish to ask participants if they have any additional ideas or examples concerning ways to engage all stakeholders in the M&E planning process. Have some of the participants had experiences -- successful or not-so-successful? What are some costs and benefits of involving a wider group in the planning process?

Speaker Notes
The process of developing a plan for M&E requires careful consideration of the program itself from two perspectives: the underlying assumptions on which the achievement of program goals depends, and the relationships or interactions among all factors that are anticipated to affect the outcome. Module 2 explains how to use frameworks to clarify these important concerns.

Assumptions and other expectations underlying a program ideally should be clearly understood before the program is implemented. An assumption may be program specific, for instance: If we train providers in clinical techniques, they will be able to give clients a higher quality of care. Assumptions may be about individual or social psychology, such as: If populations receive information on risks and options, they will take more responsibility in seeking their own healthy behaviors. Assumptions may also pertain to the wider context, expecting that the government will not be overthrown or drastically change its health policies.

M&E planning also requires taking into consideration the relationships and interactions of factors internal and external to the project, in terms of how these may affect the outcome of an intervention. Clarifying expectations about the ways project resources will be translated into improved health outcomes reveals links and points where monitoring and evaluation can be most helpful. It is often helpful also to involve other stakeholders in this process, generating a shared understanding of how various elements, assumptions, and contextual factors may affect the activities of each partner, to clarify the learning role of planning and ownership in M&E responsibilities for everyone.

Additional Background
This slide introduces elements that will be further elaborated when frameworks are discussed in Module 2. The central point at this point in the workshop is to emphasize that understanding the assumptions underlying the expectations of how the project/program/intervention is going to work is directly related to how the M&E of the project will be planned, designed, and implemented.

Speaker Notes

M&E Plans, can be organized in many ways. There are a number of elements that need to be included for a plan's organization to be considered complete:

1. An explicit statement of the assumptions being made about the context of the program, the ways the planned activities will take place, and a clear expression of the overarching goals or objectives being sought.

2. An explicit statement covering all of the important relationships or interactions that are expected to occur among program activities, targets, and outcomes.

3. A clear specification of the conceptual measures and specific ways these will be operationalized -- in other words, well-defined indicators along with the exact ways they will be measured and calculated. These operational calculations are called "metrics". The set of indicators should be discussed in detail, including baseline values, data collection, schedules and responsibilities, data sources, and estimated resources needed for associated M&E activities. (For instance, if a survey is needed, what would the appropriate sample size be? What are projected costs for a survey of that size?)

4. An outline of the partnerships and other organizations that will be involved in each activity, and how they will be involved in M&E as data providers and users.

5. Discussion of evaluation plans and plans for using M&E results, possibly including dissemination, stakeholder workshops or indicator reviews, or other tactics to ensure M&E will be incorporated into ongoing decision-making to improve outcomes.

In other words, a complete plan covers the full range of any intervention, from recognizing the most basic assumptions that are required for desired effects to occur, through the logic connecting intervention concepts and all of the technical details of data and analysis, and in the end creating a coherent structure for the use of these results ultimately to improve program performance.

Additional Background
While in general it is unlikely that a workshop will include participants actually writing a full M&E Plan, it is important for participants to understand that a consensus on the full set of these issues needs to be reached, and ideally written and agreed upon by all active partners, for a program's M&E plan to be truly complete.

<u>Speaker Notes</u>
Leaving out any of these elements leaves significant and undesirable gaps in an M&E plan's utility:

1. Assumptions obviously come before the project design. As the program unfolds and begins to have its effects, it can be quite useful to reassess those assumptions and fine-tune them according to increased understanding of the context and the degree of program effectiveness in actuality. Alternatively, where program results may not exactly be meeting expectations, re-evaluating initial assumptions can help reveal where expectations, as well as project activities or goals, may need adjustment.

2. Laying out a clear understanding of the anticipated relationships or interactions among program activities, targets, and outcomes serves a similar purpose, in that these may need fine-tuning or adjustment as the program's impact begins to be measured and assessed over time.

3. Clear specification indicators and metrics, along with accompanying details of the data plan, are of course the heart of the M&E plan. Without careful attention to designing valid and reliable indicators that are appropriate to the particular program and its activities in context, the information will not prove useful for measuring performance or improving outcomes.

Additional Background
Participants may have brought materials with them from their own projects. If appropriate, they may wish to identify the elements lacking, or not fully developed, from their materials.

<u>Speaker Notes</u>

Other issues arise if the other elements are missing from an M&E plan:

4. Full information regarding partnerships and other organizations involved in activities create a document useful for ensuring that everyone understands and commits to their various responsibilities, both in implementing the program and in Monitoring and Evaluation of its impacts. By involving all of the relevant stakeholders in M&E planning, each has their chance to contribute ideas and ensure their interests are appropriately addressed. This collaboration also creates incentives for all of the involved organizations to fulfill their data collection responsibilities and furthermore, to use M&E information in their own planning and management decisions.

5. Evaluation plans and plans for use of these M&E results help ensure that resources will be available for useful reaction and interaction according to the well-measured impacts of the project under this design. M&E is not an exercise to generate paper or databases to sit on someone's shelves or take up space on a computer's hard drive. The whole point is to use the information for improving results on an ongoing basis and in future endeavors, so these activities must be included in the M&E planning process and specified in the resulting documentation.

Additional Background

Emphasize again that a complete plan covers the full range of the intervention, from the most basic assumptions through the logic of implementing activities, the technical details of data collection, indicator calculation, and analysis and use of data,in order to create a coherent and useful structure that ultimately will improve program performance.

While in general it is unlikely that workshop participants will write a full M&E Plan, they should clearly understand that all active partners should reach a consensus on the full set of these issues, and ideally write it out in detail, in order for a program's M&E plan to be truly complete and in the final analysis, useful.

The handouts Sample Performance Monitoring Plan Outline and Sample Portion of a Performance Monitoring Plan (both found in the Appendix) would be useful handouts to distribute to participants at this time.

Speaker Notes

While M&E should usually be planned and practiced as a package, they do have different strengths. One way of distinguishing monitoring versus evaluation is that monitoring tends to be ongoing and relatively routine, while evaluation is a deeper review process that entails relatively more comprehensive data, more reflection, and an analytical critique of the implications for your program's implementation strategy, or the success or lack of success that can be seen from its tactics and operations.

Program Monitoring examines discrete achievements and shortfalls while activities are being implemented, reliably records objective changes in program factors from a management point of view, and thus is a tool to provide early warnings of elements of an intervention that may need adjustment or correction while the project is ongoing.

Program Evaluation estimates the marginal effect of the program on the outcome. In other words, evaluation analyzes the extent to which the change in key variables or outcomes can be attributed to the interventions undertaken by the program or project. Careful analysis of qualitative and quantitative data is a tool that helps provide a critical understanding of the multiplicity of factors affecting the outcomes, and thus can suggest more comprehensive ways to increase effectiveness, by improving project design and implementation for improved results and outcomes.

Additional Background
Both are valuable tools, and each needs to be included in any comprehensive M&E plan. Most of the rest of the workshop explains and discusses M&E from primarily a monitoring point of view. That approach is more appropriate for initial exposure to these fundamental concepts and tools for developing plans and practices for M&E integrally related to an intervention's conceptualization and realization, as the nuts and bolts of evaluation activities can require more methodologically sophisticated, and detailed, explanations. Participants with advanced experience should be encouraged to incorporate Evaluation examples and/or concerns in classroom discussion and small-group exercises, to the extent workshop leaders may prefer.

Speaker Notes

In review, the benefits of increasing our understanding of performance monitoring and evaluation include being better able to allocate resources appropriately, according to objectives and outcomes, and being better able to fine-tune the implementations of other interventions according to reliable data and measurable results.

M&E Plans include components that provide the reasoning and assumptions behind program objectives and projections; that describe activities to reach those objectives along with appropriate resource allocations, including partners, in context; and that detail the specific, measurable results, and lay out the full plans for collecting, analyzing, and using those results throughout the duration of the program, project, or other intervention.

This concludes the introduction to M&E Planning. The next two modules explore in greater detail the process of constructing an M&E Plan, from developing a useful framework to determining the most appropriate indicators.

Additional Background

Make sure participants appreciate that M&E plans ideally require a package approach that entails understanding the intervention's underlying assumptions and concepts as well as the actual context in which the program/project will unfold. While concrete and practical M&E activities often must be retrofitted to an ongoing project or activity, participants should understand that bringing an attitude of careful consideration to these elements can still help to build as strong an M&E strategy as possible in those circumstances.

Planning for Performance Monitoring and Evaluation

(Modules 2 and 3)

Speaker Notes

An overall point that applies to all elements of M&E planning processes is the importance of clarity. M&E planning involves clarifying each of the factors relevant to a successful intervention, clarifying how these factors may interact or affect each other, and clarifying how you will determine the actual impact, considering those interactions and effects, that your program ultimately has.

A thoroughly successful planning process will achieve a clear understanding of goals and measurable objectives; a clear determination of the relationships between goals and objectives, inputs, processes, outputs, outcomes, and other extraneous factors; clear statements of the assumptions underlying these factors and their relationships; clear definitions of the purposes and uses of the monitoring and evaluation planning efforts; and clear definitions of indicators and data systems, and the way these data will be used.

In the next two core modules, "Design Frameworks" and "Indicators and Data Systems," each of these essential components of performance monitoring and evaluation plans will be defined and discussed.

Additional Background

This section of the workshop takes a brief moment to emphasize that details are important, definitions are important, and getting everyone to agree on the clearly specified elements of an M&E plan makes the rest of the planning a bit easier and much more fruitful.

If there has been an evening break between Module 1 and these second two, this is a time also to pause and review any questions or concerns that may have occurred to participants overnight or over lunch, regarding the content or further examples related to the first Module. Clarity is important!

Module 2

M&E Frameworks

Now we begin Module Two, on Monitoring and Evaluation Frameworks.

Speaker Notes

The learning objectives of this Module on Frameworks include understanding the components of the three basic types of frameworks. The three types we will cover are conceptual frameworks, logical frameworks, and strategic or "results" frameworks. This Module also covers ways to design frameworks that will be most useful in the context of developing M&E plans.

Additional Background
*Different organizations tend to prefer a selected type of framework. It is not important to convince participants to use any particular type, although the results (or strategic) framework is used in many examples in this workshop presentation. Results frameworks provide a clear specification of the items to which appropriate program indicators can easily be pegged. The gist of this Module, however, is the importance of designing a **useful** framework for a specific project in a specific context, not the titles or particular appearance of any designated kind of framework.*

MODULE 2 -- M&E FRAMEWORKS

Designing M&E Frameworks assists in the development of

- Clearly understood program/project goals and measurable, long-term, short-term, and intermediate objectives
- Clearly defined relationships between program/project inputs, processes, outputs, and outcomes, and between program/project activities and the external context (environmental factors)

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Speaker Notes

Frameworks are best understood as useful tools for understanding and analyzing a program, which is crucial for developing and implementing sound M&E plans. Designing program frameworks is one way to develop a clearer understanding of the goals and objectives at the heart of a project, with emphasis on the objective or measurable objectives, both short-term and long-term. Developing M&E frameworks also helps clearly define the relationships among factors key to the implementation and success of a project, both internal and in interaction with the external environment or program context. In other words, developing frameworks helps generate a clearer picture of ideal goals and pragmatic objectives, and the elements both within and external to project operations that will affect its success in the particular context. This design process deepens the understanding of managers, implementers, and other partners in many practical ways, including serving as the foundation for selecting appropriate, useful M&E indicators.

Additional Background

While frameworks are obviously useful after their completion, providing a clear structure of the indicators at the heart of M&E plans, one of most useful qualities is that discussing and determining their design serves to clarify many of the concepts and assumptions underlying basic project activities. An M&E plan that does not identify appropriate, useful M&E indicators, metrics, and data systems is an M&E plan that will not contribute to good program management or to an intervention's success.

Activities

Organize participants into small groups*. Using the case studies that provide basic information about a program/project (in the Appendix), each group should identify in terms as clear as possible: the long-term goal for their case study, and relevant short-term and intermediate objectives. Reassemble the full workshop and have a representative from each group report on their discussion and decisions. The full group may offer and discuss alternatives to those initial ideas; different goals, different wording, or different levels for targets may be identified. Groups may modify their initial ideas in later sessions.

*Small groups working on case studies are recommended as a structure for maximizing the benefits of this workshop. See supplementary materials for details.

M&E FRAMEWORKS

Conceptual Frameworks:

Conceptual, or "research", frameworks are diagrams that identify and illustrate the relationships among systemic, organizational, individual, or other salient factors that may influence program/project operation and the successful achievement of program or project goals.

Logical Frameworks:

Logical frameworks are diagrams that identify and illustrate the linear relationships flowing from program inputs, processes, outputs, and outcomes.

Strategic Frameworks:

Results or strategic frameworks are diagrams that identify and illustrate the causal relationships linking all levels of a program's strategy -- objectives and impacts.

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Speaker Notes

Conceptual frameworks are a foundation of research and analysis in many fields. A conceptual framework organizes key concepts, such as infrastructure and behavior, into a causal model of how the world works. Conceptual frameworks organize all of the significant factors that are understood to affect a specified outcome, and show all of the relationships and interrelationships among them.

Logical frameworks narrow the focus to specific processes operating in the context of a given program. A logical framework shows the linear flow of resources from their initial allocation or use as program inputs, through activities and immediate effects, to their ultimate product of affecting program goals, in terms of the outcome achieved.

Strategic or results frameworks combine the relationship modeling approach of conceptual frameworks with the narrower program focus of logical frameworks. The strategic framework is a model of the relationships leading from incremental results achieved through specific activities as they contribute to further results and toward a specified outcome. It depicts the program strategy through its step-by-step results.

Additional Background

Each type of framework is discussed in more detail, with examples provided, in the next several slides. Questions at this point are best deferred until the rest of those illustrations can be presented. This section should emphasize that all three types of frameworks can be useful; however, it is recommended to focus on the Strategic, or "Results" framework for M&E purposes, as it clearly identifies objective, measurable results which are closely linked to activities and that can be useful steps toward determining a strong set of indicators and data.

M&E Conceptual Frameworks

Conceptual Framework:

Conceptual, or "research", frameworks are diagrams that identify and illustrate the relationships among all relevant systemic, organizational, individual, or other salient factors that may influence program/project operation and the successful achievement of program or project goals.

Purpose:
- Provides a perspective for understanding program objectives within a complete context of relevant factors in a program's operating environment
- Clarifies analytical assumptions and their implications for program possibilities or limitations on success, as well as measuring and analyzing that degree of success

Speaker Notes
Conceptual frameworks are sometimes called "research" frameworks. A conceptual framework is a useful tool for identifying and illustrating a wide variety of factors and relationships that may affect the successful outcome of your program. These factors include program plans and operations; its operating environment in terms of target or non-target populations, government or institutional policies, infrastructure, and other characteristics of the socio-economic or political system; and intermediate changes or ultimate goals. Conceptual frameworks take a broad view of the project itself in order to clarify the relationship of its activities and its main goals to the context in which it operates. The design of the framework should shows the interrelationships between all factors that are relevant to achieving the project's goal.

In other words, a conceptual framework identifies, illustrates, and diagrams all of the salient relationships among all of the factors impinging on the operations or targets of a program. These can be systems, organizations, population characteristics, or other features of the operational landscape that may help or hinder the program's success.

Constructing a conceptual framework thus clarifies the complete context affecting the outcome of a program or intervention. It clarifies your assumptions about the causal relationships connecting significant features of the program context, clarifying aspects that your planned intervention may affect as well as other factors beyond your control. Identifying the variables that factor into program performance, and organizing the explicit ways they interact with each other sets the stage for outlining the objective results you can reasonably expect from your program activities. Clarifying all of these issues is a critical step toward designing valid measures for analyzing, or evaluating, the success of those interventions.

Additional Background
Conceptual frameworks are used in the sciences to select key variables for analysis. By constructing this kind of analytical framework as the foundation within which your program will design, plan, and implement the Monitoring and Evaluation of program performance, real possibilities and limitations become clearer to everyone involved.

EXAMPLE 1: CONCEPTUAL FRAMEWORK

36
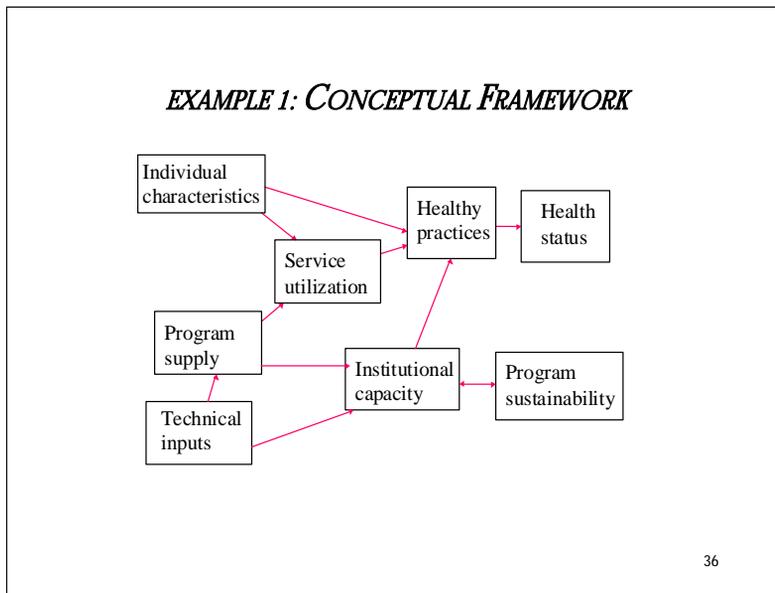
<u>Speaker Notes</u>
This is a very general example of a conceptual framework in the health field.

Factors shown include individual, systemic, and program variables.

Note that the program in this diagram has activities that aim to affect both service utilization and institutional capacity. A different project might aim at the individual characteristics such as knowledge, affecting service utilization only indirectly.

In this example, there are two outcomes of interest, the sustainability of the health program and the health status of the population.

<u>Additional Background</u>
During the rest of this workshop, many examples of conceptual frameworks may be provided or developed and discussed by participants. The point at this stage is to show that this kind of framework explicitly incorporates factors external to the program in order to examine the kind of impacts that contextual factors may have on outcomes of interest to the program.

EXAMPLE 2: CONCEPTUAL FRAMEWORK
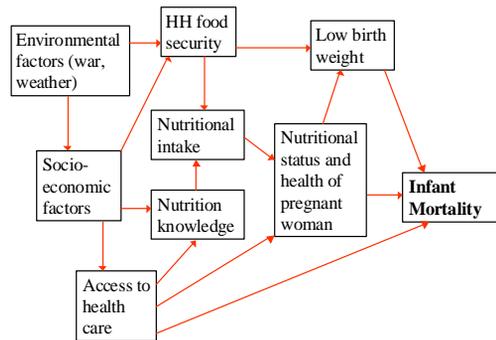
37

Speaker Notes

This is an example of a conceptual framework that is more specific. It depicts factors related to infant mortality, with emphasis on those affected by nutrition. In other words, this would be a conceptual framework to help a project planning nutrition interventions aimed at reducing infant mortality to think through all of the factors they might try to affect, as well as to keep in mind the other factors that will remain outside their control.

Again, you can see that factors include individual, systemic, and program variables. In creating a conceptual framework, it is recommended that you begin with the outcome of interest, in this case infant mortality. Low Birth Weight, other health factors of the mother, and access to health care can affect whether or not an infant may die. Access to health care can affect health status of the mother, thereby affecting the infant's risk factors. Health status and nutritional status are interrelated. Other variables affecting nutritional status are household food security (an adequate and consistent supply of food) and actual nutritional intake of the mother. Notice that food security also affects nutritional intake directly.

Knowledge of the elements that constitute a nutritious diet can also affect nutritional intake while access to health care can affect that knowledge and the use which people make of it, for instance depending on information provided by health care professionals. External social and economic factors strongly shape household food security prospects, and nutrition knowledge (via education, for example). Other environmental variables, such as a drought affecting crops, roads washed out affecting transport of food or other events such as war, can affect food security and economic status.

Logical Framework:

Logical frameworks are diagrams that identify and illustrate the linear relationships flowing from program inputs, processes, outputs, and outcomes. Inputs or resources affect Processes or activities which produce immediate results or Outputs, ultimately leading to longer term or broader results, or Outcomes.

Purposes:

- Provides a streamlined interpretation of planned use of resources and desired ends
- Clarifies project/program assumptions about linear relationships between key factors relevant to desired ends

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Speaker Notes

Logical frameworks are diagrams that identify and illustrate the linear relationships flowing from program inputs, through processes, outputs, and leading to outcomes. Inputs, or the program's resources, provide the fuel for Processes, or the program's activities. These processes produce immediate or direct Outputs or Effects; in other words, the program's activities yield some intermediate results. These Outputs lead to long-term or broader, overall results, or the program's Outcomes.

A logical framework is a useful tool for identifying and illustrating operational factors important to achieving a successful ultimate outcome. It can help identify linkages and key processes, highlighting the relationship between resource allocation and success, as well as where problems may lie if goals are not being achieved. Logical frameworks provide a streamlined perspective on the most critical processes contributing directly to program outputs and outcomes, and clarifies the linear relationships between program decisions, activities, and products.

Additional Background
"Log frames" are used in many organizations, and participants may have specific notions about the labels that should be affixed at each level (e.g. outputs versus effects). It is unlikely to be a productive use of time to debate these semantics from the various organizational perspectives. The point here is to explain and illustrate the general idea and usefulness of logical frameworks so that participants see that they can help clarify the linear flow connecting resources, allocation decisions, and program effectiveness.

EXAMPLE: LOGICAL FRAMEWORK

INPUT ⟶ PROCESS ⟶ OUTPUT ⟶ EFFECT ⟶ OUTCOME

| Develop clinical training curriculum | Conduct training events | Practitioners trained in new clinical techniques | Increase in clients served by (newly) trained providers | Declining morbidity levels in target population |
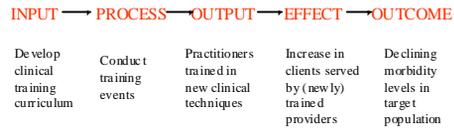
39

Speaker Notes

This framework presents a straightforward view of a project designed to reduce population morbidity due to untrained or unskilled health care providers. As you can see, it does not try to account for all of the factors that may be influencing operation and results, but instead focuses on the project's activities and impacts. This narrow focus assists program managers and M&E planners as they clarify the direct relationships among elements of particular interest within a particular program effort.

Additional Background

Logical frameworks can usefully diagram the flow of program operations, while keeping the ultimate goals in view. Process indicators are sometimes useful for monitoring, but may provide most insight if used in the context of an evaluation -- to pinpoint glitches or breakdowns within the project, for instance, if objectives are not being fully met.

M&E Strategic (Results) Frameworks

Strategic or Results Framework:

Strategic/Results frameworks are diagrams that identify steps, or levels, of results, and illustrate the causal relationships linking all levels of a program's objectives.

Purposes:

- Provides a clarified focus on the causal relationships that connect incremental achievement of results to the comprehensive program impact
- Clarifies project/program mechanics and factors' relationships that suggest ways and means of objectively measuring the achievement of desired ends

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Speaker Notes

Strategic frameworks are a useful tool for identifying and illustrating the focal points of a project for monitoring and evaluation: the results. A strategic or results framework diagrams the relationships between the incremental results of the key activities all the way up to the overall objective or goal of the intervention.

Developing a framework focused on program results clarifies the points at which results can be monitored and evaluated. In addition, results frameworks clearly depict the causal relationships that the project design assumes will connect, for instance, the clinical training of providers with the provision of a higher quality of care at facilities where (more) trained providers work, and thus ultimately lead to an improvement in health status or health outcomes for the targeted population. The effectiveness of the project's related activities can be measured at each step along the way.

Additional Background

"Strategic" frameworks lay out the strategy being implemented by the program, in terms of the causal paths leading from short-term or lower level results to the achievement of upper-level or long-term goals. They are also referred to as results frameworks for obvious reasons. The terminology is unimportant; the key issue to emphasize here is that these frameworks combine the investigation of causal relationships developed in the Conceptual Framework with the program-specific, activities-oriented approach of the Logical Framework. Combining the two is most helpful for developing a comprehensive Monitoring and Evaluation plan.

A more detailed example of Strategic Framework development is provided in Module 3, showing how it can be used to ensure coherence between program activities and the indicators selected for their related M&E.

EXAMPLE: STRATEGIC OR RESULTS FRAMEWORK

SO1: Increased use of FP, MCH, HIV/AIDS preventive measures

IR1: Availability of quality services

IR2: Demand for services

IR1.1: Information and services increased

IR1.2: Practitioners' skills and knowledge increased

IR1.3: Sustainable effective management

IR2.1: Customer knowledge of reproductive and child health improved
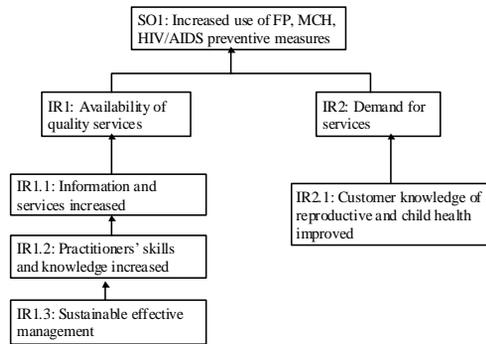
41

Speaker Notes

This is an example of a Strategic Framework. Notice that each of the boxes contains a specific result or achievement. Beginning from the lowest levels, the diagram depicts the causal flow the managers of this program expect to lead from their activities to the overall objective, at the top.

Additional Background

The example uses USAID terminology: SO ="Strategic Objective", IR ="Intermediate Result". The subordinate IRs may be called Sub-IRs or Lower Level IRs; as usual, the terms are unimportant. The main points are that each level has clearly-specified, well-defined results, that should be measurable, and that the lower level results should contribute toward achievement of the higher results and the overall objective.

Activities

At this point, pause and review the frameworks and their various areas of usefulness. When participants have a general grasp of their differences, break the workshop back into their small groups. Some may wish to refine the goals and objectives they developed earlier (at the beginning of Module 2, Slide 32). Depending on the timeframe for these workshop sessions, each small group could develop each type of framework for their case study. At minimum, at this time each group should develop a conceptual framework they consider appropriate for their program/project.

When they have come to a consensus, they should prepare a flipchart page/poster with their conceptual framework diagram. Reassemble everyone and let each group present their framework and the group's reasoning behind their selected factors and the causal relationships they have shown. Debate and discussion should focus on program factors, environmental factors, and the relationship of the factors selected for inclusion to the effects and outcomes judged key to determining the project's success.

If the workshop schedule allows, postpone the groups' development of their Results Framework until after the introduction of indicators in Module 3.

The purposes of designing performance monitoring and evaluation frameworks include:

- clarifying assumptions, goals, and interrelationships among all kinds of factors relevant to the project or program
- defining levels of performance and desired results in terms of planned activities and realistic, objective impacts

Monitoring and evaluation frameworks incorporate:

- program managers' assumptions and objectives, in a given context

to build a

- a schematic design displaying the directional linkages between key program elements and/or planned results, and other relevant factors

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Speaker Notes

The process of designing M&E frameworks serves several purposes. One main purpose is the clarification of the program's assumptions, goals, and the known or expected relationships among program and environmental factors that may affect the effectiveness of the activities or the outcome of the intervention. Another important purpose of M&E framework design is to define clear levels of results that should occur as the intervention unfolds. These should be realistic and objective impacts that can be measured and assessed.

M&E frameworks rest on the assumptions and objectives of the program within its operating environment. Drawing on those expectations, the M&E framework provides a schematic design showing how various relevant factors, results, and overall outcomes are linked.

Additional Background
Participants should be clear on several points: that the process of framework design is both useful in itself, to clarify project and partner understandings of the key assumptions and other necessary elements for a successful intervention, and that it is essential in order to develop an appropriate and useful M&E plan. Without developing a consensus on the foundations and context of the program and its success, monitoring and evaluation cannot be managed in a coherent or comprehensive way in order to contribute to effective management and the achievement of that success.

Speaker Notes

In sum, we have covered a number of ways in which the development of certain types of frameworks can be useful for generating a better understanding of the ways elements of the program interact with each other and with relevant factors in the context or project environment. This understanding can greatly improve the development of an appropriate and useful Monitoring and Evaluation plan.

Designing an M&E Framework clarifies appropriate program elements to measure, assisting in the identification of appropriate indicators and data for measuring them, and the appropriate methodology to be used in monitoring and evaluating program success. The themes of indicators, data, and methods will be central to the topics introduced and discussed further in Module 3.

Additional Background

The main theme of this Module has been the usefulness of Frameworks for developing a clear and useful understanding of the expectations embedded in project design. By using frameworks to draw out the elements critical to program success, we can identify the points where some monitoring and/or evaluation will be crucial in order to measure and understand where activities may be effective or may be not as effective as managers had hoped. The next Module shifts the focus from the significance of this broader understanding and analysis to the significance of the more mundane details of M&E -- indicator specifications and definitions, the details and data of their operationalization through metrics, and some of the caveats important for appropriate use of data, or methods.

<... take a break ...>

<u>Additional Background</u>
If time did not permit in the earlier Activity, participants may develop a Logical Framework for their Case Study. The focus of this exercise should be the clear specification of exact activities that are envisioned to take place within the program or project for which they will develop a Strategic Framework in the next Module. Along with the activities, of course, effects or outputs, and outcomes, should be specified. Small-group facilitators should assist the groups, helping them to identify reasonable activities and measurable results, as this will be conducive to later development of the Strategic Frameworks and indicator sets.

Module 3

*M&E Indicators
and Data Systems*

Now we move on to the Indicators and Data Systems, the heart of good Monitoring and Evaluation.

Additional Background
As you will see, however, we do not leave Frameworks behind.

M&E INDICATORS AND DATA SYSTEMS:
LEARNING OBJECTIVES

This module covers:

– indicator definitions and metrics for their calculation

– characteristics of ideal indicators

– criteria for the practical selection of sound indicators

– data needs and collection strategies for quality M&E

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Speaker Notes
This module covers indicator definitions and metrics for calculating indicators; the ideal characteristics of indicators; criteria to use in selecting indicators that will be of practical value for a program, for sound monitoring or evaluation; and some of the most important aspects of data needs and strategies for data collection in order to ensure high quality M&E for a given project or program.

Additional Background
The focus of this Module is on aligning valid indicators and the data to be used in their metrics with the activities and results of the program. The more closely all of these details are aligned with each other, the more useful M&E will be for ensuring and improving program effectiveness.

Module 3 (part I)

M&E Indicators

<u>Speaker Notes</u>

The first operational concept we need to discuss in detail is Indicators for Monitoring and Evaluation.

<u>Additional Background</u>
As you will see, however, we do not leave Frameworks behind.

Speaker Notes

An indicator is a variable that measures one aspect of a program or project. Let's take a moment to go over each piece of this definition. The purpose of indicators typically is to show that a program activity has caused a change or difference in something else. Therefore an indicator of that change will be something that we reasonably expect to vary. Its value will change from a given or baseline level at the time the intervention starts, to another value after the intervention has had time to make its impact felt, when the variable, or indicator, is calculated again.

Secondly, an indicator is a measurement. It measures the value of the change in meaningful units for program management, that can be compared to past and future units and values. In other words, calculation of an indicator establishes the objective value at a point in time with a metric for some factor of interest related to PHN program goals. Even if the factor itself is subjective, like attitudes of a target population, the indicator metric calculates its value objectively at a given time.

Thirdly, an indicator zeroes in on a single aspect of a program or project. It may be an input, an output, or an overarching objective, but its related indicator will be narrowly defined in a way that captures that aspect as precisely as possible.

A full, complete, and appropriate set of indicators for a given project or program in a given context with given goals and objectives will include at least one indicator for each significant element of the intervention.

Additional Background
In this module we will focus on results indicators. Typically, more than one will be appropriate per result identified in a Strategic Framework, although it is also important not to overload the M&E plan to a point of such indicator complexity that the whole set becomes overwhelming or unwieldy, and thus not very useful for feedback and improved management.

SAMPLE RESULTS FRAMEWORK

SO1: Increased use of FP, MCH, HIV/AIDS preventive measures

IR1: Availability of quality services

IR2: Demand for services

IR1.1: Information and services increased

IR2.1: Customer knowledge of reproductive and child health improved

IR1.2: Practitioners' skills and knowledge increased

IR1.3: Sustainable effective management

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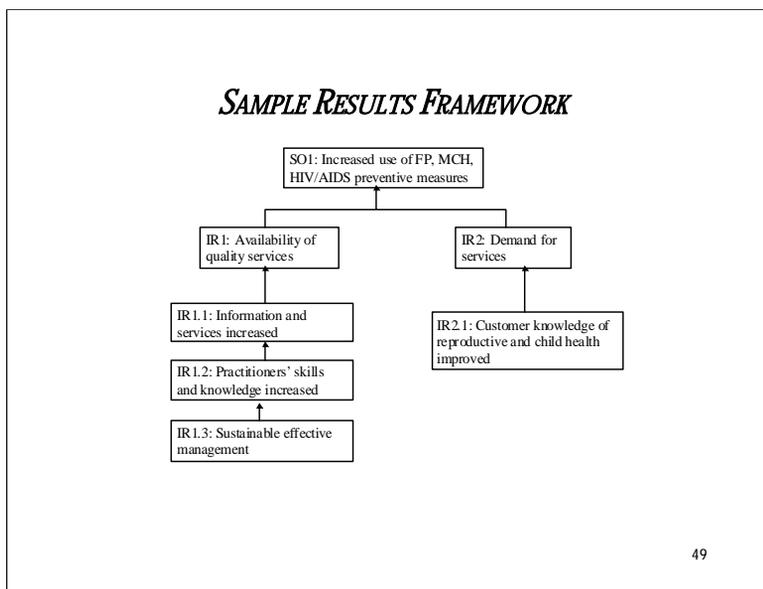
Speaker Notes

This is just one example of a strategic framework, or results framework. As covered in the previous module, this framework type provides a diagram of the strategy that is planned or that is being employed by the program or project to lead toward the desired goals. At the top, then, is the Strategic Objective, or in other words, the overall Population, Health, or Nutrition goal that the project is working to achieve. The second layer shows two Intermediate Results, or IRs, while other boxes below show subordinate or sub-IRs. While the terminology is not important, what needs to be emphasized is that the lower levels depict results or impacts that lead to or feed into the upper level results or general objectives. This is indicated here by the arrows between boxes, as they point upward from incremental achievements toward the overall goal. When designing a results framework, of course, the arrows indicate the analysis of the program regarding how various results have logical, causal connections. The task now is to find indicators to measure each of the stages and confirm those relationships.

Additional Background

This slide repeats the strategic framework from the earlier Module. If you have other frameworks on hand, these could be shown and discussed at this time. Otherwise, be prepared to discuss this one in greater detail. Participants may have questions or comments about the structure of this framework. They should be encouraged to be critical. This is not a "perfect" or ideal framework, so there is no need to defend it if they come up with valid criticisms of it. However, the point should be made (as the following slides demonstrate in detail) that the strength of the framework cannot truly be judged in the abstract, because it depends on how well it fits the actual program, its context and activities.

Activities

If participants have already prepared Strategic Frameworks for their case studies, these should be on display in the workshop area. At this time, the presentation could pause in order to allow participants to review their own designs, with a critical focus on whether or not each group has appropriately laid out the various levels of results, so that they logically lead from the lower levels up to the ultimately desired objective.
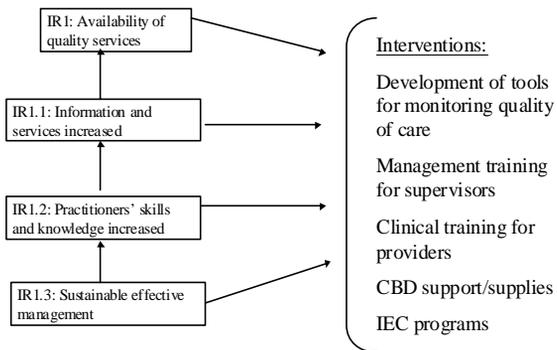
Speaker Notes

In seeking indicators, one thing to keep in mind is that frameworks must be aligned with activities. In other words, there's no point in figuring out ways to measure results unless they are reasonably closely connected to activities that are being undertaken. A program's activities should be designed to change some measurable result, with small effects or results from the full range of activities arguably leading to the larger objectives. Everything should be at least **logically** connected, although there does not have to be a one-to-one connection for each: some activities may have an effect on several results, at different levels. Some results may naturally be affected by more than one single activity.

This slide shows a subsection of the program results shown in the preceding framework example along with a list of some program activities that M&E planners might logically associate with efforts to cause changes in these results.

Additional Background
This slide and following slides are designed to make the point that there must be an integration of the project activities, the causal framework as it is understood by the project directors, and the indicators and data to be used in monitoring and evaluating program success. This integration is essential for the M&E plan to be an entirely useful product. Where there is slippage among these elements, you (the project) will find yourself either measuring something that doesn't matter, or failing to measure something that may matter a great deal.

Activities

Participants may wish to discuss other activities that might feed into the results shown, or other results that might usefully be measured according to the activities designated. Alternate examples from the other branch of the strategic framework shown on the previous slide, or from the case studies or other workshop materials, may also be discussed.

SAMPLE (PARTIAL) FRAMEWORK WITH INDICATORS

IR1: Availability of quality services

1. % of facilities scoring 85-100 on MOH Quality of Care checklist (rural, urban)
2. % of facilities with at least one trained provider in each targeted service area (rural, urban)

IR1.1: Information and services increased

1. # of IEC programs on radio in past year
2. % of facilities providing all targeted services

IR1.2: Practitioners' skills and knowledge increased

1. # of providers who have completed clinical training
2. # of CBD personnel who have completed training

IR1.3: Sustainable effective management

1. % of supervisors who completed all training courses in management (national, district levels)
2. % of providers who report satisfaction with facility management and supervision practices
3. Stocks continuously available for previous 90 days, central CBD supplies
4. Stocks continuously available for previous 90 days, district CBD supply warehouses

Interventions:
Development of tools for monitoring quality of care
Management training for supervisors
Clinical training for providers
CBD support/supplies
IEC programs

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Speaker Notes

As the previous slide indicated, the items in the results framework should be designed to flow logically from the specific activities that are being sponsored or directly undertaken by the program or project. Once you have determined the concrete or measurable effects that can be anticipated to result from these elements of the program strategy, the next step is to isolate discrete indicators that can measure one dimension at a time of the results at different levels that you have determined to be the important ones.

While the rest of this Module goes into the details of selecting and measuring an appropriate set of indicators, at this point note that in general more than one indicator can be used to measure a result. While it is a good idea not to overload an M&E plan with "too many" indicators, it can be risky to rely on a single indicator to measure any significant effects of the project. If the data for that one indicator become unavailable for some reason, or other problems occur, it will be difficult to recover and make the case that you have had a significant impact on that result. In other words, some diversification tends to strengthen an M&E plan.

Additional Background

Again, these examples are merely indicative rather than ideal or conclusive. It would be useful at this point to elaborate the connections between the specific activities and the indicators selected to measure their results but discussion of these particular indicators in comparison to other ideas is best deferred until further slides on the details of (appropriate) indicator selection and data concerns have been presented. These are not necessarily "perfect" indicators, just an array to suggest / show the connections between activities, results, and some indicators that could be appropriate.

INDICATORS WITH METRICS (example 1)

IR1: Availability of quality services

Indicators:

1. % of facilities scoring 85-100 on Quality of Care checklist (rural, urban)

Metrics:

1a. <u>Numerator</u>: # of rural facilities scoring 85 or better on checklist for quality of care.
<u>Denominator</u>: Total # of rural facilities that were checked and scored

1b. <u>Numerator</u>: # of urban facilities scoring 85 or better on QoC checklist
<u>Denominator</u>: Total # of urban facilities checked and scored

1c. (Could also calculate an aggregate percentage)

2. % of facilities with at least one trained provider in targeted service areas (rural, urban)

2a-f. <u>Numerator</u>: # of (rural, urban) facilities with at least one trained provider in (MCH, STDs, FP)
<u>Denominator</u>: Total # of (rural, urban) facilities

Alternative 2a-f. Could limit denominators to count only those facilities that offer the service for which trained providers are counted in the numerator

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<u>Speaker Notes</u>
The final element that completes the framework tree is developing a metric for each indicator. The metric is simply the precise explanation of the data and the calculation that will give the measurement or value of the indicator. In other words, it specifies the data that will be used to generate the value, and how the data elements will be manipulated to come up with a value.

Defining good metrics is absolutely crucial to the usefulness of any M&E plan. A good metric clarifies the single dimension of the result that is being measured by the indicator. A good metric does this in such a way that each value measured for the indicator is exactly comparable to values measured at another time. You can be entirely confident that the values of the indicator at the baseline, at each time of measurement, and in the final analysis will all be valid and comparable figures for gauging the degree and direction of effectiveness demonstrated by the project activities.

<u>Additional Background</u>
This point needs to be especially emphasized in the small-group work.
Good metrics are fundamentally important when deciding between different ways to approach indicator construction -- e.g. often "Percentage of" will be the desired result to measure, but trying to construct the metric will reveal that gathering data for the denominator is likely to prove an insurmountable obstacle.

INDICATORS WITH METRICS (example 2)

IR1.2: Practitioners' skills and knowledge increased

Indicators:

1. # of providers who have completed clinical training

Metrics:

1. Number of providers who have completed a clinical training course in an area in which they provide client care (e.g., MCH, STDs, FP)

Note: The M&E Plan should determine and specify how to calculate this count. For instance, a provider may have completed a basic course and an advanced course. The M&E Plan should specify that this is a count of 1 provider. Data for this indicator therefore must come from provider interviews, not a count of trainees in courses, in order to avoid double counting.

2. # of CBD personnel who have completed training

2. Number of CBDs who have completed a course training them in relevant duties and responsibilities

Note: The M&E Plan should determine and specify the appropriate period within which training should have taken place, e.g. "ever trained" or "trained in the past year", or another time period. Where attrition rates are a concern, some determination of "active" trained personnel may need to be included in the metric.

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Speaker Notes

Note that a single indicator may have more than one metric. Each metric may calculate the value for a sub-population, or otherwise break out the values into parameters of interest from a programmatic point of view.

Activities

If time and interest allow, have participants suggest different ways with different data to construct different metrics for the indicators shown here and/or on the previous slide. What would be the different implications of the indicators as differently constructed?

If small groups did not develop a results framework for their case study previously, it would be appropriate at this point in the workshop to take the time to complete this exercise. It is recommended that groups have a results framework before the next activity (when they select indicators).

CHARACTERISTICS OF A GOOD INDICATOR

- **Validity:** Measures in fact what it intends to measure conceptually

- **Reliability:** Minimizes measurement error

- **Precision:** Is operationally defined in clear terms

- **Independence:** Non-directional and unidimensional, depicting a specific, definite value at one point in time

- **Timeliness:** Provides a measurement at time intervals relevant and appropriate in terms of program goals and activities

- **Comparability:** Generates corresponding or parallel values across different population groups and program/project approaches

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Speaker Notes
What makes a good indicator? Fundamentally, good indicators must be valid and reliable measures of the result. The other desirable characteristics listed here all serve in a sense as aids that help guide the design of indicators and metrics toward this ideal or goal of valid, reliable indicators.

Validity: An indicator is valid when the phenomenon it measures matches the result it is designed to measure, conceptually and in actual terms.

Reliability: An indicator is reliable when it minimizes measurement error.

Precision: Indicators should be operationalized with clear, well-specified definitions.

Independence: Indicators should be non-directional and capture a single dimension of program results, so that their values clearly depict a specific level of performance and program effectiveness at a certain point in time.

Timeliness: Indicators should be measured at appropriate intervals relevant in terms of program goals and activities.

Comparability: Where possible, indicators should be structured using comparable units, denominators, and in other ways that will enable increased understanding of impact or effectiveness across different population groups or program approaches.

Next, each of the characteristics of good indicators will be discussed and examples of good and problematic indicators identified.

Additional Background
These technical issues will be covered as ideals toward which to strive. Later slides will discuss a number of caveats and trade-offs often necessary in terms of the pragmatic management of programmatic M&E.

Speaker Notes

Validity may be the most important characteristic of a good indicator. A valid indicator is one that accurately measures the phenomenon it is designed to capture. In other words, the indicator provides valid information about the target, or result it aims to measure, in a direct and focused way. Clearly, then, we can see that the validity of an indicator is an attribute that can only be assessed in the context of considering the result or phenomenon it is aiming to measure.

Sometimes valid indicators that could be designed for particular important results may be impossible to use for practical reasons like costs, or other sorts of material or logistical obstacles that may prevent collecting all of the data that would ideally be necessary. In that case the next best thing is a proxy indicator. A proxy indicator is one that does not capture the exact concept or single aspect of your activity's result, but aims to measure a concept that approximates the true or ideal indicator. Your M&E plan should make sure to note where you will be using proxy indicators, and the reasons. It may become possible later to collect other data and construct a valid indicator for that result, in its place. On the other hand, if uncertainty exists about data collection for some results, it may be prudent to think of proxy indicators for which the data may be easier or cheaper to collect.

Examples/Activities

Participants may consider the following examples, and then take time to look at their developing Frameworks. Can they think of a valid indicator and a proxy indicator for each major result?

   Example: Survey questions on ideal family size are not generally thought to be very valid measures of fertility demand. Why? What are better indicators of fertility demand? Why? (Answer: Survey questions on **ideal** family size only indirectly indicate a person's actual fertility demand. Stated intention to have more children is more valid as an indicator of demand because it is focused on the individual and her likely personal choices and decisions.)

   Example: Maternal mortality ratio is not a valid measure of the impact of a family planning program on women's health. Why? What might be a more valid indicator? (Answer: While family planning programs contribute to reducing maternal mortality, numerous other factors, such as prenatal care, a referral system, access to hospital care, and transportation also influence the ratio. In this case, the result itself needs narrowing, to focus on a particular effect of FP programs on women's health, before a valid indicator to capture & measure that effect can be determined.)

Speaker Notes

Reliability, or minimization of measurement error, is at least as important as validity. For one thing, there is no simple tactic, like proxy indicators, in cases where M&E planners face problems with indicator reliability. All indicators and metrics need to be examined critically to assess ways to reduce measurement error that might otherwise creep into program M&E.

Simply put, measurement error is a critical issue because indicators are used to assess program performance. If changes in indicator values are merely reflecting random or systematic errors in their measurement, however, conclusions about program efficiency or effectiveness will not be accurate.

In PHN M&E, problems in measurement may commonly arise from sampling error, non-sampling error, or subjectivity. In brief, sampling error occurs where the sample taken to estimate population values is not a representative sample. Non-sampling error includes all other kinds of mismeasurement that may occur, such as courtesy bias, inaccurate or incomplete records, or non-response rates. Subjectivity introduces measurement error because the indicator's value will be influenced by the impressions and sentiments of the measurer -- values will not be comparable over time or across geographical units or populations.

Additional Background
The technical details of measurement error should be covered in depth in additional modules on, for example, survey techniques, or impact assessment.

Examples

Example of Sampling Error: Non-random sampling, for instance resulting in over-representation of urban populations because access to them is quicker/cheaper.

Example of Non-Sampling Error: Survey estimates of abortion incidence, due to response bias (the reluctance of respondents to report abortions).

Example of Subjectivity: Many "quality" indicators (quality of care, leadership, supervision, etc.) call on the personal judgment of the "data" collector or analyst. Another example is policy "environment" and other political "progress" indicators.

Speaker Notes
An indicator should be defined in precise, unambiguous terms that clearly describe exactly what is being measured. Where practical, the indicator should give a relatively good idea of the data required and the population among which the indicator is going to be measured.

This seems like an obviously desirable attribute of indicators, but deserves emphasis, since many indicators in common use are not truly well-defined in clear terms, or at least often include terminology that could be improved to add greater precision. For instance, "new user", "knowledge of AIDS", "quality of care", or "trained provider" can all mean and imply different things in different circumstances. The more you can spell out in the indicator, the less room there will be for later confusion or complications.

Additional Background
Increasing the clarity of the wording of indicators contributes to validity in the use of the indicator. The more clearly you specify the operational aspect of the result that you intend to measure with this indicator, the simpler it becomes to ensure that concepts match measurement.

Activities
Have participants individually define the terms "new user", "knowledge of AIDS", "quality of care", or "trained provider", or others, and write these definitions down on scratch paper. Comparing their responses will show how many different ideas the group could generate for terms that are often considered 'obvious' when used in indicators.

Independence: Non-directional and unidimensional,
to describe a discrete result at a single point in time

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Speaker Notes
The characteristic of independence captures the idea that the value of the indicator should stand alone. It is best to avoid ratios, rates of increase or decrease, or other directional definitions; the baseline and subsequent values for the indicator will demonstrate that movement anyway. At the same time, the ideal is to design indicators that measure more complex results a single dimension at a time. For instance, rather than constructing some kind of index to measure "quality of care" in an aggregated, overall way, it is preferable to have separate indicators that would measure time spent counseling, technical skills, clients' satisfaction, etc., or other key aspects of quality care. The dimensions that are targeted for measurement by the program's M&E indicators should be the ones that are most directly affected by the program activities and/or the ones at lower levels that logically or causally lead toward upper-level results or objectives.

Additional Background
Increasing the independence of indicators contributes to their validity, through clarifying concepts. Independent indicators are also easier to interpret. If certain items in a ratio improve and others decline, the overall ratio will tell you very little about these possibly crucial internal elements. A set of more disaggregated indicators for a complex result however should provide a clear signal of which activities are performing relatively better than others, or if all are on track.

Activities
Have participants think of other common "complex" or directional results that should be broken out into separate dimensions for clearer, easier to interpret, results and indicators.
Examples could be: sustainability; quality; healthier families; health-seeking behavior; knowledge of diseases or knowledge of health-seeking "ideals"; policy environment; policy improvement; etc.

Speaker Notes
Considering timeliness when building a set of indicators for a program's M&E plan is crucial, as it affects not only the indicators themselves, but the data collection schedule, in the context of reporting schedules as well. Since indicators are tools for measuring results, data to construct them should be collected after some period sufficient for program activities to have made a measurable impact! Again, although this may seem obvious or self-evident, many times data collection may be affected by the government's reporting schedule, your partners' schedules, and your own to your headquarters, so to the extent possible these logistical factors should be taken into account in indicator design. For instance, if your condom-social-marketing partners compile routine statistics every six weeks, it might be better not to design an indicator counting condoms distributed in the last 30 days. Other timeliness factors to take into account would include the periods for which reporting sub-units, such as clinics, may compile statistics; the degree to which surveys should rely on respondents' memories or retrospective evaluations; and the length of time one could reasonably expect change in some variables, such as mortality or fertility rates, over a country's population.

Additional Background
Timeliness contributes to reliability. If you are trying to measure impacts that have not had time to occur, or have occurred over such a long period of time that many other factors will have intruded, there will be more "noise" in your data, inevitably. While this noise can be corrected for or filtered out with some of the relatively more sophisticated methods typically used in evaluation, in general monitoring indicators, lack of timeliness will tend to foster higher measurement error.
Taking timeliness into account in an M&E plan should involve communication with the full range of stakeholders in the M&E process regarding logistics, reporting, and their M&E needs. Since the questions involved are intrinsically very practical , it is one way to get less analytical or less abstract partners more involved in the whole process; increasing their sense of "ownership" helps to ensure that data collection and other reporting-related tasks are more likely to be completed on a timely basis. This can be one of the side-benefits or spillover effects of engaging partners in the M&E planning process.

Comparability: Assists in understanding results across different
population groups and program/project approaches

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Speaker Notes

Amidst all of the calls for specificity and precision of indicators, keep in mind that
another desirable characteristic of indicators is that they be comparable across different
population groups and program/project approaches. To the extent that you may need
disaggregated indicators for some activities (by population group, by region, by type of
facility, etc.), you certainly should use identically constructed indicators for these, unless
your activities targeting each group differ greatly.

Additional comparability beyond narrow, or immediate, results reporting is also
desirable. Think about further uses of your program's data and results, and try to ensure
that comparability in the broader scope of improving PHN programs and their
effectiveness won't be impaired by particularly narrow or unique indicators whose
values would be difficult to compare with other programs' results. For instance, if the
general standard for gauging Contraceptive Prevalence Rates is a percentage of all
women ages 15-49, don't construct your CPR indicator as a percentage of unmarried
women ages 19-45 -- unless there is a very strong programmatic reason that you would
need to break out the information in exactly that format.

Additional Background
While not particularly contributing toward validity or reliability, and in fact at times the
most widely-used indicators could stand improvement in both areas, it is still a good
idea to select generally comparable indicators within and across program approaches,
and certainly across relevant population groups where activities warrant such a
breakdown.

Examples
"Breastfeeding" indicators -- timing, exclusivity, duration, etc.
CPR -- what ages; married, sexually active, or all women; 'modern' methods; etc.

   A program with different approaches (e.g., clinic, CBD, social marketing) toward PHN
goals should identify indicators (e.g. of service utilization) appropriate to all modalities
where possible, so that the results or effectiveness of the given activities can be
compared across service delivery approaches.

Speaker Notes

In an ideal world, indicators judged to be the highest quality and most useful would be the ones selected and used to monitor and evaluate the effects of program activities. However, in the real world and in field settings, many other factors may intervene. Ideal indicators may not be practical; the feasibility of certain indicator designs can be constrained by data availability, resources, programmatic (or host government) needs, and donor requirements and needs.

Additional Background
There are some additional materials along these lines available in the USAID Performance Management Toolkit/Guide (www.usaidresults.org). These may be incorporated into the small-group exercises if suitable according to workshop goals and if time permits.

Examples

Availability of Data: Some data may be considered 'privileged' information by agencies, projects, or government officials. Data may be available only on aggregated levels or already calculated into indicators that may not be the ideal indicators for your program or activities.

Resources: Ideal indicators might require collecting data to calculate an unknown denominator, or national data to compare with project area data, or tracking lifetime statistics for an affected and/or control population, etc. The costs of collecting all of the appropriate data for ideal indicators typically is prohibitive. Human resources and technical skills, particularly for evaluation, may be a constraint as well.

Programmatic and Donor Requirements: Indicators may be imposed from above by those not trained in M&E techniques. Reporting schedules may not be synchronized (e.g. fiscal year vs. reporting year). Different stakeholders priorities may diverge.

Activities/Discussion:

Ask: In your experience, what factors other than desire to select the best and most appropriate indicators, has affected the selection of M&E indicators?

OPERATIONALIZING INDICATORS

Definition: To operationalize an indicator is to identify exactly how a given
    concept or behavior will be measured.

Challenges:

  – Subjective judgment

  – Local Conditions

  – Unclear yardsticks

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Speaker Notes

In a best-case scenario, indicators will be conceptually clear, lending themselves to easy, unequivocal, unambiguous measurement. For example, the number of persons completing a given training course, in a given year, by category of personnel (e.g., physician, nurse). Every effort should be made to design and define indicators so that their operationalization will be as transparent as possible. Contrary design tendencies or Challenges will tend to fall into one of these categories: requiring Subjective judgment; requiring certain local quirks or conditions to be understood or maintained; or using unclear units, terms, or yardsticks for calculating/gauging indicator values.

Let's go over each of these. Measurement of some indicator terms may be subjective. For example: quality; leadership; improvement; establishment (of a supervisory or management system, or a policy); networking; advocacy. Often the indicator itself could be re-designed to specify a more precise, singular dimension of a result. However, sometimes subjectivities cannot be avoided, in which case Very Precise Definitions must be agreed upon and used in every M&E cycle. Where measurement unavoidably requires an opinion from experts or others involved in the M&E process, careful thought and caution should be used when reporting the results, interpreting them, comparing them over time, and using them in decision-making.

Local conditions may affect measurement of an indicator. For example: New acceptors can only be counted according to the kinds of records that SDPs are willing to keep on a continuing/accurate basis. If you want to define new acceptors as only the first time a woman begins any (modern) contraception (rather than a new acceptor as any client who starts any method any time at any SDP), you will need very good, detailed, and cross-referenced data. Otherwise, it may not be feasible to identify those kind of "new acceptors"; you will need to tailor your definition to the data that is locally available.

Indicators may be defined without a clear yardstick. For example: cost of one month's supply of contraceptives (by method) does not make clear how cost will be defined -- Per person? as an average? Should the average cost be weighted by the proportion of the surveyed (or statistical) population using each different method? For which month? Costs may vary over the course of a year, especially in areas of high or seasonal migration. What about unstable or fluctuating currency values?

All of these issues need to be addressed in what we will call the **metric**, agreed upon by relevant stakeholders, and recorded and used in M&E planning, implementation, and interpretations or uses of the results.

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<... take a break ...>
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Activities

Organize participants again into their small groups. If time did not permit earlier, participants should begin to develop Indicators for their Case Study Framework developed in the previous section (Module 2). The focus of this exercise should be to come up with indicators, first, and then to improve them according to the desired characteristics and features explained in detail in this section of the workshop. They should fit in with the case-study's activities as well as the goals and results that each group has identified for their program in context.

Small-group facilitators should assist the groups, helping them to identify reasonable indicators as well as problems with indicators. Although there are no perfect indicators, facilitators should be provocative and push groups beyond the use of generally-used but sometimes weak indicators to develop more valid and more reliable indicators that fit their program best.

For groups that have decided on indicators, hand out the completed Performance Indicator Reference Sheet, the Suggested Concepts/Topics for Indicator Reference Sheet, and the Example of a completed Indicator Reference Sheet (all found in the Appendix). Let groups identify one or two indicators and begin working through the issues raised on these sheets specifically for their own indicators. What problems do they foresee? Facilitators will need to work closely with groups to ensure they identify the full range of issues for different kinds of indicators. Have each group report back and facilitate discussion of tricky indicator issues among all participants.

By this time, each small group of participants should have completed a conceptual framework, a results framework and selection of indicators. Module 3 moves beyond these issues to talk more about sources of data and types of data collection available to calculate indicators, and it is important that participants have a framework from which to work and have made progress on indicators. Indicator Reference Sheets should be reconsidered as different data issues are explained and discussed.

Module 3 (part II)

M&E Data Systems

Speaker Notes

Now we move on to Data Systems

Additional Background
As you will see, however, we do not leave Indicators behind.

Components of a Clearly Defined Data System:

- Multiple, Operationally Defined Indicators

- A Variety of Appropriate Data Sources

- Baseline and Target Values

- Feasible Data Collection Plan and Budget
  - Specified Frequency
  - Identified Responsibility

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Speaker Notes

To speak of Data Systems is a way of talking about the whole set of M&E indicators in a performance monitoring and evaluation plan, and all of the data and other information that needs to be gathered and understood in an orderly fashion that makes sense and helps in program management and implementation.

A clearly-defined, strong Data System, then, will have these characteristics:
-It will have an appropriate range and number of clearly-operationalized indicators, as discussed in the first part of this module;
-It will draw on a variety of appropriate data sources and kinds of data;
-It will include baseline and target values appropriate for the program in its particular operational context, for each indicator; and
-It will spell out a plan and schedule for data collection, including estimations of the financial and technical resources that will be required to achieve each element of that plan, in such a way that all stakeholders are aware of and commit to their share of responsibility for ensuring the Data System functions as designed.

Additional Background

The data system for a specific M&E plan should be designed in conjunction with all partners and stakeholders who will contribute resources or data to M&E activities. It is also a good idea to include program activity partners, even if they will not actively participate in M&E efforts, because program decisions that will affect them will be at least partly based on M&E results. Their involvement in your M&E planning also is an opportunity for them to initiate their own M&E efforts, which will be a benefit to all, obviously.

LEVELS OF DATA

– Policy or Program Level

– Population Level

– Service Environment Level

– Client Level

– Spatial/Geographic Level

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To identify the data needed for measurement of the selected indicators and appropriate sources of the data, the levels of data must be considered. There are four levels of data in general use, with an additional perspective of spatial or geographic data sometimes available in a given context.

Policy or program level data is information about the policy environment, plans, and comprehensive program management and operations. This information tends to be at the highest level of aggregation, often on a national scale, although it may be for regional, district, state, or other areas as appropriate.

Population level data is information about all relevant persons in the area.

The service environment level of information is data that pertains to operations at the service delivery or provider delivery point. It differs from program level data in that data is aggregated by relevant SDP or provider strata rather than more comprehensively.

Client information is data that pertains only to persons interacting with the health service environment. It differs from population level data by not including the entire population, or potential clients, in a given catchment area or entire country.

Spatial or geographic information is starting to be used in some M&E plans, but it is much less common than the other four types. At this point in time, it is more used in evaluation, as an added perspective on data that assists with analysis and/or contextual understanding.

Additional Background
The levels are heuristic devices. What is important is to ensure that a M&E plan's data system is appropriate to both activities and indicators. Diversifying data and sources is a sound strategy for developing an M&E plan that will be useful even if some circumstances change.

Sources:
- Official documents (e.g., legislative and administrative documents)
- National budgets or other accounts data
- Policy inquiries
- Reputational rankings (e.g., program efforts scores)

Tools:
- Indexing questionnaires (for country specialists and rankings)
- Special/contract studies

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Speaker Notes

Here are some examples of sources and tools for ensuring that your M&E plan covers the policy/program level as appropriate.

Additional Background

For all of these illustrative slides, it may be useful to solicit additional input from participants. Keep in mind that the "levels" are simple categories, and do not get bogged down in disputing which kinds of tools/sources "belong" in which categories. Overlaps in practice do not detract from the main point, that data systems should be designed with diversified data sources and diversified data collection tools.
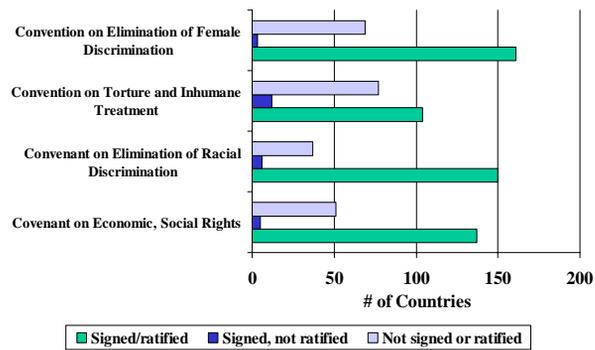
Examples

Composite scores have been developed to measure the level of program effort and policy. These include the Family Planning Effort Score, which has now been used for more than 25 years; the recently field tested Maternal/Neonatal Program Effort Score, and an AIDS Program Effort Index Score, recently field tested by UNAIDS.

Activities

Participants may brainstorm briefly on indicators that could be constructed using these sources and tools.

EXAMPLE: POLICY/PROGRAM LEVEL DATA

Global Record on International Human Rights Instruments

# of Countries

Legend: Signed/ratified | Signed, not ratified | Not signed or ratified

Categories: Convention on Elimination of Female Discrimination; Convention on Torture and Inhumane Treatment; Convenant on Elimination of Racial Discrimination; Covenant on Economic, Social Rights

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Speaker Notes
This example of using policy level data provides information on an international scale. Typically the scale is national.

Additional Background

Activities
Have participants collected policy/program level data in the past? What were the sources of the data? How were the data used?

DATA SOURCES AND TOOLS
AT THE SERVICE ENVIRONMENT LEVEL

Sources:

- Administrative records (e.g., service statistics, HMIS data, financial data)
- Service delivery point information (e.g., audit information, inventories, facility survey data)
- Staff or provider information (performance or competency assessments, training records, staff/provider data, quality of care data)
- Client visit registers/compilations

Tools:

- Health Service Information Systems
- Facility sample surveys
- Performance monitoring reports
- Facility (Service Delivery Point) records

Speaker Notes

Here are some examples of sources and tools for ensuring that your M&E plan covers the service environment level as appropriate.

Additional Background

Solicit additional input from participants, keeping in mind that the "levels" are heuristic devices rather than categories worthy of prolonged dispute. The central point is that data systems should have diversified data sources and tools.

Activities

Participants may brainstorm briefly on indicators that could be constructed using these sources and tools.

HEALTH MANAGEMENT INFORMATION SYSTEMS (HMIS)

Note: An important way of monitoring routine data over time is through a Health Management Information System. An HMIS is a system for ongoing (routine) collection and reporting of data about client service delivery. In many countries, this system operates at the national level. Ideally, these routine data are collected from a comprehensive set of service delivery points, and should cover topics such as:

- Costs
- Stockouts
- Births
- Mortality
- Morbidity
- Numbers of clients seen, referred (inpatient; outpatient)
- Numbers of clients by types of service

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Speaker Notes

Health Management Information Systems is a special category that merits in-depth discussion because of its many uses and, sometimes, many difficulties. At this point we will just note that it can be a valuable resource for an M&E plan's data system, often covering the service environment level in all of the topic areas shown on this slide. However, in most developing countries, it is prudent to be cautious of the data quality when information is collected through an HMIS.

Activities

What routine data do participants access from Health Management Information Systems? What difficulties have they encountered?

EXAMPLE: SERVICE ENVIRONMENT LEVEL DATA

Informal health system practices, Zambia
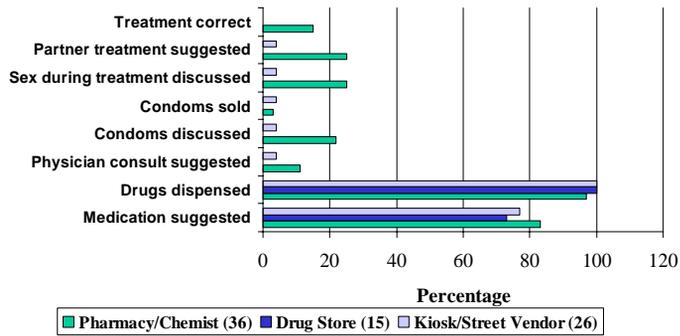
71

Speaker Notes

This example of using service environment data shows information by type of outlet for informal health services or products.

Activities

Have participants collected service environment level data in the past? What were the sources of the data? How were the data disaggregated? How were the data used?

DATA SOURCES AND TOOLS
AT THE INDIVIDUAL LEVEL

Sources:
- Case surveillance (e.g., epidemiology of disease)
- Medical records
- Interview data
- Provider-Client interactions (clinical/technical or interpersonal skills)

Tools:
- Case reports
- Client register analysis
- Patient flow analysis
- Direct observation
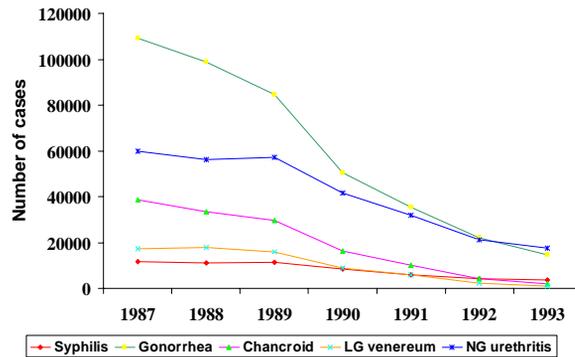
72

<u>Speaker Notes</u>
Here are some examples of sources and tools for ensuring that your M&E plan covers the individual level as appropriate.

<u>Activities</u>
Participant may brainstorm briefly on indicators that could be constructed using these sources and tools.

EXAMPLE: INDIVIDUAL LEVEL DATA

Male STD Cases at Thai Government Clinics: 1987-1993

Speaker Notes
This example of using individual level data shows numbers of STD clients.

Recall that this differs from population level data. If this were population level data it might be shown as a percentage of population who have been diagnosed with particular STDs, for example.

Activities
Have participants collected client level data in the past? What were the sources of the data? How were the data used? What are the costs and benefits of using these kinds of data?

DATA SOURCES AND TOOLS
AT THE POPULATION LEVEL

Sources:
- Government Census Office
- Vital registration systems (e.g., birth and death certificates)
- Sentinel surveillance systems
- Sample households or individuals
- Special population samples (demographic or occupational group, or geographic sector)

Tools:
- Birth certificates
- Household/Individual/Special surveys
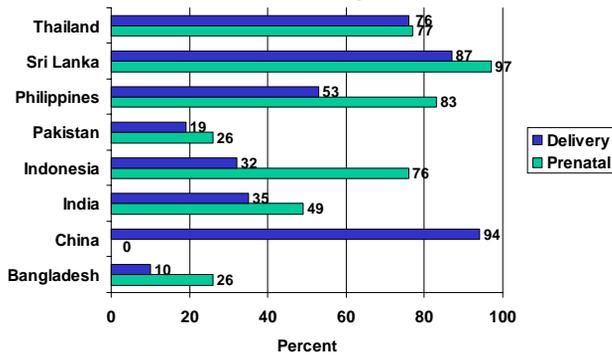- Census forms

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Speaker Notes
Here are some examples of sources and tools for ensuring that your M&E plan covers the population level as appropriate.

Activities
Participants may brainstorm briefly on indicators that could be constructed using these sources and tools.

EXAMPLE: POPULATION LEVEL DATA

Percent of Women Receiving Prenatal Care and
Professional Assistance at Delivery

Country	Delivery	Prenatal
Thailand	76	77
Sri Lanka	87	97
Philippines	53	83
Pakistan	19	26
Indonesia	32	76
India	35	49
China	94	
Bangladesh	10	26

Percent (0, 20, 40, 60, 80, 100)

Legend: ■ Delivery ■ Prenatal

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Speaker Notes
This example shows population level data as used to construct a maternal health indicator. Note the difference between this use of data versus data used at the client level, shown previously.

Activities
Have participants collected population level data in the past? What were the sources of the data? How were the data used? When would you want to use a population indicator versus when would a client indicator probably be more useful?

Sources:
- Satellite imagery and areal photography
- Digital line graphs and elevation models
- Cadastral maps (land ownership)

Tools:
- Global Positioning System
- Computer software programs

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Speaker Notes

Here are some examples of sources and tools for using spatial or geographic information in your M&E plan, where it might be appropriate for your program activities. Remember that this level of information tends to be quite useful in evaluation of program impact and analysis of the results.

Activities

Brainstorm briefly on indicators that could be constructed using these sources and tools. If cost were not a concern, how might you imagine using this kind of data to better understand the ways programs or certain activities are working in a given context?
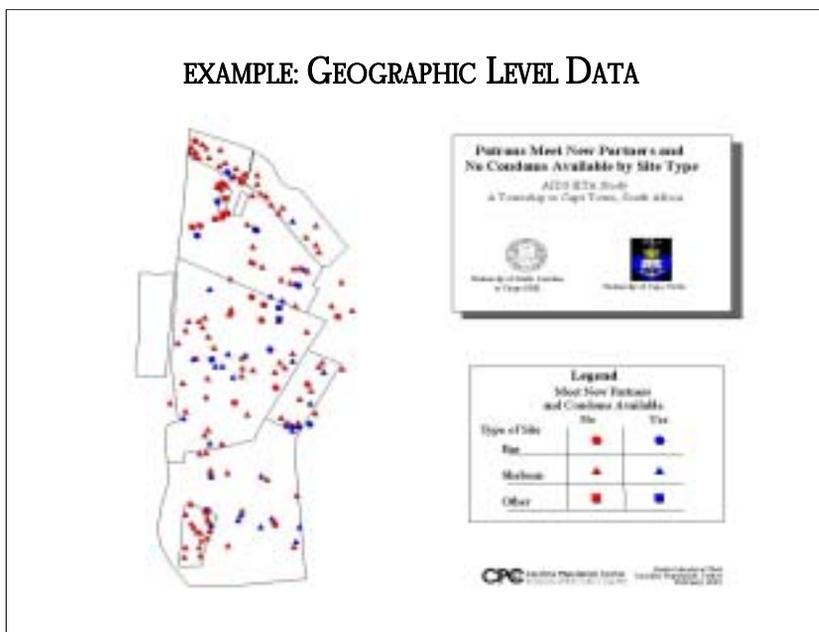
Speaker Notes

This example uses geographic data illustrated to show High Transmission Areas for HIV and STDs. Although the specific information was collected via surveys, by displaying it spatially we can see concentrations more easily.

Activities

Have participants used spatial/geographic data in the past. What were the sources of the data? How were the data used?

Speaker Notes

Data from different sources, or levels, can be used to calculate the same indicator. The definition of the metric may need to be changed depending on the data sources selected, or vise versa.

For example, to measure the proportion of live births attended by a trained professional in the last 12 months, one can use service environment and/or population level data. In Option 1 above, the numerator data can come from monthly facility statistics and the numerator could come from vital registration data of births. In Option 2, both the numerator and denominator could come from a sample household survey.

Additional Background
The purpose of this slide is to highlight that different data sources can be explored for calculating the same indicator, and changes to the metric may be necessary.

Activities
Participants may be asked what other possibilities for data sources there might be for calculating this indicator and how would changes to the metric need to be made.

DIFFERENT DATA SOURCES - SAME INDICATOR

Pros and cons of different data sources should be weighed when there is more than one option.

% of children 12-23 months receiving all three polio vaccines

- Numerator: # of children 12-23 mos receiving all three polio vaccines
- Denominator: # of children 12-23 mos

Data sources:

- Option 1: numerator from individual client records at facilities, denominator from census
- Option 2: numerator from HMIS, denominator from census
- Option 3: numerator and denominator from sample household survey (interview with mother)
- Option 4: numerator and denominator from sample household survey (review of child's immunization card)

Speaker Notes

In this example, there are several options for data sources, each with pros and cons.

In Option 1, reviewing client records may be time consuming and require training of field workers. Census data will likely be a projected figure since censuses are typically taken only every 10 years.

In Option 2, HMIS data is suspect since often systems are weak and inaccurate. Validity of HMIS data needs to be explored if there are other data options available.

In Option 3, the response of the mothers is subject to recall bias and courtesy bias. Mothers may not remember accurately or may want to give the "right" answer.

In Option 4, not all mothers may be able to locate the child's immunization card.

Activities

Participants may be asked to debate which of the four options of this example is the best given no restrictions on budget or manpower to collect the data.

MODULE 3 -- DATA SYSTEMS

Components of a Clearly Defined Data System:

- Multiple, Operationally Defined Indicators

- A Variety of Appropriate Data Sources

- Baseline and Target Values

- Feasible Data Collection Plan and Budget
    - Specified Frequency
    - Identified Responsibility

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Speaker Notes

We have now covered many kinds of data and other information that needs to be organized in order to construct a Data System that will make sense of M&E efforts and help in program management and implementation.

A full Data System, as discussed previously, will have these characteristics:
-an appropriate set of clearly-operationalized indicators;
-a variety of appropriate data sources and types;
-baseline and target values for each indicator; and
-a data collection plan, schedule, and budget.
It is very important to design a diversified data system. Indicators should report on the effectiveness and efficiency of program activities at a number of levels, drawing on a number of kinds of data or other information from a number of sources. For instance, if all indicators are population-level, and rely on a national survey every five years to provide the data to calculate them, that is an extremely weak system, vulnerable to any disruption . A better system would have some population-level indicators, some disaggregated.

Additional Background
The data system for a specific M&E plan should be designed in conjunction with all partners and stakeholders who will contribute resources or data to M&E activities. It is also a good idea to include program activity partners, even if they will not actively participate in M&E efforts, because program decisions that will affect them will be at least partly based on M&E results. Their involvement in your M&E planning also is an opportunity for them to initiate their own M&E efforts which will be a benefit to all.

Activities

Organize participants again into their small groups. Distribute the blank Schedule for Data Collection Activities (in Appendix). Using the frameworks they developed earlier, ask each to identify data collection activities and consider how they will cover all of the indicators for all of their activities. What problems do they see looming? E.g., funding, timing, coverage, access, data analysis, etc. Have each group report back and facilitate discussion of the indicators among participants.

Additional Issues

Speaker Notes
[Time and interest permitting, these are additional issues that may be of interest to workshop participants.]

Additional Background
These final slides introduce or discuss a few additional or dangling items that may be added to this final section of the core modules. To the extent possible, these may be matters worth discussing further in small groups, and beyond the context of this workshop.

Those using these materials to develop their own M&E Workshop formats should feel free to introduce any issue in this section that they feel will help their participants contextualize or synthesize the information already presented in the core. You may wish to push the case studies further along in their M&E Plan Development, devise hypothetical situations or other challenges to challenge the small groups (for example, suppose the DHS has been delayed for a year or suppose the budget for M&E data collection efforts has been cut in half), or simply reinforce ideas that may have come up in the workshop so far. The following slides suggest some directions in which you could take this final sub-section of the workshop core.

How much is enough?

- at least one or two indicators per result (ideally with different data sources)
- at least one indicator for every activity
- no more than ten or fifteen indicators per area of significant program focus
- try to include a variety of data collection activities or sources

A frequent question is "How many indicators should my program have?"
The best answer is "It depends."
What does it depend on? Complexity of goals; Costs of data collection and analysis; Benefits and practical utilization anticipated for M&E results at the different conceivable levels.

A reasonable rule of thumb might be one or two indicators per result, but that depends on how finely detailed your results may be. You should definitely have at least one or two indicators for every significant activity -- remember, M&E's purpose is to monitor performance and evaluate impacts! However, there is a tendency to go into overkill on indicators -- again, keep in mind that the focus of your program is your program. M&E that is not going to be fed back to program management or otherwise used to improve performance, effectiveness, or efficiency, is not a very sound use of program resources! It is wise to vary the data sources used for indicators, either secondary sources or your own data collection efforts, especially for key results. Any number of unexpected events can occur and disrupt an M&E plan, such as budget cuts, delayed surveys, or civil war, so diversifying data sources is good strategy to ensure some indicators can be tracked over the life of the project.

LINKING DATA

- Data can be linked from different sources, across different levels, or over time

- Linking data appropriately requires planning, preferably prior to data collection

- Understanding linked data can provide depth and continuity to enrich otherwise discrete points of information

Speaker Notes

Data or datasets that can be linked often reveal additional angles of interest for M&E, particularly for evaluation purposes. It is almost never possible to link data unless the linkage has been planned in advance and built into the data collection scheme.

Activities
What linked sources of data have participants used in the past? What information was gained from linking data from multiple sources?

LINKING DATA

Why link?

- Survey data sets (e.g., household and facility information) can be linked to compare services available and health outcomes across geographical units
- Geographical and survey data can be linked to examine the effects of physical attributes on service utilization
- Time series and panel data can help build causal explanations of program or project effects

Why not link?

- May not be necessary for a given program in a given context
- Improper methodology can confuse issues more than explain them
- Analyzing linked data more appropriate for evaluation than monitoring

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Speaker Notes

Although linking data is not necessarily expensive, there are nonetheless costs and benefits that should be considered when designing M&E plans and data collection activities.

Time series and panel data are two ways of comparing surveys. A time series is basically more than one set of data gathered in the same way from different samples drawn from the same population. Panel data is similar to a time series but should either cover population as a census (i.e. all facilities in a region of interest) or the samples should be as nearly identical as can be achieved.

LINKING DATA

Examples

- Population and facility data can be linked to ascertain health outcomes correlated with service availability, training, or quality of care (e.g. % of live births in catchment area attended by a trained personnel or % of women exclusively breastfeeding until 6 months among women going to facilities where provider training took place.)

- Facility and client data can be linked to learn about program expenditures per new family planning acceptor

- Facility and staff data can be combined to provide information about the proportion of clients per provider or the proportion of doctors per facility

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Speaker Notes

Here are just a few examples of the ways linked data can add to our understanding of program effectiveness and program impacts.

DATA QUALITY

Without sound and reliable data, the best-designed indicators will be useless.

Types of measurement error --
        Sampling Error
        Non-Sampling Error
        Subjective Measurement

<u>Speaker Notes</u>
Data quality is a crucial topic that must be included in M&E concerns. To ensure the quality of the data collected, potential errors or biases in data collection or in the data themselves must be carefully considered in determining the usefulness of data sources and tools. Although problems in data quality usually require a technical solution, M&E plans must include discussion of data quality for any or all indicators where information or sources may be questionable. If the data on which indicators are based are faulty, the indicators themselves cannot provide sound information for program planning, management, monitoring, or evaluation.

Again, problems in measurement may commonly arise from sampling error, non-sampling error, or subjectivity. Sampling error occurs where the sample taken to estimate population values is not a representative sample. Non-sampling error includes all other kinds of mismeasurement that may occur, such as courtesy bias, inaccurate or incomplete records, or non-response rates. Subjectivity introduces measurement error because the indicator's value will be influenced by the impressions and sentiments of the measurer -- values will not be comparable over time or across geographical units or populations.

At a minimum, uncertainties about data sources or tools must be acknowledged, and taken into account in the interpretation of all related results.

<u>Activities</u>
Ask: What issues have you encountered in identifying sources and collecting data that is of high quality? How were these issues resolved?

DATA QUALITY

Data Quality Issues:

- Will the data cover all of the elements of interest? (Coverage)

- Is there a complete set of data needed for each element of interest? (Completeness)

- Have the instruments been tested to ensure validity and reliability of data? (Accuracy)

Speaker Notes

To ensure the quality of the data collected, all of these issues must be carefully considered in determining the feasibility of collecting useful data from various sources. Some issues pertain to the entire data system, while others should be taken into account for each component of the system

For instance, Coverage refers to the entire data system. If an intermediate result refers to improving the quality of care provided through national health facilities, does the data system ensure that information will be collected on results in all of the appropriate dimensions? The important and appropriate dimensions will depend on areas of activity, such as provider training, logistics, and range of family planning options offered. If these are the activities, and the goal is improved quality, the data system must include coverage to monitor and evaluate progress in each of those elements -- in other words, an M&E plan that simply includes checking the percentage of facilities that offer at least three family planning methods, one of which is long-term, would not be using a quality data system. A different way of thinking about coverage is not to design a data system that overcollects data: e.g., if a program is supporting routine immunization as a pilot project in one or two regions, it would not make sense, and wastes M&E resources, to collect national data on changes in immunization rates.

Completeness of the data system can mean that the M&E plan ensures that each measured element will have a baseline and periodic data collected over time, in order to provide the context in which program managers can understand what the indicator values imply about program success. Sometimes time or resources can make completeness difficult to achieve, but a strong data system will plan to collect the data or construct proxies where collection may be infeasible.

Testing of instruments for accuracy is crucial, but can be costly. Where full pilot tests may not be possible, instruments should at least be tested, perhaps on a small scale or with focus groups, to ensure that cultural or other factors of the local context are taken into account in the instrument's design and use.

DATA QUALITY

Data Quality Issues:

- Are the data collected as frequently as needed? (Frequency)

- Does the available data reflect the time periods of interest (Reporting Schedule)

- Can the data needed from each source be collected/retrieved? (Accessibility)

Speaker Notes
These issues also require careful consideration.

The appropriate frequency of data collection depends on the activities and goals. In the design of the M&E plan and its data system, both managers and evaluators must consider how much activity they are supporting, and how quick and how broad they expect to be able to accomplish a measurable change. If data are collected too frequently, small fluctuations from standard (e.g. sampling) error will likely produce more confusing results than evidence of any program achievement.

However, data also need to represent incremental results at the end of each reporting period. A data system must include the collection of data that will suit the needs of the program in terms of reporting for each reporting period -- in other words, a program cannot rely solely on the DHS! Alternate sources of information on relevant results must be sought to allow more or less continuous assessment of program effectiveness and investigation of problem areas.

A final important issue for data quality is access to the data itself. If the data are of high reliability and validity, but access to the data depends on idiosyncratic factors of personality or proprietary concerns, the quality of the data system will suffer.

Uses of Quantitative and Qualitative Data:

- Quantitative data are necessary for tracking trends accurately

- Qualitative data are useful for understanding the context in which the trends occurred and to interpret the quantitative data accurately

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Speaker Notes

Both quantitative and qualitative data are useful for performance monitoring and evaluation. The use of quantitative data alone has been criticized as not incorporating the comprehensive information necessary for understanding causal processes. The use of qualitative data has been criticized because of the cost of collecting the data, the difficulty in organizing and accurately interpreting the data, and typically, a lack of a uniform set of data across all cases.

Activities

Ask: How have you used quantitative and qualitative data together in the past to analyze trends? What data were collected? How did use of both quantitative and qualitative data assist with understanding the program/project and results? What problems were encountered?

Organize participants once again into their small groups in order to complete the blank Schedule for Data Collection Activities (in Appendix). Ask each group to identify data needs and sources of data, keeping in mind the levels of data needed and issues that have been identified. Provide each group with a large piece of paper and post-it notes. Have each group report out and facilitate discussion of the data and sources identified.

CONCLUDING 3: M&E INDICATORS AND DATA

The purposes of understanding indicators and data systems include:

- better design of indicators using better data for most effectively improving program results

Indicators and Data Systems for performance M&E incorporate:

- an understanding of the program's assumptions, underlying and operational frameworks, activities, and context

- an understanding of the strengths and limitations of available information, in order to maximize its utilization in management for results

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Speaker Notes
This concludes the module on indicators and data systems, and concludes the three core modules introducing M&E fundamentals. Taken as a whole, these discussions raise the most important elements that must be taken into consideration in the development of M&E plans that are as strong and as useful as possible. Quality data is crucial, but so is careful examination of program assumptions through framework design and other analytical approaches.

PHN M&E
Core Training Modules:
Wrap-Up

Speaker Notes

Now that we have covered all of the core modules, we can see more clearly that planning, frameworks, indicators and data systems are each indispensible to strong M&E.

PERFORMANCE MONITORING AND EVALUATION

- Modules 1-3 have introduced basic concepts and practices useful for both Performance Monitoring and Evaluation.

- Understanding of additional concepts and practices is indispensable for planning and implementing both Performance Monitoring and Evaluation.

- Ideally, both performance monitoring and evaluation should be built into program/project planning and design.

- In the real world, choices must be made based on greatest need, data availability/accessibility, and financial and political realities.

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Speaker Notes

Basically, the stronger your M&E, the more effective your program can become. An M&E plan should be developed as carefully as possible, but it will always be a work in progress. Test it and improve it as the program unfolds.

CONCLUDING: INTRODUCTION TO M&E

The purposes of understanding performance monitoring and evaluation include:
- appropriate allocation of resources according to program objectives and measurable outcomes
- fine-tuning of future program impact according to current real results

The components of plans for performance monitoring and evaluation include:
- program activities and resources in local context
- program managers' assumptions and objectives
- desired impacts / objective results, indicators to determine progress periodically, and detailed strategies for data collection

Speaker Notes

[Foreshadow the rest of the Workshop!]