

MODULE 4:

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# DESIGNING AND IMPLEMENTING A SURVEILLANCE, MONITORING, AND EVALUATION PLAN FOR MALARIA PROGRAMS

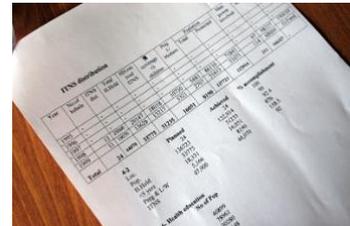
# MODULE 4: DESIGNING AND IMPLEMENTING A SURVEILLANCE, MONITORING, AND EVALUATION PLAN FOR MALARIA PROGRAMS

This module describes the main functions and essential elements of an surveillance, monitoring, and evaluation (SME) plan for malaria programs and the process for developing and implementing an SME plan. It will also review Specific, Measurable, Appropriate, Realistic, and Time-bound (SMART) goals and objectives.

## Module Objectives

By the end of this module, you will be able to:

- Describe the functions of an SME plan for malaria programs
- Identify the main elements of an SME plan
- Describe the process of developing an SME plan
- Understand how to implement an SME plan
- Make a distinction between goals and objectives for malaria programs



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## What Is an SME Plan?

An SME plan is a comprehensive document that describes all SME activities in an SME system, including:

- Program objectives and interventions developed to achieve the stated objectives and procedures to be implemented to determine whether or not the objectives are met
- Expected program results and how they relate to goals and objectives
- Data needed and how it will be collected and analyzed
- Information use including resources needed to do so
- Program procedures for how the program will be accountable to stakeholders

Ideally, the SME plan should be developed when your program is being developed. In practice, however, this is often not the case and SME plans are often developed after the program is already in place. If feasible, aim to develop the two simultaneously.

## Functions of an SME Plan

An SME plan serves a number of functions. First, the plan states how the program will measure achievements, providing accountability for the program. Second, it serves to document the consensus reached from all stakeholders. This provides greater transparency and holds stakeholders responsible for the achievements of the program. Third, the plan helps guide the SME implementation over the life of the program, thus standardizing and coordinating all SME efforts throughout the program. Lastly, the plan helps to preserve institutional memory.

It is important to remember that an SME plan is a living document. Often programs are modified based on lessons learned during implementation. If your program is modified at any time during the life of the program, it is important to also adjust the SME plan accordingly.

An SME plan should strive to be:

- Useful, by serving the practical information needs of its intended users
- Feasible, as well as realistic, diplomatic, and frugal
- Conducted in a legal and ethical manner with regard to those involved in and affected by the evaluations
- Accurate, by conveying technically sound information

## Components of an SME Plan

An SME plan consists of eight main elements:

1. Introduction
2. Program description
3. Indicators
4. Data sources and reporting systems
5. Strategies for demonstrating program outcome and impact
6. Plans for dissemination and use of information
7. Analysis of data quality constraints and potential solutions
8. Implementation plan

It is important to note that not every plan will conform to this exact outline. Some plans will include other elements or a different arrangement of elements. These elements represent the essential components in an SME plan that should be thought out and discussed in detail.

### 1. Introduction

The introduction of the SME plan includes:

- The purpose of the SME plan. For example, “To detail how the program will monitor its progress and evaluate its achievements”
- A description of how the plan was developed, which describes who the stakeholders are and the process that was undertaken to reach consensus among all the stakeholders
- A review of the SME system, including a Strengths, weaknesses, opportunities, and threats (SWOT) analysis

**A SWOT analysis is a tool used for strategic planning during the review of an SME system. It generates information that is helpful in matching a malaria program’s goals, activities, and capacities. A SWOT analysis identifies a malaria program’s internal factors, such as strengths and weaknesses, and external factors, such as opportunities and threats.**

#### Internal factors:

- Strengths are positive attributes that are internal to the malaria program and can be controlled by the program.
- Weaknesses are factors within the control of the program that lesson the program’s ability to attain its goals.



External factors:

- Opportunities are external factors that may improve a program.
- Threats are factors, beyond the program’s control, which could place program activities at risk.

A matrix is often used during a SWOT analysis to assess each system within a malaria program. Here is an example of a matrix used during a SWOT analysis.

**Figure 8. Example of a SWOT analysis matrix**

System	Strengths	Weaknesses	Opportunities	Threats
<b>Routine Health Information System (RHIS)</b>				
<b>Integrated Disease Surveillance and Response System (IDSR)</b>				
<b>Demographic and Health Survey (DHS)</b>				
<b>Entomological sentinel sites</b>				
<b>Other reporting systems</b>				

## 2. Program Description

The program description includes:

- *A problem statement* that describes the nature of the malaria-related issue being addressed by the program
- *The conceptual framework for the program*
- *Goals and objectives* that describe the ultimate outcome of the program (goal) and the shorter-term aims (objectives)
- *Program description which provides a description of the interventions that will be implemented*, describes the geographic scope of the program and the target population for the interventions, and discusses the expected duration of the program
- *A logical framework/ results framework*

## 3. Indicators

This section details which indicators will be measured to track the program’s progress and achievements. When selecting the indicators for the program, a number of important considerations should be taken into account.

Indicators should be based on the following:

- The program’s conceptual and logic framework
- The strategic information that will be needed for decision making at all relevant levels (global, policy, community, programmatic, beneficiary)
- The specific requirements of the country and health partners
- What existing data are already available or will be feasible to collect
- The amount of funding the program has allocated for SME activities

**Figure 9. Example of an indicator matrix**

Indicator	Data Source	Frequency	Level	Responsible persons
Number of health personnel and community health care agents trained in case management	Program Records	Quarterly	Output	LGA SME personnel
Proportion of children <5 years who slept under an ITN the previous night	Representative household survey (ex. DHS, MICS, MIS)	Periodic (Every 1-5 years)	Outcome	Survey Personnel

Here are a few suggested ways in which you can present the indicators in your SME plan:

- **Indicator matrix:** Table that presents the indicators and information on data source, frequency, and who is responsible
- **Indicator reference sheets:** Detailed sheets describing each indicator, how to measure it, underlying assumptions, and interpretation considerations.

**Figure 10. Example of an indicator reference sheet**

Name of Indicator
<b>DESCRIPTION</b>
<b>Rationale</b>
<b>Definition of the Indicator:</b> <ul style="list-style-type: none"> <li>• <b>Numerator:</b></li> <li>• <b>Denominator:</b></li> </ul>
<b>Measurement:</b>
<b>Frequency:</b>
<b>Interpretation:</b>
<b>Data Source(s):</b>
<b>Strengths:</b>
<b>Limitations:</b>
<b>THIS SHEET LAST UPDATED ON: 02/04/2020</b>

#### 4. Data Sources and Reporting Systems

The data sources and reporting systems section of the SME plan describes the source of the information for each indicator, how that information will be reported, and how the SME team will collect the information.

It typically includes a description of each of the following:

- The specific sources of the data for each of the indicators
- A framework that details the data collection, processing, analysis, and reporting system
- The data collection tools will be; for example, patient records or registers, survey instruments, commodity management forms
- The management of the SME activities, including the roles and responsibilities of each group or member of the reporting system

#### 5. Plans for Demonstrating Program Performance, Outcome, and Impact

It is important to include in your SME plan a detailed account of how you will demonstrate the outcomes and impact of your program. This entails building an evaluation into your program from the start to measure the outcomes and impact over the life of the program. Typically, it is best to build in an evaluation that would take measures at baseline (at the start of the program) and compare them to the same measures either at the end of the program or ongoing throughout the life of the program. Other

special studies that take place during or after the program can be included in the SME plan. These special studies are less ideal than a baseline and end line evaluation, but in some cases they will be the most feasible option.

This section of the SME plan includes the following:

- A methodology for measuring program outcome or impact
- Protocols for any other special study planned for the program

## 6. Plans for Dissemination and Use of Information

It is critical to include a section in the SME plan that discusses how the data and information collected will be disseminated, to what audiences and stakeholders they will be disseminated, and how they will be used for decision making. Clarifying from the start of the program how the data will be used at all levels and across all stakeholders for decision making will help to create a “culture” for using data for decision making.

This section of the SME plan includes the following:

- How the data and other information collected will be stored to ensure confidentiality and who the users of the data will be
- How the information and results from the evaluations and special studies will be disseminated and used
- The different methods envisioned for disseminating the information; for example, through reports, media, conferences, and publications

## 7. Analysis of Data Quality Constraints and Potential Solutions

The SME plan should include a description of any constraints you expect to encounter throughout the implementation of the program and potential solutions and actions that will be undertaken by the program to avoid these constraints. It is important to show that you have considered and planned for possible constraints in the quality of the data collected by the program or in the system’s overall performance.

## 8. Implementation Plan

This section of the plan describes the capacity needed to implement functions of the SME unit and how this will be addressed. It also includes a detailed work plan for how the SME plan will be implemented, a calendar with a timeframe to complete the activities, who will be responsible for each activity, and a budget.

### Preparing an SME Plan

There are a number of steps involved in developing and preparing an SME plan, in addition to drafting the actual document. These steps are outlined as follows:

1. Identify your program’s stakeholders and involve them in the development and implementation of the SME plan.
2. Assess your program’s strategic information needs.

3. Assess the existing systems' capabilities to address your strategic information needs. If the current systems are unable to gather the information you need, decide on what mechanisms or systems will need to be put in place to collect that information.
4. Gather baseline data for the indicators chosen in the SME plan.
5. Develop a mechanism for SME plan development and review it among the stakeholders.
6. Prepare a budget for the implementation of the SME plan.
7. Achieve consensus and commitment among stakeholders on all of the following:
  - a. Resources for implementation of the SME plan
  - b. Indicators and their definitions
  - c. Data collection, data analysis, processing systems and mechanisms
  - d. A reporting structure, timeline, and formats
  - e. The roles and responsibilities of all stakeholders for the implementation of the SME plan
8. Prepare a draft of the SME plan.
9. Review and achieve consensus from stakeholders.
10. Finalize the SME plan.

## Tips for Implementing the SME Plan

Here is a list of important tips to remember for effective implementation of your SME plan:

- It is important to continually engage and involve your program's stakeholders in the implementation of the SME plan.
- It is essential at the beginning of the process to clarify the roles and responsibilities of each stakeholder for carrying out the SME plan.
- The program should regularly organize and interpret program results to ensure that it is being implemented as planned and achieving the expected results.
- The program should regularly prepare and disseminate reports and presentations for stakeholders on the results of the program.
- When possible, the program should facilitate and support stakeholders to use the information for decision making.
- Remember to update the SME plan whenever there are changes to your program and share these changes with program stakeholders.

## Role of the SME Unit

There are a number of important roles that the SME unit of a program or of an organization plays in the development and implementation of an SME plan.

The main roles include:

- Building consensus among all of the stakeholders in the program, including beneficiaries, program managers, policymakers, and donors, around the proposed SME plan

### SME Plan Development: Tips for Building Consensus

- Make sure that stakeholders understand what you are trying to achieve consensus on in the SME plan
- Ensure that all stakeholders are involved early in the process of developing the SME plan. This will ensure that they will have ample opportunity to provide input into the development of the plan.
- Provide stakeholders with the opportunity to provide input and receive feedback on the plan.
- Consistently promote the message that SME provides the means to demonstrate the extent to which a program is achieving its objectives and provides valuable information for improving your program.

- Coordinating SME efforts with the implementation of program activities
- Managing and manipulating the data, which includes all data entry, analysis, and interpretation
- Reporting the results and disseminating the information to all stakeholders in a user-friendly and easily accessible format
- Taking appropriate steps to ensure data quality, including auditing data to assess their quality
- Training staff and building their capacity in SME

## Important Tips

Table 3 offers a few tips to keep in mind while you are preparing your SME plan.

**Table 3. Tips for preparing an SME plan**

Do	Don't
<ul style="list-style-type: none"> <li>• Start early.</li> <li>• Involve stakeholders at all stages in the process.</li> <li>• Assess current capacity and use what is already available.</li> <li>• Avoid duplication of data collection and reporting.</li> <li>• Budget appropriately for the SME plan.</li> <li>• Report results in an easily accessible format and in a timely manner.</li> </ul>	<ul style="list-style-type: none"> <li>• Collect information that will not be used.</li> <li>• Underestimate the importance of stakeholder buy-in and ownership at each step of the process.</li> </ul>

## Developing a Problem Statement

A problem statement must be developed in the program description of an SME plan. A good problem statement concisely states a situation related to the programs needs or purpose that needs to be changed. It states who or what is affected, how many people, and what links the problem to the program's purpose. Another way to look at a problem statement is to ask:

- What is the ideal (expected) situation?
- What is the current situation?
- Where do we stand now or where is the gap?

Understanding the causes of the problem contributes to developing an effective plan. Two common tools used in developing a problem statement are problem tree analysis or fishbone diagram.

## Goals and Objectives

A program description also includes goals and objectives that describe the outcome of the program and the shorter-term aims. A **goal** is a broad statement of a desired, long-term outcome of a program, and an **objective** is a statement of a desired, specific, realistic, and measurable program result.

Read each statement in the quiz and decide whether it represents a goal or whether it is an example of an objective. Your responses will not be graded. *Correct answers are provided on the next page.*

1. To reduce malaria morbidity and mortality among children under five
  - a. Goal
  - b. Objective

2. At least 85 percent of pregnant women have access to intermittent preventive treatment in Community X by January 2020.
  - a. Goal
  - b. Objective
3. Eighty percent of children who present with fever in the health clinic in Community Y receive the appropriate antimalarial treatment according to the current drug policy each month.
  - a. Goal
  - b. Objective



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Now think of your own malaria project; what are your program's overarching goal and objectives? Can you think of other effective ways for increasing data demand and use in your own program?

### Correct Answers for Goals and Objectives

1. To reduce malaria morbidity and mortality among children under five
  - a. **Goal**
2. At least 85 percent of pregnant women have access to intermittent preventive treatment in Community X by January 2016.
  - b. **Objective**
3. Eighty percent of children who present with fever in the health clinic in Community Y receive the appropriate antimalarial treatment according to the current drug policy each month.
  - b. **Objective**

### SMART Objectives

Your program's stated goal and objectives should be written SMART. In other words, they should meet the SMART—Specific, Measurable, Appropriate, Realistic, and Time-based—criteria.

**SMART**

Your program goal and objectives should aim to be:

- **Specific:** Identify concrete events or actions that will take place.
- **Measurable:** Quantify the amount of resources, activity, or change.
- **Appropriate:** Logically relate to the overall problem statement and desired effects of the program.
- **Realistic:** Provide a realistic dimension that can be achieved with the available resources and plans for implementation.
- **Time-based:** Specify a time within which the objective will be achieved.

## Putting SMART Objectives into Action

Test your knowledge of SMART objectives by determining whether the following statements meet the SMART criteria. Your responses will not be graded. *Correct answers are provided on the next page.*

1. *True or False:* The following statement meets the SMART criteria: “To ensure that at least 80 percent of people sleep under insecticide-treated nets in every district.”
2. *True or False:* The following statement meets the SMART criteria: “At least 80 percent of pregnant women have access to the package of interventions to reduce the burden of malaria in pregnancy by December 2020.”
3. *True or False:* The following statement meets the SMART criteria: “At least 85 percent of people sleep in insecticide-sprayed structures in eligible areas of the 36 selected districts by December 2019, an upward revision from the 15 initially planned districts in the 2015-2020 National Malaria Strategic Plan.”
4. *True or False:* The following statement meets the SMART criteria: “One hundred percent of malaria patients in all districts are receiving treatment according to the national policy within 24 hours of onset of symptoms by the end of next month.”



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## Correct Answers for SMART Objectives

1. *True or False:* The following statement meets the SMART criteria: “To ensure that at least 80 percent of people sleep under insecticide-treated nets in every district.”

**False: This objective statement does not meet all of the SMART criteria. It does not include a time frame for when the objective should be met.**

2. *True or False:* The following statement meets the SMART criteria: “At least 80 percent of pregnant women have access to the package of interventions to reduce the burden of malaria in pregnancy by December 2020.”

**False: This objective statement does not meet all of the SMART criteria. It is not specific; it should include a definition of what is meant by the “package of interventions” for reducing the malaria burden. When an indicator is not specific, it is very difficult to measure.**

3. *True or False:* The following statement meets the SMART criteria: “At least 85 percent of people sleep in insecticide-sprayed structures in eligible areas of the 36 selected districts by December 2019, an upward revision from the 15 initially planned districts in the 2015-2020 National Malaria Strategic Plan.”

**True: This objective is SMART. It meets all of the five criteria—it is specific, measurable, appropriate, realistic, and time-bound.**

4. *True or False:* The following statement meets the SMART criteria: “One hundred percent of malaria patients in all districts are receiving treatment according to the national policy within 24 hours of onset of symptoms by the end of next month.”

**False: This objective does not meet all of the SMART criteria. It is not a realistic objective, because ensuring that all malaria patients receive prompt and effective treatment within 24 hours according to the current drug policy most likely will take a very long time to accomplish and will not realistically be achieved within one month.**

## Module 4 Assessment

### Questions

*Correct answers are provided on the next page.*

- Which of the following is NOT an essential element of an SME plan?
  - A detailed description of the program's activities or interventions, including a timeline and implementation plan
  - The different data sources that will be used for collecting all the indicators
  - A plan for how to implement the SME plan
  - An analysis of potential data quality constraints
- True or False:* After an SME plan is developed, it is important to stick to the plan throughout the life of the program, even if there are small modifications to your program.
  - True
  - False
- Which of the following is NOT one of the main functions of an SME plan?
  - To state how a program will measure achievements
  - To show stakeholders how the program plans to carry out its SME activities
  - To guide SME implementation over the life of the program
  - To document exactly how SME activities will be carried out to avoid having to make any changes later
- True or False:* Typically, it is best to include all stakeholders in the process of developing a program's SME plan.
  - True
  - False
- Which of the following statements represents a SMART objective?
  - To reduce malaria mortality in children under five by 50 percent
  - At least 90 percent of all health workers in Districts X and Y receive training on how to properly diagnose and provide the correct antimalarial treatment for children who present with fever in the clinic by the end of the year.
  - To increase use of insecticide-treated nets among pregnant women and children under five by 50 percent
  - All pregnant women in Community Y receive two doses of intermittent preventative treatment during their pregnancy.
- Which of the following statements represents a SMART objective?
  - At least 80 percent of children under five who present with fever at the health clinics in District X receive the appropriate antimalarial treatment by December 2019.
  - Health providers receive training on correct diagnosis and treatment of malaria in children under five.
  - All pregnant women have access to intermittent preventive treatment.
  - At least 75 percent of households are sprayed with insecticides in Community Y.

## Correct Answers

*Correct answers are noted in bold.*

1. Which of the following is NOT an essential element of an SME plan?
  - a. **A detailed description of the program's activities and interventions, including a timeline and implementation plan**

A brief description of the program's activities, goals, and objectives is an essential element, but it is not necessary to include a long and detailed description of the program's activities and interventions, how and by whom they will be implemented, and a timeline. This information can be found in the program's work plans and other related documents.
2. *True or False:* Once an SME plan is developed, it is important to stick to the plan throughout the life of the program, even if there are small modifications to your program.
  - b. **False**

If there are any changes or small modifications to your program over time, then the SME plan will need to be modified accordingly to reflect those changes.
3. Which of the following is NOT one of the main functions of an SME Plan?
  - d. **To document exactly how SME activities will be carried to avoid having to make any changes later**

It is important to document how SME activities will be carried out, but if your program changes over time (as often happens), the SME plan will need to be modified accordingly. The point is **not** to document it from the beginning so that no changes have to be made later on.
4. *True or False:* Typically, it is best to include all stakeholders in the process of developing a program's SME plan.
  - a. **True**

It is important for all stakeholders to be part of the process of developing a program's SME plan because different stakeholders will need different information for decision making, thus their input is essential. Furthermore, it is important that there is consensus from stakeholders on how the program will track progress and its measure its achievements.
5. Which of the following statements represents a SMART objective?
  - b. **At least 90 percent of all health workers in Districts X and Y receive training on how to properly diagnose and provide the correct antimalarial treatment for children who present with fever in the clinic by the end of the year**
6. Which of the following statements represents a SMART objective?
  - a. **At least 80 percent of children under five who present with fever at the health clinics in District X receive the appropriate antimalarial treatment by December 2019.**