Center for Applied Research on Population and Development (CERPOD)

USING DATA TO IMPROVE SERVICE DELIVERY

A Self-Evaluation Approach

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Using Data to Improve Service Delivery:

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Table of Contents

Acknowledgments v

Part 1 1
Introduction 3

Part II 9
Sources of Data for Self-Evaluation 11

Part III Identifying Needs and Resolving Problems with Data: Five Steps to Self-Evaluation of Health Services 23
Essential Service: Antenatal Care (ANC) 25
Essential Service: Assisted Delivery 41
Essential Service: Preventive Infant Visit (PIV) 57
Essential Service: Childhood Immunization 73
Essential Service: Family Planning 89
Essential Service: Community Involvement in Health Care Management 105

Annexes

Annex 1: Indicator Definitions A-2
Annex 2: Blank Tables A-13
Annex 3: Glossary—Words You Should Know A-23
Annex 4: Help Section A-25

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Part 1

Introduction

1. What Is the Purpose of this Guide?

This guide will help frontline health workers use the data collected at health facilities to:

- Solve common problems in service delivery; and
- Improve their response to community needs.

It is intended for doctors, nurses, and midwives in community-based health centers. The overall aim of the guide is to promote greater use of existing service data to improve health services. It does not require health workers to collect any additional data.

2. Why Should Health Workers Use Data for Problem Solving?

The following story will help answer this question.

Meet Mary and Kadija

Mary and Kadija work at Kasemeni health center. Mary is a nurse and Kadija is a midwife. They have worked at Kasemeni for four years, providing services to the communities living in this area. After all this time working in Kasemeni, Mary and Kadija feel that they understand the health problems in the community quite well. After all, most people come to the health center with the same problems month after month. Children have respiratory infections and diarrhea, many people come to the center with malaria in the rainy season, and sometimes pregnant women seek care after they deliver. Although she promotes antenatal and well-baby care, Kadija finds that the community's interest in these preventive services remains limited. Mary and Kadija are pleased that they can help people solve some of their health problems.

However, they would like to improve the services they provide and work more effectively with the community to address health needs.

Using registers and patient record cards, Mary and Kadija record information about the people seen at the health center each day. At the end of each month, Mary tallies the information and sends a report to the district health office. Sometimes she wonders about the purpose of collecting all this information.

Many health workers like Mary do not realize that the data they collect each day can be used right at the facility to solve problems in service delivery as well as community health problems in general. For example, Kadija knows that many women do not come to her for antenatal care. But without looking at the data, she does not know **how many** pregnant women in the community are not receiving the benefits of antenatal care, nor does she know **where** these women live. This information can help her define the problem of low antenatal coverage and find ways to address it.

In addition, if attendance at the clinic improves following an information, education, and communication (IEC) campaign about the benefits of antenatal care, Kadija can use health data to determine **whether coverage has improved a little or a lot.**

It is possible for Kadija to answer each of the following questions using *census data* on the population and *facility data* collected at the health center:

- **How many** pregnant women in the community do not receive antenatal health care?
- **Where** do these women live?
- **Has coverage of antenatal care improved a little or a lot?**

With data she could estimate the actual number of pregnant women in the community, set a target or goal for reaching a certain percentage of these women, and then measure whether her efforts to improve coverage have been successful. While Kadija can report this information to the district management team or the supervisor as evidence of her efforts, the data is probably most useful to Kadija herself. She can understand the strengths and weaknesses of the health service and work with other health staff and the community to make improvements where they are needed. *This process of examining data to assess problems and find solutions is called* ***self-evaluation.***

This guide will help you learn how to conduct self-evaluation at your facility and use data to improve your capacity to meet health needs in your community.

3. Who Benefits from Self-Evaluation?

Conducting **self-evaluation of health services** using data already collected at the health facility can help health workers in many ways. Overall, self-evaluation will enable health workers to assess problems and discover new strategies for improving health services. Specifically, analyzing and interpreting data assists health workers to:

- Identify and understand community needs and problems;
- Identify and understand health service needs and problems;
- Help the community understand the extent of their health problems and identify solutions;
- Set priorities each period (month, quarter, etc.) for facility- and community-based activities;
- Monitor the results of facility- and community-based health interventions to solve health problems; and
- Use resources such as medicine and supplies more effectively.

Data that describe a problem or show that you have been successful in solving a problem can also be presented to your **supervisors and managers** to:

- Demonstrate your ability to conduct self-evaluation and improve health services; and
- Support a request for additional resources such as staff, equipment, supplies, drugs, transportation, and fuel.

Information can also be used to engage **people in the community** in improving health services and addressing major health problems in the community. Health workers can present data to **community leaders** to:

- Demonstrate that the health services are an important part of the community; and
- Demonstrate the benefits of working together to solve health problems.

4. How Do I Use this Guide to Conduct Self-Evaluation?

As you read this guide, you will find in each section:

- **A story** about a common problem that health workers face when they deliver basic health services. Each story describes one worker's efforts to try to reach people with specific health needs—such as pregnant women—and the problems associated with attracting people to the health service or providing good quality health care.

Following each story you will find:

- Some **suggestions** about monitoring and evaluating these essential services using *census* and *facility* data. The guide encourages health workers to use information already available at the health center or district health office to improve their understanding of a specific problem, devise ways to address it, and monitor improvements that result from these efforts.

Clearly, most health workers are already aware of many of these problems without having to use data. The purpose of this guide is to help you gain a deeper understanding of a specific problem by using data to measure its **size**, identify **who** is affected most by it, and assess whether the problem is becoming **larger or smaller over time**. It will help you answer questions such as:

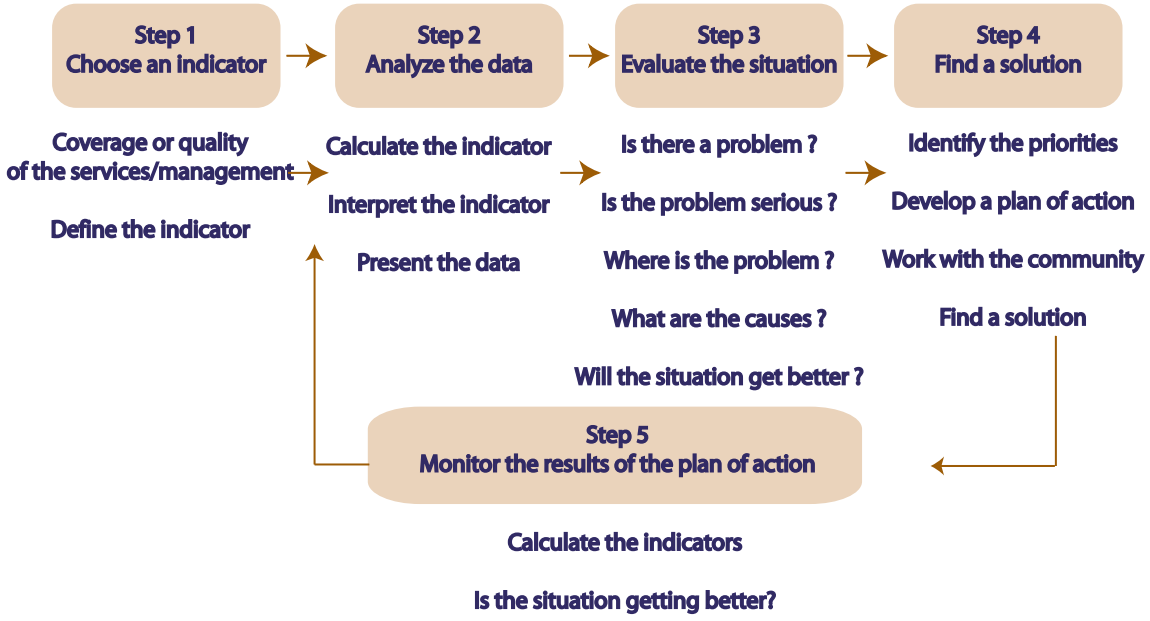
- What percentage of children in the community has **not** received three doses of DPT and OPV?
- Where do these children live?
- Is the percentage of children who have not received three doses of DPT and OPV becoming larger or smaller?
- How can we improve immunization coverage at our health facility?

While there are many indicators that may be used to assess performance, the guide suggests that you use one **key indicator** for monitoring the performance of each essential service (see Annex 1). Indicators will relate to health services coverage or the quality of management. The guide explains how to take data that is already available at the health center and *calculate* this indicator. The guide then suggests ways to use this information to make improvements in coverage and management. To help you record data, calculate indicators, and present your findings, step-by-step instructions and blank forms are found in the annexes.

5. Performing Self-Evaluation

Self-evaluation is not difficult, but it can take time. It works best when health workers take a special interest in improving their ability to meet health needs in the community. To be effective evaluators, health workers should also receive support from their managers and supervisors. **Self-evaluation involves five steps.** These five steps are illustrated in the diagram below and explained later in the guide.

Five Steps of Self-Evaluation



Part II

Sources of Data for Self-Evaluation

1. Introduction

Self-evaluation uses two types of data. The first type is:

Community Data

Community data includes information on the total population that should be served by the health services (also called the catchment population). Examples are:

- Names of all the villages and cities served;
- Population of each village, city, or catchment area;
- Names of influential people in the area and in each community; and
- Names of members of the health center management committee.

The second type of data is:

Facility Data

Facility data includes information on the people that actually attend the health service and information on the management of the health services. Examples are:

- Names, sex, and location of clients seen;
- Diagnosis and services provided; and
- Records of meetings held, etc.

Both types of data are described in the following pages.

2. Community Data

Health workers should know as much about their community as possible. The more they know, the more effective they are likely to be. For example, they should know the size of the population, where people live, and characteristics of the population in different communities. Are people poor? Are they farmers or nomads? They should also be aware of the most influential individuals that can help resolve problems or motivate the community. This information helps health workers understand the community's needs and the obstacles to improving health in the community. Ideally, each health center should have the following information available:

- A map that covers all the communities served by the health facility;
- A list of all villages served;
- Population figures for the whole catchment area and specific target groups;
- Population figures for each village and target groups within each village;
- A list of influential individuals in the community; and
- A list of individuals on the health center management committee.

Population figures for each village can be found in *census reports*. From these numbers you can calculate the total population of your catchment area.[1] The population for different target groups, such as pregnant women, can then be calculated using the percentages noted in **Table A** on the following page. These percentages are based on the composition of populations found in the majority of African countries. Blank tables can be found in Annex 2 at the end of this document.

[1] In many countries, population figures are outdated. You should use the most recent population figures that are available. Sometimes the National Bureau of Statistics will provide population projections for the years following a census. Large national surveys such as the Demographic and Health Survey (DHS) can also be a reliable source of population data. You may want to discuss this issue with your district health management team and determine the best source of data for calculating population sizes for your catchment area.

TABLE A: Population Figures

Health center: Kasemeni **Year:** 2002

	Percentage of total population	Your community
Total population of the catchment area (catchment population)	100%	10,000
Total population of pregnant women in the catchment area	5%	500
Total population of women of child-bearing age in the catchment area	24%	2,400
Total population of children aged 0 to 11 months in the catchment area	4%	400
Total population of children aged 12 to 23 months in the catchment area	4%	400
Total population of children aged 0 to 35 months in the catchment area	11%	1,100
Total population living within a range of 0 to 5 km of the health center	No formula	
Total population living farther than 5 km from the health center	No formula	

After you make these calculations, you can display the data in tables, such as **Tables B and C** on the following pages. These tables are only examples. To complete a table for your catchment area, use the blank tables in **Annex 2**. These tables may be copied for recording information for each village. To complete the tables, you will need information on the approximate distance from the village to the health center (either less than or more than 5 km) as well as the population of each village.

TABLE B: Village Population and Size of Target Groups

Health center: Kasemeni **Year:** 2002

Village	Total population	Pregnant women 5%	Women of child-bearing age 24%	Children 0-11 months 4%	Children 12-23 months 4%	Children 0-35 months 11%
Villages less than 5 km						
1. Mwavumbo	670	34	161	27	27	74
2. Mtaa	1260	63	302	50	50	139
3. Mwabilla	780	39	187	31	31	86
4. Mwatete	850	43	204	34	34	94
5. Kalalani	720	36	173	29	29	79
6. Mwamdudu	1130	57	271	45	45	124
7. Bofu	750	38	180	30	30	83
8. Msambweni	590	30	142	24	24	65
Total <5km	**6750**	**340**	**1620**	**270**	**270**	**744**
Villages 5 km or more						
1. Kenango	790	40	190	32	32	87
2. Kafundi	1570	79	377	63	63	173
3. Mwashanga	380	19	91	15	15	42
4. Mgandini	510	26	122	20	20	56
Total >5km	**3250**	**164**	**780**	**130**	**130**	**358**
Total population	**10,000**	**504**	**2400**	**400**	**400**	**1102**

Influential Individuals in the Community

In the table below, you can list the influential individuals in the community (at least one per village). There are many different people who might be included in this list: the village head, president of the women's organization, teachers, traditional birth attendants, traditional healers, etc. These are people who can help mobilize the community and reach target groups with health messages. In the example below, empty spaces have been left for you to add other influential people in your area. Blank tables are found in **Annex 2**.

TABLE C: Influential Individuals in the Community

Health center: Kasemeni **Year:** 2002

Village	Names	Positions
	Villages less than 5 km	
1. Baurem	(Insert each person's name here)	Village Head/President Teacher President of women's group Traditional healer
2. Mamissa		Village Head/President Teacher President of women's group Traditional healer

TABLE C (continued): Influential Individuals in the Community

Health center: Kasemeni **Year:** 2002

Village	Names	Positions
	Villages less than 5 km	
3. Mwabilla	(Insert each person's name here)	Village Head/President Teacher President of women's group Traditional healer
4. Mwatete		
5. Kalalani		
6. Mwamdudu		
7. Bofu		
8. Msambweni		
	Villages 5 km or more	
1. Kenango	(Insert each person's name here)	Village Head/President Teacher President of women's group
2. Kafundi		Village Head/President Teacher Religious leader
3. Mwashanga		
4. Mgandini		

Health Center Management Committee

The health center management committee helps guide the work of the health center and forms one link between the health workers and the community.

In **Table D,** list the management committee members and their positions. This information should be updated each year.

TABLE D: Health Center Management Committee

Health center: Kasemeni **Year:** 2002

Member (name)	Function
1.	Head/President
2.	Secretary
3.	Treasurer
4.	Community Organizer

Continue to the last member

3. Facility Data

Registers and Cards

The type of information you collect at the health facility is contained in the daily records kept on each person that visits the health center. Before you begin the self-evaluation, you should review your registers and cards and make sure they are filled out properly. Ask yourself these questions:

- Are you recording all the necessary information on each patient, or are there some blank spaces in the registers and cards?
- Can you read all the words and numbers written there? Is the writing clear?
- Is the information accurate? Are there pieces of information that do not make sense or indicate a mistake in practice or recording, such as a measles immunization given to a child that is five months old?

Self-evaluation of health services works best when your facility data is **complete, clearly written, and accurate**. If you find problems with the information recorded in the registers, take steps to fix these problems for all the records kept *from today onwards*. **Even if the data you recorded in the past is incomplete, DO NOT** go back and try to change the information already written in the registers. It is too difficult to recall accurately what has happened in the past, and you risk recording the wrong information.

Monthly/Quarterly Reports

The information you collect in the cards and registers is used to write the monthly/quarterly report. A tally sheet is often used to count the number of visits for different services and conditions, and the total is then written in the monthly/quarterly report. When conducting self-evaluation, it is important that the tally sheets and monthly/quarterly reports are complete, clear, and accurate. Check your tally sheets for any problems and take steps to fix these problems for all the tally sheets made *from today onwards*. **Before you send your tally sheet or monthly/quarterly reports to either the district health office or the Ministry of Health, be sure to keep a copy of it for your records.**

Indicators

Below you will find a list of essential health services or activities and a key indicator that can be used to monitor the performance of that activity. Each indicator is discussed in detail in the next section. These indicators are only suggestions. In **Annex 1**, you will find additional indicators that could be used for monitoring and evaluation at a basic health facility.

There are many different things to consider when choosing an indicator:

- The policies, norms, and standards established for essential health services;
- Program goals and objectives; and
- The focus of your program (e.g., women, children, etc.).

For example, in some countries, the minimum standard of care for antenatal attendance is three visits during pregnancy, with the first visit occurring in the first trimester. The program might therefore encourage all women to attend at least three antenatal visits, and the indicator would reflect this program goal. To understand how well your program is performing with respect to meeting this national standard at the facility level, you could monitor coverage of pregnant women attending for three antenatal visits as follows:

$$\frac{\textbf{Number of women attending three antenatal visits}}{\textbf{Number of expected pregnancies in the catchment area}}$$

If you were particularly concerned that women begin their antenatal care in the first trimester, the program might focus on encouraging utilization of antenatal care early in the pregnancy. An indicator that reflects this particular goal—coverage of women who make their first antenatal care visit in the first trimester—would be calculated as follows:

$$\frac{\textbf{Number of women making the first antenatal visit in the first trimester}}{\textbf{Number of expected pregnancies in the catchment area}}$$

On the other hand, if you were finding it difficult to encourage pregnant women to visit the health center for even one antenatal care visit, the program focus might be on increasing utilization of antenatal services in general. The indicator you choose will measure coverage of the first antenatal visit at any time during the pregnancy.

$$\frac{\textbf{Number of women making one antenatal visit}}{\textbf{Number of expected pregnancies in the catchment area}}$$

It is best to monitor only one or two specific indicators for each activity. It is usually not possible, or necessary, to monitor all the indicators for an essential service each month.

When Might You Change the Indicator You Are Monitoring?

You might decide to change the indicator you monitor when your program is performing well in one area or if the focus of your program changes. Perhaps utilization of antenatal care has improved greatly due to information campaigns. Now you may want to focus on improving the quality of antenatal care that each woman receives. You might choose an indicator of the quality of antenatal care, such as the percentage of women attending antenatal care who receive iron and folic acid supplements or have their blood pressure taken.

These two indicators of quality are presented below:

$$\frac{\textbf{Number of women counseled for antenatal visits who received iron and folic acid supplements}}{\textbf{Number of pregnant women counseled}}$$

$$\frac{\textbf{Number of women counseled for antenatal visits whose blood pressure was taken and noted}}{\textbf{Number of expected pregnancies in the catchment area}}$$

Essential Health Services and Key Indicators

Essential Health Service	Suggested Indicator
1. Antenatal check	Coverage of antenatal checks (third visit)
2. Assisted delivery	Coverage of assisted deliveries
3. Preventive infant visit	Coverage of first preventive infant visit
4. Childhood immunization	Coverage of DPT 3
5. Family planning	Family planning recruitment rate
6. Community involvement in health center management	Percentage of meetings held by the management committee

Annex 1 contains a list of indicators that includes information on their definition, focus, and limitations. Discuss the choice of indicators with other health workers at the facility, the health center management committee, your supervisor, or district health management team. Remember to monitor indicators that are relevant to your program goals and objectives.

How often should I calculate indicators?

Normally we calculate indicators for two purposes: to tell us about the current status of an activity and to tell us how the status of the activity has changed over time, either since the last time we took a measurement or over the course of a year. Although health workers usually report facility data on a monthly basis, it may not be necessary to calculate, graph, and interpret data so frequently. Many indicators do not show substantial changes in a one-month period. In this guide, we recommend calculating and graphing key indicators every quarter, or every three months.

Ready for Self-Evaluation

Now you are ready to conduct self-evaluation at your facility. In the next section (Part III), you will discover how to apply the five steps of self-evaluation to assess different services, identify problems, and discover solutions to those problems.

On page 20 you will find:

- A list of six basic services or activities normally found at a community-based health facility; and
- A key indicator for monitoring and evaluating each service.

To begin, choose the service that is important to your community and go to that section. Review the story and the discussion about how to calculate and present the indicator. When you are finished with the first indicator, you may want to go on to another until you have reviewed them all. Each section takes a similar approach, although each deals with a different service and a different indicator.

Good Luck!

Part III

Identifying Needs and Resolving Problems with Data: Five Steps to Self-Evaluation of Health Services

Essential Service: Antenatal Care (ANC)

The Story of Fatima

Fatima lives with her husband and children in Kenango, a village located 15 km from the Kasemeni health center. She is sick and complains of vomiting, nausea, fever, dizziness, and headache. She tells her husband, and together they decide to go to the health center. After waiting for more than an hour, Fatima is examined by Mary, the nurse. Mary asks Fatima some questions and learns that Fatima is about five months pregnant. Suspecting she has malaria, Mary provides treatment for malaria and refers Fatima to Kadija, the midwife, for an antenatal exam. Kadija asks Fatima why she did not come to the health center in the early days of her pregnancy for an antenatal exam. Fatima answers that most women in her village believe that a woman should not talk about her pregnancy in the first few months, and, because she did not feel sick until today, she saw no reason to come to the health center. Kadija then discusses with

Elements of Antenatal Care

Conduct a physical and obstetric exam:

- Monitor blood pressure
- Listen to fetal heartbeat
- Exam abdomen
- Check for swelling in extremities
- Monitor weight/height
- Test urine
- Assess eyes for signs of anemia
- Advise on nutrition
- Give iron and folic acid supplement
- Advise on danger signs
- Check immunization status and give tetanus toxoid vaccine if required
- Prescribe chloroquine or the recommended antimalarial

Near delivery:

- Check position of fetus
- Advise on facility-based delivery

Fatima the importance of receiving regular antenatal checks and tells her that she needs a tetanus toxoid immunization. Unfortunately, the health center has run out of vaccine that very day, so Kadija asks Fatima to return after one week, when the vaccine will be in stock.

After working at the Kasemeni health center for some time, Kadija has learned that Fatima's attitude toward antenatal care is not unusual. Pregnant women generally do not come to the health center to ensure a healthy pregnancy and delivery. They only come when they are sick or when they have problems after delivery. The National Safe Motherhood program has set a goal to increase coverage of antenatal care. It recommends that women come to the clinic, as soon as they know they are pregnant, to receive tetanus toxoid vaccine, iron, folic acid, and antimalarials, if needed. Because so few women in Kasemeni attend the clinic for antenatal care, Kadija decides to examine the data she has been recording in the registers more closely and determine what percentage of pregnant women in the community are missing out on the benefits of antenatal care. Based on this information, she will discover ways to improve antenatal coverage in the Kasemeni catchment area.

Reflection

This story shows that many pregnant women worry about their health only when they feel ill. However, health workers know that serious conditions like eclampsia and other problems related to pregnancy must be found early to ensure a safe delivery and prevent illness or death of the mother and the baby. They often advise women to come for antenatal care as soon as possible after becoming pregnant as well as several times before delivery. There are a number of reasons that women do not seek this type of care, such as:

- Many women do not feel they will benefit from it;
- Some women find it difficult to travel to the health center; and
- The quality of the antenatal care provided may discourage women from attending antenatal clinics.

To reduce these and other possible constraints, health workers must work closely with the community, try to improve service quality, and encourage more women to visit the health center.

Consider these questions:

- How does Fatima's story relate to your work at your health facility?
- Do most pregnant women in your community come to your health center for antenatal care?
- If women come, do they come as early and as often as they should?
- Do you know how many pregnant women in the community are not receiving any antenatal care?
- Do you know where these women are located?
- Why don't women in your community attend antenatal clinics?
- What can you do to encourage more women to come for antenatal care?

To answer these questions, begin by looking at the data you collect at your health center and the data available about the community. Then follow the five steps of self-evaluation.

Self-Evaluation

Step 1: Choose and Define an Appropriate Indicator

From community and facility data you can calculate **indicators** of the strengths and weaknesses of antenatal services. There are four basic indicators that health workers can use to conduct self-evaluation of antenatal care activities (see box). To begin, the health worker should select only one indicator to analyze.

Key Indicators of Antenatal Care

- Coverage of antenatal visits (third visit)
- Average number of antenatal visits per pregnant woman
- Tetanus toxoid coverage
- Number of days without tetanus toxoid vaccine stocks

Here we suggest starting with the first indicator in the box—**coverage for antenatal check (third visit)**—which is an important indicator for assessing the effectiveness of antenatal care.

Define the Indicator for Coverage of the Third Antenatal Visit

$$\frac{\text{Number of women who came to the health center for the third antenatal care visit } \textit{last quarter}}{\text{Number of expected pregnancies in the health center catchment area during } \textit{last quarter}} \times 100$$

REMEMBER! The numerator and the denominator can cover any period of time (quarter, year, etc.). However, the time period related to the numerator and the denominator in a single indicator must always be the same.

Step 2: Analyze the Data (Calculate—Interpret—Present)

Calculate the Indicator

The Numerator

The numerator is calculated with information recorded in the quarterly report. Use your tally sheet or quarterly report form to find the number of women who came to the health facility for a third antenatal visit last quarter.

Example: 50 pregnant women came for their third antenatal visit last quarter.

The Denominator

The denominator is calculated using the catchment population as defined by the district health office using the last census.

Example: Total population 10,000 multiplied by 0.05 (equal to 5%, or the percentage of women expected to be pregnant each year) = 500.

This means that there are an estimated 500 pregnant women each year for a population of 10,000 people. Because the numerator relates to only one quarter, the denominator should be divided by four. 500/4 = 125 expected pregnancies last quarter.

Coverage

Using examples from above, **divide the numerator by the denominator and multiply by 100: (50/125) x 100 = 40%**

Interpret the Indicator: What Does this Indicator Tell You?

You can use this indicator to:

- **Describe the problem: Is it big or small?**
  - 40% of pregnant women in the community came to the health center for their third antenatal check last quarter.
  - 60% of pregnant women did not come to the health center for their third antenatal check last quarter.

- **Compare the indicator with the target. Describe the difference between actual coverage and the objective. Did you reach the target? Is coverage improving?**
  There may be a quarterly or annual target for antenatal coverage that has been set for your district. Is your indicator for the last quarter higher or lower than the target? What does this information tell you about your health service? If the annual target was set at 60% for this year, what can you do to ensure that coverage reaches this level?

- **Determine who is affected most by this problem?**
  You may want to identify the lowest areas of coverage in order to focus your activities on those people who need them most. To identify these areas, look at the total coverage per village or collection of villages. In the future, you may want to change the focus of your services to the villages with the lowest coverage.

REMEMBER! A target is different than the denominator. The denominator represents 100% of all possible third antenatal visits. A target is usually a certain portion of the total target population that you believe you can reach in a specific time period. It can be expressed as a percentage or a number. For example, you may want 60% of all pregnant women to attend at least three antenatal visits this year. Based on the examples above, your target would be 60% of 500, or 300 (calculation: 500 x 0.6 = 300). Over the year you would plan to reach at least 300 women. Each quarter you would therefore plan to reach 75 women, or one quarter of 300. If there is no target set for antenatal care coverage for your area, you can choose a target based on the indicator you have just calculated. (See the help section on target setting in Annex 4.)

Presenting the Data

It is sometimes helpful to make a picture with the data (a graph or table) to illustrate changes in coverage over time, discover where coverage is lowest, or compare coverage to the target. These pictures can also be used to explain the data to others, such as members of the management committee, other community leaders, and your supervisors.

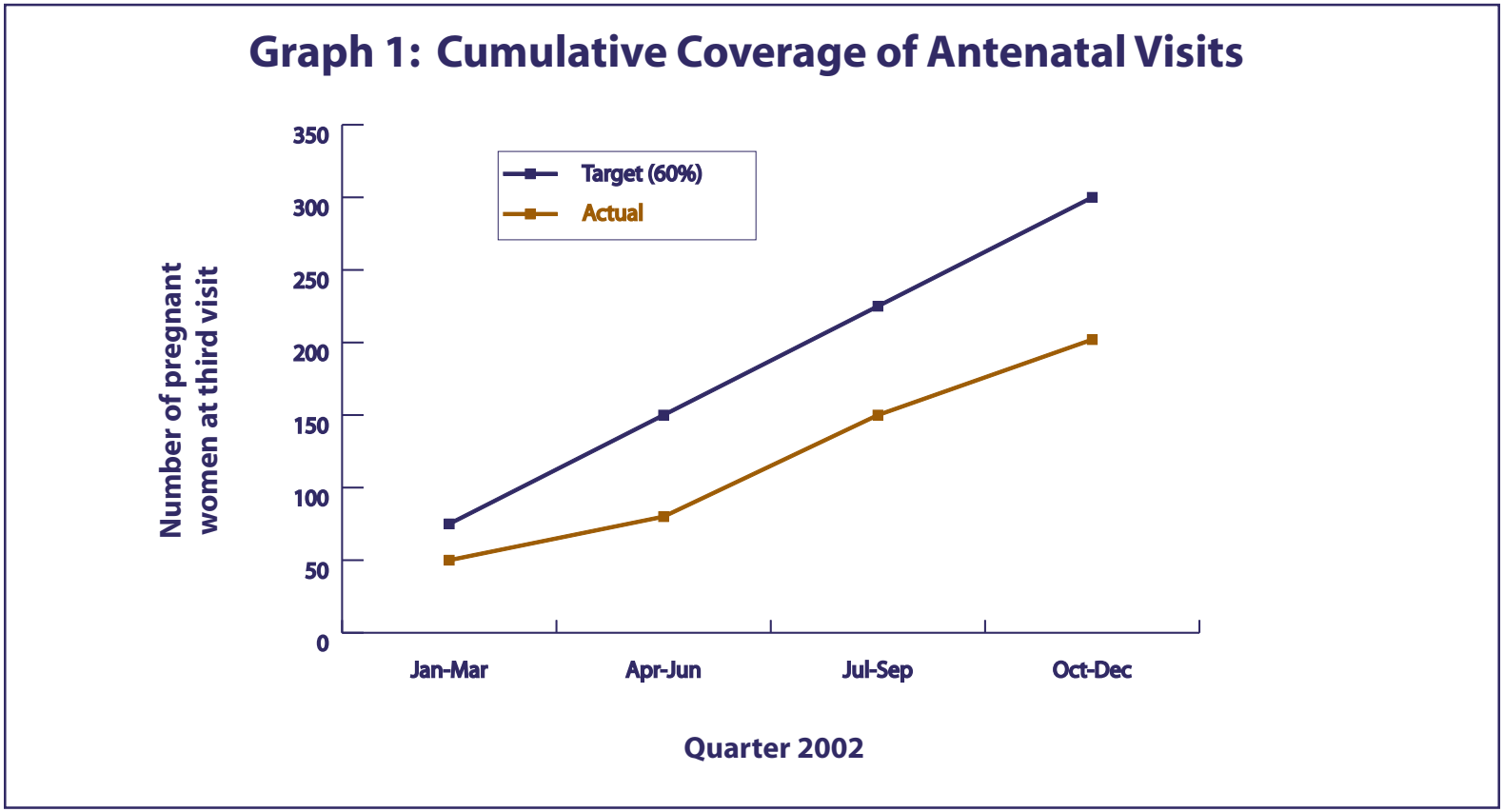
Making a Graph or Table

You can make a graph that shows changes in antenatal coverage over time. To depict cumulative coverage for the year, record a marker or dot across from the total number of third antenatal visits in the first quarter. For the next quarter, add the total number of visits to that of the first quarter, and so on for the rest of the year. You can then compare one quarter with the next to see if your total coverage is improving. Each point is connected with a line until the year is complete. In the graph on the following page, this is the bottom line (actual coverage).

You can also place markers or dots on the graph relating to the coverage target set for your area. Using the example above, if the total annual target is 60%, then each year 300 women must come to the health center for their third antenatal check. Each quarter you would expect about 75 visits. Connect the dots to make a line that shows the cumulative progress made if you reach the quarterly target throughout the year. In Graph 1 on the following page, this is the top line (coverage target).

Look at the two lines to compare your actual numbers to the target. In the example below, actual coverage is lower than the target for every quarter. In the first quarter, coverage almost reaches the target. As the year progresses, coverage falls further and further from the target. According to the graph, 100 more women would have to come to the health center for a third antenatal visit to reach the annual target.

A second way of illustrating the data is to make a table that shows the actual number of antenatal visits per village, the total number of expected pregnancies (or a target of 100%), and actual coverage for each quarter. You can only complete this table if you record the name of each woman's village when you fill in the forms or the register. If you do not collect this



information, you might consider changing the patient record form or the register. From the register, you tally up the number of women from each village who came for their third antenatal check. The tally sheet might look like **Table 1** below.

TABLE 1: Tally Sheet for Third Antenatal Visit

Health center: Kasemeni **Indicator:** Third antenatal visit **Year:** 2002

Village	Quarter 1 ANC visit	Quarter 2 ANC visit	Quarter 3 ANC visit	Quarter 4 ANC visit	Total
Villages less than 5 km					
1. Mwavumbo	~~IIII~~ III	II	~~IIII~~ III	III	21
2. Mtaa	IIII	II	~~IIII~~	~~IIII~~ I	17
3. Mwabilla	~~IIII~~	III	IIII	III	15
4. Mwatete	IIII	IIII	~~IIII~~	IIII	17
5. Kalalani	II	II	III	III	10
6. Mwamdudu	~~IIII~~ II	IIII	~~IIII~~ II	~~IIII~~ III	26
7. Bofu	~~IIII~~ III	II	~~IIII~~ III	IIII	22
8. Msambweni	IIII	II	IIII	~~IIII~~	15
Total <5 km	**42**	**21**	**44**	**36**	**143**
Villages 5 km or more					
1. Kenango	~~IIII~~	III	~~IIII~~ III	~~IIII~~ I	22
2. Kafundi	I	III	~~IIII~~ IIII	III	16
3. Mwashanga	I	II	IIII	IIII	11
4. Mgandini	I	I	~~IIII~~	III	10
Total >5 km	**8**	**9**	**26**	**16**	**59**
Total by period	**50**	**30**	**70**	**52**	**202**

*Blank tables are found in Annex 2.

TABLE 2: Coverage of Third Antenatal Visit by Village

Health center: Kasemeni **Indicator:** Third antenatal visit

Target: 60% **Year:** 2002

Village	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Year
	ANC visit	Pregnant women 1/4	Coverage rate	ANC visit	Pregnant women 1/4	Coverage rate	ANC visit	Pregnant women 1/4	Coverage rate	ANC visit	Pregnant women 1/4	Coverage rate	Total coverage
Villages less than 5 km													
1. Mwavumbo	8	9	89	2	9	22	8	9	89	3	9	33	58
2. Mtaa	4	16	25	2	16	13	5	16	31	6	16	38	27
3. Mwabilla	5	10	50	3	10	30	4	10	40	3	10	30	38
4. Mwatete	4	11	36	4	11	36	5	11	45	4	11	36	39
5. Kalalani	2	9	22	2	9	22	3	9	33	3	9	33	28
6. Mwamdudu	7	14	50	4	14	29	7	14	50	8	14	57	46
7. Bofu	8	9	89	2	9	22	8	9	89	4	9	44	61
8. Msambweni	4	7	57	2	7	29	4	7	57	5	7	71	54
Total <5 km	**42**	**85**	**49**	**21**	**85**	**25**	**44**	**85**	**52**	**36**	**85**	**43**	**42**
Villages 5 km or more													
1. Kenango	5	10	50	3	10	30	8	10	80	6	10	60	55
2. Kafundi	1	19	5	3	19	16	9	19	47	3	19	16	21
3. Mwashanga	1	5	20	2	5	40	4	5	80	4	5	80	55
4. Mgandini	1	6	17	1	6	17	5	6	83	3	6	50	42
Total >5 km	**8**	**40**	**20**	**9**	**40**	**23**	**26**	**40**	**65**	**16**	**40**	**40**	**40**
Total per period	**50**	**125**	**40**	**30**	**125**	**24**	**70**	**125**	**56**	**52**	**125**	**42**	**41**

* Blank tables are located in Annex 2 at the end of the document.

When you finish the tallies, you can fill in the numbers in Table 2 (page 33) and calculate the coverage of third antenatal visits by village and the total catchment population in the same way you calculated the coverage indicator above. Then look at the information carefully to see what it tells you. From this table you can see that coverage in Kafundi is lower than coverage in Kenango for the first quarter. Based on this data, you may want to make an extra effort to encourage mothers from Kafundi to come for antenatal care. You will also notice that coverage is higher for women who live closer to the health center. This data suggests that more attention should be paid to reaching communities that are further than 5 km from the health center. It is sometimes difficult to draw conclusions from only one quarter's data. You may want to consider reviewing at least two quarters before concluding that there is a problem.

Step 3: Assess the Situation

Now use the indicator, the graph, and the table to assess the situation and decide what to do.

The **indicator** tells you the overall size of the problem at a specific time. Coverage of antenatal services (third visit) last quarter was 40%, and the annual target is 60%.

The **graph** tells you whether there have been improvements over time and how actual coverage compares to the target.

Table 2 tells you where the problem is greatest.

WHAT IF...

- ☑ If the level of overall coverage is acceptable (getting closer, equal to, or exceeding the target), then you may decide that you do not need to make any additional effort to improve antenatal coverage. Give this information to the management committee and others in the community and tell them that things are going well.
- ☑ If the indicator is too low or improvements are not happening fast enough to meet your target by the end of the year, you may want to consider possible **causes and solutions**.

The **cause of low antenatal coverage** may be found in the community, the health center, or in both.

In the community, you might consider:

- ☑ The distance women live from the health center and the time it takes them to reach it;
- ☑ The lack of information or understanding about the importance of antenatal care;

- ☑ Cultural constraints; and
- ☑ The cost of antenatal care (in terms of fees or time lost away from work).

In the health center, you might consider:

- ☑ Whether women are greeted politely and how long they wait for services;
- ☑ The perceived quality of the antenatal service (Do women believe they will benefit from the service?); and
- ☑ The technical quality of the antenatal service. (Are basic supplies, such as vaccines, iron, and food supplements available when needed?)

There may be other causes of low antenatal care coverage. These are only examples. To explore the possible causes and solutions, you should discuss the problem with other health staff, the management committee for the health center, your supervisor, district managers, and especially the community. Key sources of information in the community are village health workers and traditional birth attendants. During the meeting, use both the data that you have analyzed and the tables and graphs that you have made to illustrate the problem. Then hold a discussion about possible solutions.

Depending on the cause, these are steps that you could take **to improve antenatal care coverage**:

- ☑ Improve the technical quality of the service by offering a complete service (tetanus vaccine, iron, and antimalarial).
- ☑ Change the way that services are delivered. For example, combine the antenatal clinic with vaccination days. Offer to examine pregnant women even if they visit the health center on days when you do not offer an antenatal clinic.
- ☑ Avoid interruptions in inventory of essential medications by ordering supplies regularly and, if necessary, collecting them to ensure that there are no stockouts.
- ☑ Improve the way in which women are treated at the health center. Communication is important. Make each woman feel welcome. Invite her to sit down and tell her that your conversation will be confidential. Encourage her to ask questions. Listen attentively to her concerns and encourage her to come back again.
- ☑ Conduct IEC activities in remote villages with the support of the management committee. During these sessions, emphasize the importance of antenatal care.
- ☑ Provide antenatal care in remote villages either with an outreach strategy or by forming networks with the traditional birth attendants.
- ☑ Get support from village representatives, women's groups, and associations to promote antenatal care.

Step 4: Finding a Solution

Hold a Meeting

As you begin to address the problem, you may want to hold a meeting with other health workers or community members. These meetings should follow the steps indicated below.

Set Priorities

First, decide what is the most important and easiest step to take. Start with something that relates to your direct responsibilities in the health facility, and then move on to the community. For example:

1. *If you have run out of essential supplies, such as tetanus toxoid vaccine:*

- ☑ **Order** supplies immediately and, in the future, order them on a regular basis to ensure that they arrive **before** you need them.

2. *If you have learned from your discussions in the community or the health center that more women are likely to come for antenatal care if immunization for children were offered at the same time:*

- ☑ **Change** the way you provide antenatal services and **let people know about it!**

3. *If women do not accept the importance of antenatal services:*

- ☑ **Find out why and learn** more about local customs and beliefs; and
- ☑ **Speak** to women who use the service and ask them why other women choose not to attend.

4. *If the population does not have enough information about the importance of antenatal care and all the services offered at the health center:*

- ☑ **Conduct** IEC activities in the villages with women's groups and associations, village representatives, and networks to increase local knowledge of the benefits of antenatal care and encourage utilization of these services.

5. *If some women say they cannot come to the health center because they live too far away or cannot find appropriate transportation:*

- ☑ **Form** a network of local groups to provide services such as IEC and identification of high risk pregnancies;
- ☑ **Supervise and support** the networks; and
- ☑ **Conduct outreach services** regularly in the villages.

6. *If cultural beliefs may be influencing women and preventing them from seeing the advantages of antenatal care:*

- ☑ **Respect** cultural differences, but **find out** more about them;
- ☑ **Choose** health messages that reflect local beliefs;
- ☑ **Collaborate** with local leaders to encourage them to acknowledge the importance of antenatal care and promote it in their communities; and
- ☑ **Involve** women's groups and associations and others to help promote antenatal care.

Only you and the community together can decide the best steps to take to address this problem in your community.

Develop an Action Plan

Work with other health staff or community members to make a plan. A plan is an agreed set of activities that will be conducted to address a problem or achieve a result. This plan might include improving the health service, setting a coverage target for the next few quarters, or introducing new activities to encourage more women to come for antenatal care. The plan should list **all the activities** that will be done, when they should be completed, and who is responsible for completing them. An example is illustrated below.

Action Plan for Improving Coverage of Third Antenatal Visit

Activities to improve coverage of third antenatal visit	Date to be completed?	Who is responsible?	Results achieved or not? Comments
Order tetanus vaccine to arrive by 15/3/02	3/3/02	Kadija	
Begin providing tetanus vaccine with antenatal care	When vaccine arrives (estimated at 15/3/02)	Kadija	
Start IEC activities and promote outreach	21/3/02	Health workers Management committee Women's groups	

* Blank tables are located in Annex 2 at the end of the document.

Work with the Community

Next, continue to work with the community to implement the plan. While both the health workers and the community can take responsibility for implementing the action plan, the community may need your help to do their part.

Seek Support

If you need help, you could request support from the district health management team, a local NGO, local government, or other community groups. Teachers can help spread health messages. A local NGO might let you borrow essential supplies while you wait for yours to arrive. Solving health problems in the community is everyone's responsibility.

STEP 5: Monitoring the Results of the Action Plan

It is important to monitor what happens as a result of your action plan. Did your activities lead to an improvement in antenatal care coverage?

Fill in the Action Plan and Note the Results That Were Achieved

- ☑ **Assess** the same indicator after a period of time to see if there has been any change. Be sure to share that information with all those involved in identifying and addressing the problem.

If you reach the target or make any improvement:

- ☑ **Inform** the management committee and the community of this success, congratulate them, and thank them;
- ☑ **Ask** them to make an effort to maintain or even improve on this good result; and
- ☑ If necessary, **work** with the community to reach a higher target for the next period and define activities that will help you reach it.

If you do not reach the target or your indicators remain low:

- ☑ **Identify** the villages in the area with the lowest participation; and
- ☑ **Hold** a meeting with the management committee to help identify the causes for low coverage and find solutions.

The Results of Self-Evaluation

Mary and Kadija presented the data on coverage of third antenatal visits to the district health management committee. They joined the management committee during its monthly meeting and gave each member a copy of the graphs and tables they produced during data analysis. With these graphs, Mary explained that while use of early antenatal care was improving, coverage remained consistently below the target, particularly in remote communities. Kadija then presented them with a one-page plan and a budget for addressing this problem.

Next, the health workers and the management committee met with local government officials and suggested that the district government provide fuel for conducting outreach services once a week in the most remote villages. The district officials were convinced by this argument because they could understand the information provided by the health staff. They then gave Mary and Kadija enough resources to support activities for one quarter. Kadija agreed to reassess the data after three months, determine whether coverage had improved, and report back to the management committee. If this approach was indeed improving coverage, district government officials agreed to provide additional resources for outreach activities for the remainder of the year.

Essential Service: Assisted Delivery

The Story of John and Florence

After traveling ten kilometers by bicycle, John and his wife Florence approached the home of a nurse named Moses. They were worried, out of breath, and perspiring. Moses, who works at the Kissi health center, was resting at home that Sunday. John and Florence live in Mazeras, one of the ten villages in the catchment area of the Kissi health center. John explained to Moses that his wife had delivered a baby one week ago and has been very ill ever since. The delivery had lasted from morning until dusk and was attended by the old woman in the village. Florence now complains of abdominal pains and fever. The child died at birth and, according to the old woman, had never uttered a cry.

John admitted that neither he nor his wife had ever come to the health center before today because they did not know what services were offered other than child vaccination. He explained that the local healer and the old woman normally deal with health problems in their village. In this case, Florence's situation was more than they could handle, so the old woman advised them to visit the health center.

Moses immediately took Florence to the health center. When he questioned her, she confirmed what John had said. The child

Elements of Assisted Delivery

Qualified health professional / trained birth attendant:

- Monitor progress of labor using partograph and regularly assess risk factors
- Manage delivery of child and placenta

For all providers:

- Refer high risk mothers or mothers with complications to appropriate facility, if available
- Use clean equipment and instruments for delivery and for cutting the umbilical cord
- Advise mother and child for one to two hours into the postpartum period
- Advise mother to:
  - keep child warm
  - breastfeed early
  - list possible danger signs for mother and child
- Set appointment for postnatal visit

that was stillborn was the result of Florence's third pregnancy, the first two having ended in miscarriages before the third month. The nurse prescribed medication for Florence's infection and advised her to seek a follow-up consultation in two weeks. Moses then told John and his wife about the services offered at the health center, emphasizing the importance of antenatal exams, vaccination for pregnant women, and assisted childbirth. He encouraged Florence to visit Rachel, the midwife at the health center.

Moses was surprised that this couple knew so little about the health service. He decided to consult the register, monthly reports, and management charts for the last 12 months to learn more about the people of Mazeras. He discovered the following:

- Only a few people from the village of Mazeras came to the health center, and most of those coming were men.
- The few women that did visit the health center all went for the same reasons: problems with fertility and children's illness. No women had attended the health center for antenatal care or delivery.

He then decided to examine all the available data to determine how often problems related to unassisted delivery occur and what proportion of women in the catchment population were delivered by a qualified health worker or a trained birth attendant.

Reflection

This story shows the problems that result from complications of labor and delivery. It is well known that many of these problems could be addressed if more women received antenatal care and were delivered by a trained healthcare worker. To prevent serious illness or death from labor and delivery, health centers and communities should promote the use of professional midwives or trained birth attendants for delivery.[2]

Ideally, deliveries should take place in a hospital or health center. However, many women prefer to deliver at home in familiar surroundings and in the company of people they know. If health professionals cannot be present, local women can be trained in safe delivery techniques and learn how to recognize danger signs so they can refer women to a health center or hospital. Many local birth attendants may have received some training in their lifetime. However, many of these women do not receive sufficient support from professional health staff including follow-up training, supervision, and access to essential supplies. Over time, the skills of trained birth attendants may deteriorate, and they may slip back into old habits. It is therefore important to assist the trained birth attendants as they work in the community.

Consider these questions:

- How does this story relate to your work at your health facility?
- Do most pregnant women come to your health center for delivery?
- If women come, do they come as early as they should?
- Do you know how many pregnant women in the community are delivering without help from a trained birth attendant?
- Do you know where these women are located?
- Why don't women in your community use a trained birth attendant?
- What can you do to encourage more women to use a trained attendant during delivery?

To answer these questions, begin by looking at the data you collect at your health center and the data available about the community. Then follow the five steps of self-evaluation.

[2] A trained birth attendant refers to a local woman who has received training in the past year and is supported by the health center. Each health center should keep a list of all the trained birth attendants in the catchment area and the date of their most recent training.

Self-Evaluation

Step 1: Choose and Define an Appropriate Indicator

From community and facility data you can calculate indicators of the strengths and weaknesses of delivery care in your area. There are four basic indicators that health workers can use to conduct self-evaluation of safe delivery care (see box). To begin, the health worker should select only one indicator and analyze it. Here we suggest starting with the first indicator in the box—**coverage of assisted deliveries**—which is an important measure of the effectiveness of safe delivery care.

Define the Indicator for Coverage of Assisted Deliveries

$$\frac{\text{Number of deliveries in the health center catchment area handled by a qualified health professional or trained birth attendant } \textit{last quarter}}{\text{Number of expected pregnancies in the health center catchment area during } \textit{last quarter}} \times 100$$

Key Indicators for Safe Delivery Care

- Coverage of assisted deliveries
- Percentage of villages located more than one hour away by foot (5 km) served by a qualified health professional or trained birth attendant and monitored by the health center
- Stockout of supplies for delivery in the last six months
- Postnatal care coverage

REMEMBER! The numerator and the denominator can cover any period of time (quarter, year, etc.). However, the time period related to the numerator and the denominator in a single indicator must always be the same.

STEP 2: Analyze the Data (Calculate—Interpret—Present)

Calculate the Indicator

The Numerator

The numerator is calculated with information recorded in the records kept by trained birth attendants, data records (delivery log or pregnancy monitoring sheets or cards), monthly or quarterly reports, and management charts. Use this information to determine the number of assisted deliveries last quarter.

***Example*:** 35 pregnant women had deliveries that were handled by a qualified health professional or trained birth attendant last quarter.

The Denominator

The denominator is calculated using the catchment population as defined in the last census. These figures should be provided by the district health office or the local government.

Example: Total population of 10,000 multiplied by 0.05 (equal to 5%, or the percent of women expected to be pregnant each year) = 500.

This means that there are an estimated 500 pregnant women each year for a population of 10,000 people. Since the numerator relates to only one quarter, the denominator should be divided by four. 500/4 = 125 expected pregnancies last quarter.

Coverage

Using examples from above, **divide the numerator by the denominator and multiply by 100:** (35/125) x 100 = 28%.

Interpret the Indicator: What Does this Indicator Tell You?

You can use this indicator to:

- **Describe the problem: Is it big or small?**
  - 28% of pregnant women in the community were delivered by a qualified health professional or trained birth attendant last quarter.
  - 72% of pregnant women were not delivered by a qualified health professional or trained birth attendant last quarter.

- **Compare the indicator with the target. Did you reach the target? Is coverage improving?**
  There may be a target for assisted deliveries that has been set for your district. Is your indicator for the last quarter higher

or lower than the target? What does this information tell you about your health service? If the annual target was set at 50% for this year, what can you do to ensure that cover age reaches this level?

REMEMBER! A target is different than the denominator. The denominator represents 100% of all possible assisted deliveries. A target is usually a certain portion of the total target population that you believe you can reach in a specific time period. It can be expressed as a percentage or as a number. For example, you may want 50% of all pregnant women to have assisted deliveries this year. Based on the examples above, your target would be 50% of 500, or 250 (calculation: 500 x 0.5 = 250). Over the year you would plan to reach at least 250 women. Each quarter you would therefore hope to reach 63 women, or about one quarter of 250).

If there is no target set for assisted deliveries for your area, you can choose a target based on the indicator you have just calculated in the example above (see the help section on target setting).

- **Determine who is affected most by this problem?**
  You may want to know where coverage is the lowest. To identify these areas, look at the total coverage per village or group of villages. List the village with the lowest coverage to identify where most of the women that have not received the benefits of assisted delivery are living. What do these villages have in common that might cause coverage to be especially low?

Presenting the Data

It is sometimes helpful to make a picture with the data (a graph or table) to illustrate changes in coverage over time, discover where coverage is the lowest, and compare coverage to the target. These pictures can be used to explain the data to others, such as members of the management committee, other community leaders, and your supervisors.

Making a Graph or Table

You can make a graph that shows changes in the percentage of assisted deliveries over time. To depict cumulative coverage for the year, record a marker or dot across from the total number of assisted deliveries for the first quarter. For the next quarter, add the total number of assisted deliveries to that of the first quarter, and so on for the rest of the year. You can then compare one quarter with the next to see if your total coverage is improving. Each point is connected with a line until the year is complete.

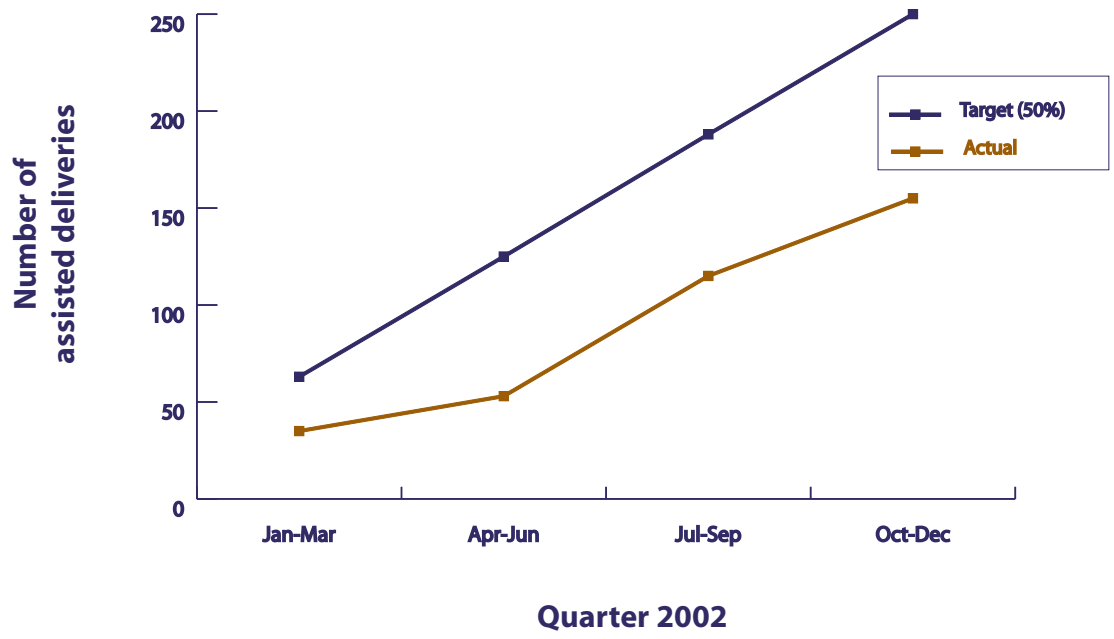
You can also place markers or dots on the graph that relate to the coverage target set for your area. Using the example on the following page, if the total annual target is 50%, then each year 250 women must be delivered by a trained assistant. Each quarter you would expect about 63 women to be assisted in delivery. Connect the dots to make a line that shows the cumulative progress of the target throughout the year. Compare the two lines to compare your actual numbers to the target.

In the example graph, coverage of assisted deliveries improved faster in the third quarter, but slowed again in the last quarter.

A second way of illustrating the data is to make a table that shows the actual number of assisted deliveries per village, the total number of expected pregnancies (or a target of 100%), and the actual coverage for each quarter. You can only complete this table if you record the name of each woman's village when you fill in the forms or the register. If you do not collect this information, you might consider changing the patient record form or the register. From your register, you tally up the number of women from each village who had an assisted delivery. The tally sheet might look like **Table 1** (page 48).

When you finish the tallies, you can fill in the numbers in **Table 2** (page 49) and calculate the coverage of assisted deliveries by

Graph 1: Cumulative Coverage of Assisted Deliveries



village and the total catchment population in the same way you calculated the coverage indicator above. Then look at the information carefully to see what it tells you. From this table, you can see that coverage in Mazeras is lower than coverage in Bakana. Based on this data, you may want to make an extra effort to encourage women from Mazeras to seek a trained birth attendant for their next delivery. Again, you may want to look at more that one quarter of data to determine if coverage is lower in certain villages than in others.

TABLE 1: Tally Sheet for Assisted Deliveries

Health center: Kissi **Indicator:** Assisted deliveries **Year:** 2002

Village	Quarter 1 Assisted deliveries	Quarter 2 Assisted deliveries	Quarter 3 Assisted deliveries	Quarter 4 Assisted deliveries	Total
Villages less than 5 km					
1. Bakana	卌 III	III	卌 卌	卌 III	29
2. Matumbi	III	II	卌 IIII	卌	19
3. Konna	卌 IIII	IIII	卌 卌 III	卌 IIII	35
4. Hombori	卌	II	卌 卌 I	卌 卌	28
Total <5 km	**25**	**11**	**43**	**32**	**111**
Villages 5 km or more					
1. Mazeras	-	I	III	I	5
2. Kudzecha	II	I	IIII	II	9
3. Daraba	I	I	III	I	6
4. Madari	III	II	IIII	II	11
5. Sidami	II	I	II	I	6
6. Kanakoro	II	I	III	I	7
Total > 5km	**10**	**7**	**19**	**8**	**44**
Total by period	**35**	**18**	**62**	**40**	**155**

TABLE 2: Coverage of Assisted Deliveries by Village

Health center: Kissi **Indicator:** Assisted deliveries

Target: 50% **Year:** 2002

Village	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Year
	Assisted deliveries	Pregnant women 1/4	Coverage rate	Assisted deliveries	Pregnant women 1/4	Coverage rate	Assisted deliveries	Pregnant women 1/4	Coverage rate	Assisted deliveries	Pregnant women 1/4	Coverage rate	Total coverage
Villages less than 5 km													
1. Bakana	8	12	67	3	12	25	10	12	83	8	12	67	60
2. Matumbi	3	17	18	2	17	12	9	17	41	5	17	29	26
3. Konna	9	14	64	4	14	29	13	14	93	9	14	64	63
4. Hombori	5	11	45	2	11	18	11	11	100	10	11	91	64
Total <5 km	**25**	**54**	**46**	**11**	**54**	**20**	**43**	**54**	**76**	**32**	**54**	**59**	**50**
Villages 5 km or more													
1. Mazeras	0	10	0	1	10	10	3	10	30	1	10	10	13
2. Kudzecha	2	15	13	1	15	7	4	15	27	2	15	13	15
3. Daraba	1	9	11	1	9	11	3	9	33	1	9	11	17
4. Madari	3	11	27	2	11	18	4	11	36	2	11	18	24
5. Sidami	2	14	14	1	14	7	2	14	14	1	14	7	11
6. Kanakoro	2	12	17	1	12	8	3	12	25	1	12	8	15
Total >5 km	**10**	**71**	**14**	**7**	**71**	**10**	**19**	**71**	**27**	**8**	**71**	**11**	**15**
Total per period	**35**	**125**	**28**	**18**	**125**	**14**	**62**	**125**	**48**	**40**	**125**	**32**	**31**

* Blank tables are located in Annex 2 at the end of the document.

STEP 3: Assess the Situation

Now use the indicator, the graph, and the table to assess the situation and decide what to do.

The **indicator** tells you the overall size of the problem at a specific time. Coverage of assisted deliveries last quarter was 28%, and the annual target is 50%.

The **graph** tells you whether there have been improvements over time and how actual coverage compares to the target.

Table 2 tells you where the problem is greatest or where your program is working well.

WHAT IF...

- ☑ If the level of overall coverage is acceptable (getting closer, equal to, or exceeding the target), then you may decide that you do not need to make any additional effort to improve coverage of assisted deliveries. Give this information to the community and tell them that things are going well.
- ☑ If the indicator is too low, or improvements are not happening fast enough to meet your target by the end of the year, you may want to consider possible **causes and solutions.**

The cause of low coverage of assisted deliveries may be found in the community, in the health center, or in both.

In the community, you might consider:

- ☑ The distance women live from the health center and the time it takes them to reach it;
- ☑ The lack of information or understanding about the importance of assisted delivery;
- ☑ Cultural constraints; and
- ☑ The cost of assisted delivery in terms of fees or time lost by people who accompany the woman.

In the health center, you might consider:

- ☑ Whether women feel comfortable and supported when they deliver at the health center or when they are assisted by a trained birth attendant;
- ☑ The perceived quality of the assistance that they receive (Do women believe they will benefit from assisted delivery?); and
- ☑ The technical quality of assisted delivery. (Are basic supplies, such as gloves, sutures, and blood, available when needed?)

These are only examples. There may be many other reasons why women do not choose assisted delivery. To explore the possible causes and solutions, you should discuss the problem with other health staff, the management committee for the health center, your supervisor, district managers, and especially the community. Key sources of information in the community are village health workers and traditional birth attendants, both trained and untrained. During the meeting, use both the data that you have analyzed and the tables and graphs that you have made to illustrate the problem. Then hold a discussion about possible solutions.

Depending on the cause, these are steps that you could take to **increase use of trained birth attendants:**

- ☑ Improve the technical quality of the service by retraining health staff and community-based birth attendants in safe delivery techniques.
- ☑ Organize the service differently. For example, work more closely with trained birth attendants during their deliveries.
- ☑ Avoid interruptions in inventory of essential supplies and medications by ordering supplies regularly and collecting them as needed to ensure that they do not run out.
- ☑ Improve the way in which women are treated at the health center or during deliveries. Communication is important. Make each woman and her family feel comfortable at the health center or during delivery. Be supportive of their efforts, even if they may have made some errors in their support of the woman during delivery, such as waiting too long to seek assistance. Listen attentively to all concerns. Encourage the woman to visit the health center for postnatal care.
- ☑ Conduct IEC (information, education, and communication) activities in remote villages with the support of the management committee. During these sessions, emphasize the importance of assisted delivery and encourage women to make arrangements for assisted delivery long before they are ready to deliver.
- ☑ Provide access to assisted delivery in remote villages either by training and supporting local birth attendants or providing transportation to the health center when a woman is close to delivery or facing an emergency.
- ☑ Get support from village representatives, women's groups, and associations to promote the use of trained birth attendants.

STEP 4: Finding a Solution

Organize a Meeting

To begin to address the problem, you may want to hold a meeting with other health workers or community members. These meetings should follow the steps indicated below.

Set Priorities

First, decide what is the most important and easiest step to take. Start with something that relates to your direct responsibilities in the health facility. Then move on to the community. For example:

1. *If you have run out of essential supplies, such as delivery kits:*

☑ **Order** essential supplies immediately and, in the future, order them on a regular basis to ensure that they arrive before you need them.

2. *If you have learned from your discussions in the community or in the health center that more women are likely to choose to deliver with a trained birth attendant if they feel that the health staff are supportive and capable:*

☑ **Change** the way you assist deliveries **and let people know about it!**

3. *If women do not believe that assisted delivery is important:*

☑ **Find out why and learn** more about local customs and beliefs; and

☑ **Speak** to women who have used a trained birth attendant and ask them why other women may not want to do the same.

4. *If the population does not have enough information about the importance of delivery with a trained birth attendant and where this service is available:*

☑ **Conduct** IEC activities in the villages with women's groups and associations, village representatives, and networks to increase local knowledge of the benefits of assisted delivery and encourage utilization of these services.

5. *If some women say they cannot come to the health center because they live too far away or cannot find appropriate transportation:*

☑ **Form** a network of trained and untrained birth attendants to provide services such as IEC, identifying high risk pregnancies and transporting women to the health center near their delivery date;

☑ **Train or re-train** local birth attendant in safe delivery practices and provide delivery kits; and

- ☑ **Supervise and support** the networks and the trained birth attendants.

6. *If cultural beliefs may be influencing women and preventing them from taking advantage of assisted delivery:*

- ☑ **Respect** cultural beliefs, but **find out** more about them;
- ☑ **Choose** health messages that reflect local beliefs;
- ☑ **Collaborate** with local leaders to encourage them to accept the importance of assisted delivery and promote it in their communities; and
- ☑ **Involve** women's groups and other associations to help promote the use of trained birth attendants.

Only you and the community together can decide the best steps to take to address the problem in your community.

Develop an Action Plan

Work with other health staff or community members to make a plan. A plan is an agreed set of activities that will be conducted to address a problem or achieve a result. This plan might include improving the health service, setting a coverage target for the next few quarters, or introducing new activities to encourage more women to use trained birth attendants. The plan should list all the activities that will be done, when they should be completed, and who is responsible for completing them.

Action plan for Improving Coverage of Assisted Deliveries

Activities to improve coverage of assisted deliveries	Date to be completed?	Who is responsible?	Results achieved or not? Comments
Order delivery kits	3/4/02	Moses	
Conduct refresher training of local birth attendants	1/5/02-31/7/02	Rachel	
Start IEC activities and promote use of trained birth attendants	1/8/02	Health workers Management committee Women's groups	

* Blank tables are located in Annex 2 at the end of the document.

Work with the Community

Next, continue to work with the community to implement the plan. While both the health workers and the community can take responsibility for implementing the action plan, the community may need your help to do their part.

Seek Support

If you need help, you could request support from the district health management team, a local NGO, local government, or other community groups. Teachers can help spread health messages. A local NGO might let you borrow essential supplies while you wait for yours to arrive. Solving health problems in the community is everyone's responsibility.

STEP 5: Monitoring the Results of the Action Plan

It is important to monitor what happens as a result of your action plan. Did your activities lead to an improvement in use of trained birth attendants?

Fill in the Action Plan and Note the Results That Were Achieved

- ☑ **Assess** the same indicator after a period of time to see if there has been any change. Be sure to share that information with all those involved in identifying and addressing the problem.

If you reach the target or make any improvement:

- ☑ **Inform** the management committee and the community of this success, congratulate them, and thank them;
- ☑ **Ask** them to make an effort to maintain or even improve on this good result; and
- ☑ If necessary, **work** with the community to set a higher target for the next period and define activities that will help you reach it.

If you do not reach the target or your indicators remain low:

- ☑ **Identify** the villages in the area with the lowest participation; and
- ☑ **Hold** a meeting with the committee to help identify the causes for low coverage and find solutions.

The Results of Self-Evaluation

After Moses and Rachel finished examining the data on coverage of assisted deliveries, they presented the results to the health center management committee at its monthly meeting. They gave each member a copy of the graphs and tables produced during data analysis. They also gave the committee additional information on:

- The number of women they treated for problems related to child birth, such as postpartum infection; and
- The number of women reported to have died from problems associated with pregnancy and delivery.

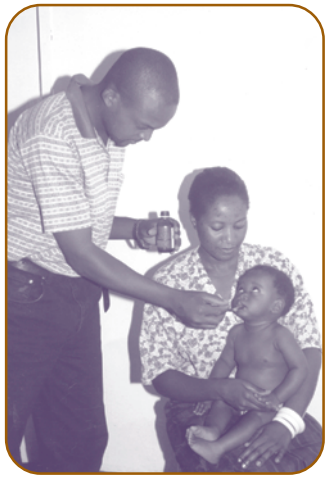
With this graph, Moses explained that very few women were using trained birth attendants and that this practice was contributing to high rates of illness and death among women of child-bearing age in Kissi. Rachel added that she would like to see Kissi improve its coverage of assisted deliveries and reach the national target of 50% by the end of 2002. Moses then presented them with a one-page action plan and budget for addressing this problem.

Next, the health workers and the management committee met with local government officials and suggested that the district government provide resources to retrain local birth attendants, support for conducting supervision of these birth attendants, and IEC activities. The district officials were convinced by their argument because they could understand the information provided by the health staff. They then gave the Kissi health center funds to organize the training. However, they suggested that the team also find ways to draw funds from their existing budget to conduct supervision and IEC. Moses and Rachel agreed to reassess the data every three months after the training to determine whether coverage had improved sufficiently and report this information back to the management committee. If their approach was indeed improving coverage, district government officials agreed to provide additional support for supervision on a regular basis.

Essential Service: Preventive Infant Visit (PIV)

The Story of Ruth and Sarah

Ruth delivered her third child four months ago. After taking the appropriate time to rest following her delivery, she is now working again selling vegetables in the market. She takes her son with her because there is no one at home to care for him. Sarah, Ruth's sister, often sits with her while she works. Sarah has a baby that is just six weeks old. Ruth asks Sarah whether she has taken her baby to the health clinic to be checked by the health staff. Sarah laughs and says her mother-in-law would never let her go. There is a small fee for the service and, besides, the baby is well. He is eating and growing.



Just as they finish their conversation, Mary, the nurse from the health center, walks by, and Ruth calls her to come talk with her and her sister. After greeting the two women, Mary thanks Ruth for bringing her baby to the health center for a check-up every two months. Ruth jokes with Mary and says that she is more clever than her sister because her sister refuses to

Elements of First Well-Baby Check

- Examine head and fontanelle
- Assess eyes for infection and jaundice
- Assess respiration rate
- Assess heart rate (rate and murmur)
- Assess skin for pallor, jaundice, petechiae, and infection
- Examine extremities and skeletal system for symmetry, movement, and broken bones
- Examine umbilicus
- Assess general alertness
- Assess suction reflex
- Assess Moro reflex
- Assess response to brightness
- Assess response to sound
- Measure weight and length
- Measure head circumference
- Plot information on a growth chart
- Advise on exclusive breast feeding and maternal nutrition while breast feeding
- Give vitamin A according to age
- Verify BCG status (Bacilli Calmette-Guerin, a vaccine to protect against tuberculosis) and give if needed
- Give DPT1 and OPV1 if the child has reached six weeks of age
- Advise on an immunization schedule
- Advise on danger signs in the child
- Promote well-child care
- Schedule the next visit

take her baby to the health center for a check-up. Sarah is embarrassed, but Mary says that she is not alone. Unfortunately, many young mothers do not understand the benefits of preventive infant care, and their husbands and mothers-in-law tell them not to "waste time" going to the doctor.

Mary explains that the first preventive visit should take place before the child is two months old. This is one of the most vulnerable times in a child's life. During this visit, the nurse or doctor checks whether the child is developing properly. The health worker weighs the baby and checks for important signs of health in a newborn. The child receives its first immunization, and the health staff advises the mother not to introduce any solid food until the child is six months old. Often the child's mother will receive her own check-up to ensure that she is regaining her strength after delivery. Sarah is still not convinced that her mother-in-law will allow her to go to the health center, but she promises to try.

Mary decides to return to the health center and look at the data on coverage of all first preventive infant visits. She wants to know whether coverage has improved since the women's committees have become involved in promoting early check-ups for newborn children.

Reflection

This story explains the difficulty health workers face in promoting preventive care for children. Children aged less than one year are at risk of contracting a number of common diseases. Immunization, growth monitoring, appropriate feeding practices, and care of the umbilicus are intended to reduce this risk and improve the child's chances of surviving beyond age one. It is difficult for health workers to contact mothers after delivery to promote attendance for early preventive infant care. They often wait for the mother to bring the child to the health center after he or she has become ill. Parents may feel there is no benefit from growth monitoring, or they may feel cheated if the health service does not offer any food or medicine for the child. Sometimes it is easier to promote early immunization and then provide a full check-up when the child is brought in for DPT1 and OPV1.

Consider these questions:

- Do you experience similar problems at your health facility?
- Do you know how many children are born each year in your catchment area?
- Do you know how many of these children attend their first preventive infant visit (PIV) by age 2 months?
- Among those who do attend for PIVs, where are they located? Near the health center? In a particular village?
- What can you do to encourage more mothers to bring their children for a PIV?

To answer these questions, **begin** by looking at the data you collect at your health center and the data available on the community. Then follow the five steps of self-evaluation.

Self-Evaluation

Step 1: Choose and Define an Appropriate Indicator

From community and facility data you can calculate indicators of the strengths and weaknesses of well-baby care. There are four basic indicators that health workers can use to conduct self-evaluation of this service (see box). To begin, the health worker should select only one indicator and analyze it. Here we suggest starting with the first indicator in the box—**coverage of first preventive infant visit**—which is a key indicator for assessing the effectiveness of preventive infant care.

Key Indicators of Well-Baby Care

- Coverage of first preventive infant visit
- Coverage of DPT1 and OPV1
- Percentage of malnourished children
- Coverage of BCG

Define the Indicator for Coverage of the First Preventive Infant Visit

$$\frac{\text{Number of children aged less than 8 weeks who attended a health facility for the first preventive infant visit } \textit{last quarter}}{\text{Number of children aged 0-11 months}^{3} \text{ present in the community } \textit{last quarter}} \times 100$$

REMEMBER! The numerator and the denominator can cover any period of time (quarter, year, etc.). However, the time period related to the numerator and the denominator in a single indicator must always be the same.

[3] This denominator should reflect the total number of children surviving to 12 months of age (live births minus infant deaths). However, in the interest of simplicity and to ease calculation, the total number of children aged 0-11 months is taken as 4% of the population. Used consistently over time, this estimate will provide adequate evidence of change for decision making at the facility level.

STEP 2: Analyze the Data (Calculate—Interpret—Present)

Calculate the Indicator

The Numerator

The numerator is calculated with information from the register. Use a tally sheet to record the number of first preventive infant visits last quarter among children aged less than 8 weeks.

***Example*:** 25 children aged less than 8 weeks attended the health center for the first preventive infant visit last quarter.

The Denominator

The denominator is calculated using the total population in the catchment area reported in the latest census multiplied by .04 (4%). The total population of the catchment areas should be provided by the district health office or local government.

Example: Total population of 10,000 multiplied by .04 (equal to 4%, or the percent of children expected to fall between 0-11 months each year) = 400.

This means that there are an estimated 400 children aged 0-11 months in the catchment population each year. Since the numerator relates to only one quarter, the denominator should be divided by four. 400/4 = 100 children aged 0-11 months last quarter.

Coverage

Using examples from above, **divide the numerator by the denominator and multiply by 100:** (25/100) x 100 = 25%.

Interpret the Indicator: What Does this Indicator Tell You?

You can use this indicator to:

- **Describe the problem: Is it big or small?**
  - 25% of all children aged less than 8 weeks came to the health center for their first preventive infant visit last quarter.
  - 75% of all children aged less than 8 weeks **did not** come to the health center for their first preventive infant visit last quarter.

- **Compare the indicator with the target. Did you reach the target? Is coverage improving?**
  Is your indicator for the last quarter higher or lower than the target? Is it higher or lower than coverage during the previous quarter? What does this information tell you about the health service? If coverage is improving, do you know why? If it is not improving, do you understand why?

REMEMBER! A target is different than the denominator. The denominator represents 100% of all possible preventive infant visits. A target is usually a certain portion of the total target population that you believe you can reach in a specific time period. It can be expressed as a percentage or as a number. For example, during this year, you may want 50% of all infants to attend a first preventive visit by the time they are 8 weeks old. Based on the examples above, your target would be 50% of 400, or 200 (calculation: 400 x 0.5 = 200). Over the year, you would plan to reach at least 200 infants. Each quarter you would therefore hope to reach at least 50 (about one quarter of 200).

If there is no target set for preventive infant visits for your area, you can choose a target based on the indicator you have just calculated (see the help section on target setting in Annex 4).

Presenting the Data

Like the other indicators, you can illustrate changes in coverage over time, discover where coverage is the lowest, and compare coverage to the target. These pictures can help you show the problem more clearly and explain the problem to others, such as your supervisor or the community.

Making a Graph or Table

You can make a **graph** that shows changes in first preventive infant visits over time. To depict cumulative coverage for the year, record a marker or dot across from the total number of first preventive infant visits for the first quarter. For the next quarter, add the total number of visits to that of the first quarter, and so on for the rest of the year. You can then compare one quarter with the next to see if your total coverage is improving. Each point is connected with a line until the year is complete.

You can also place dots on the graph to mark the targets set for each quarter, and then you can connect them. When you have done this, you can compare your coverage with the target. Using the example above, if the total annual target is 50%, then each year you would expect 200 children aged less than 8 weeks to come for their first preventive infant visit. Each quarter you would expect 50 visits. In **Graph 1** (page 63), coverage is below the target, but it increases steadily throughout the year.

A second way of illustrating the data is to make a **table** that shows the actual number of first preventive infant visits per village, the total number of expected live births (100% of the target), and actual coverage for each quarter. You can only complete this table if you record the name of each child's village when you fill in the forms or the register.

If you do not collect this information, you might consider changing the patient record form or the register. From your register, tally up the number of children aged less than 8 weeks who came for a first preventive infant visit. The tally sheet might look like **Table 1** on page 64.

When you finish the tallies, you can fill in the numbers in **Table 2** (page 65) and calculate the coverage of first preventive infant visits by village and by total catchment population in the same way you calculated the coverage indicator above. When this is done, look at the information carefully to see what it tells you. You can see that coverage in Mgandini in the first quarter is lower than coverage in Kenango. Based on this data, the health worker may want to speak to the health committee in Mgandini and ask for their assistance in encouraging women to take their children to the health center before the children are two months old.

Graph 1: Cumulative Coverage of First Preventive Infant Visits

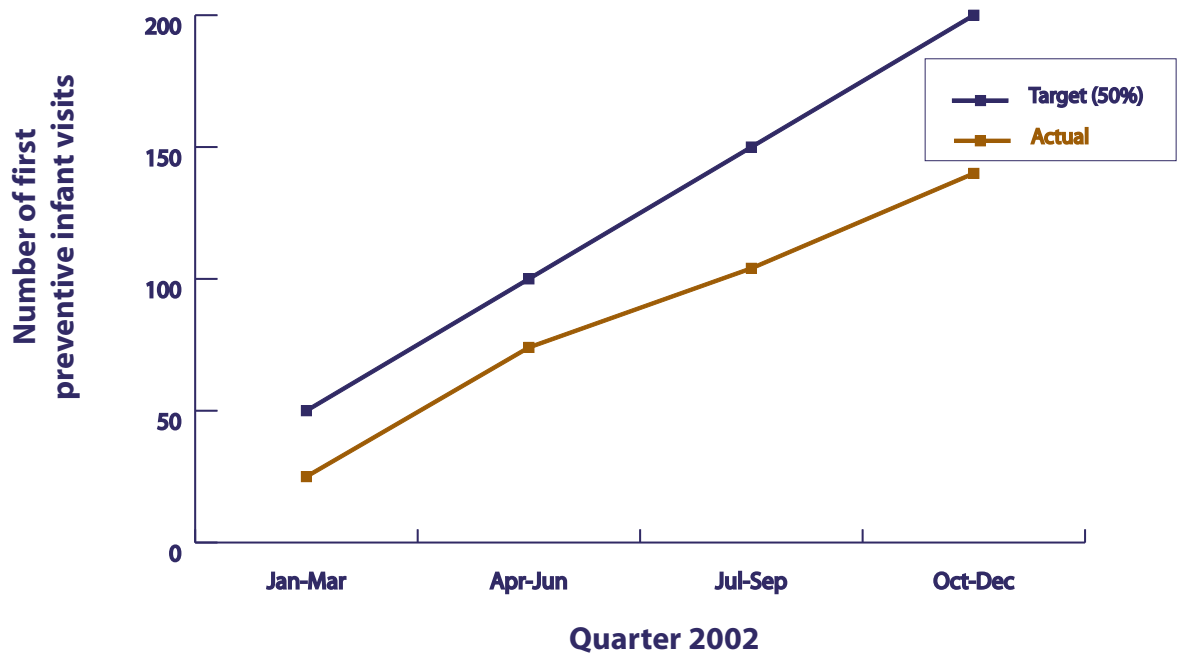


TABLE 1: Tally Sheet for First Preventive Infant Visit

Health center: Kasemeni **Indicator:** First preventive infant visit **Year:** 2002

Village	Quarter 1 PIV visit at less than 8 weeks	Quarter 2 PIV visit at less than 8 weeks	Quarter 3 PIV visit at less than 8 weeks	Quarter 4 PIV visit at less than 8 weeks	Total
Villages less than 5 km					
1. Mwavumbo	II	III	IIII	~~IIII~~ I	15
2. Mtaa	IIII	III	II	III	12
3. Mwabilla	I	IIII	I	~~IIII~~	11
4. Mwatete	I	~~IIII~~ I	~~IIII~~	III	15
5. Kalalani	I	IIII	III	III	11
6. Mwamdudu	II	~~IIII~~	II	IIII	13
7. Bofu	I	III	I	III	8
8. Msambweni	III	II	III	II	10
Total <5 km	**15**	**30**	**21**	**29**	**95**
Villages 5 km or more					
1. Kenango	III	~~IIII~~ I	II	II	13
2. Kafundi	~~IIII~~	~~IIII~~ IIII	IIII	III	21
3. Mwashanga	I	I	I	I	4
4. Mgandini	I	III	II	I	7
Total >5 km	**10**	**19**	**9**	**7**	**45**
Total by period	**25**	**49**	**30**	**36**	**140**

TABLE 2: Coverage of First Preventive Infant Visit by Village

Health center: Kasemeni **Indicator:** First preventive infant visit

Target: 50% **Year:** 2002

Village	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Year
	PIV	Children 0-11 months 1/4	Coverage rate	PIV	Children 0-11 months 1/4	Coverage rate	PIV	Children 0-11 months 1/4	Coverage rate	PIV	Children 0-11 months 1/4	Coverage rate	Total coverage
Villages less than 5 km													
1. Mwavumbo	2	7	29	3	7	43	4	7	57	6	7	86	54
2. Mtaa	4	12	33	3	12	25	2	12	17	3	12	25	25
3. Mwabilla	1	8	13	4	8	50	1	8	13	5	8	63	34
4. Mwatete	1	9	11	6	9	67	5	9	56	3	9	33	42
5. Kalalani	1	7	14	4	7	57	3	7	43	3	7	43	39
6. Mwamdudu	2	11	18	5	11	45	2	11	18	4	11	36	30
7. Bofu	1	8	13	3	8	38	1	8	13	3	8	38	25
8. Msambweni	3	6	50	2	6	33	3	6	50	2	6	33	42
Total <5 km	**15**	**68**	**22**	**30**	**68**	**44**	**21**	**68**	**31**	**29**	**68**	**43**	**35**
Villages 5 km or more													
1. Kenango	3	8	38	6	8	75	2	8	25	2	8	25	41
2. Kafudni	5	16	31	9	16	56	4	16	25	3	16	19	33
3. Mwashanga	1	3	33	1	3	33	1	3	33	1	3	33	33
4. Mgandini	1	5	20	3	5	60	2	5	40	1	5	20	35
Total >5 km	**10**	**32**	**31**	**19**	**32**	**59**	**9**	**32**	**28**	**7**	**32**	**22**	**35**
Total per period	**25**	**100**	**25**	**49**	**100**	**49**	**30**	**100**	**30**	**36**	**100**	**36**	**35**

* Blank tables are located in Annex 2 at the end of the document.

STEP 3: Assess the Situation

Now use the indicator, the graph, and the table to **assess the situation and decide what to do.**

The **indicator** tells you the overall size of the problem at a specific time. Coverage of first preventive visits last quarter was 25%, and the annual target is 50%.

The **graph** tells you whether there have been improvements over time and how actual coverage compares to the target.

Table 2 tells you which areas have the lowest and highest coverage.

WHAT IF...

- ☑ If the level of overall coverage is acceptable (getting closer, equal to, or exceeding the target), then you may decide that you do not need to make any additional intervention. Make a commitment to maintaining coverage.
- ☑ If the indicator is too low, or improvements are not happening fast enough to meet your target by the end of the year, you should consider possible **causes and solutions.**

The cause of low coverage of first preventive visits may be found in the community, in the health center, or in both.

In the community, you might consider:

- ☑ The distance a family lives from the health center and the time it takes them to travel there;
- ☑ The lack of information or understanding about the importance of well-baby care;
- ☑ Cultural beliefs or practices related to new babies or newly delivered mothers; and
- ☑ The cost of preventive infant care in terms of fees or time lost by people who accompany the woman.

In the health center, you might consider:

- ☑ Whether women and children are treated kindly and given enough time to discuss problems;
- ☑ The way women perceive preventive infant care (Do they feel it is beneficial for children?); and
- ☑ The technical quality of preventive infant care. (Are basic equipment and supplies such as vaccines, scales, and drugs always available when needed?)

These are only some of the possible causes of low coverage of preventive infant care. What other causes might be relevant in your community?

To explore causes and find solutions, you should dicuss the situation with other health workers, the health center management committee, your supervisor, district managers, and especially members of the community. Key sources of information in the community are village health workers, trained birth attendants, grandmothers, and religious leaders. When you meet with these people, use the data and graphs that you have prepared to illustrate and explain the problem. Then hold a discussion about possible solutions.

Depending on the cause(s) of low coverage, these are steps that you could take to improve coverage of the first preventive infant visit:

- ☑ Improve the technical quality of the service by ensuring that all supplies and equipment are available.
- ☑ Organize the service differently by combining first preventive infant visits with postnatal care.
- ☑ Improve the way women and children are treated at the health center. Allow enough time for questions. Encourage an exchange of information. Make women feel comfortable.
- ☑ Introduce education and information activities in villages with low coverage that explain the importance of early preventive infant care.
- ☑ Conduct outreach visits for preventive infant care.
- ☑ Ask for support from women's groups and village associations to encourage the use of early preventive infant care.

STEP 4: Finding a Solution

Organize a Meeting

To begin to address the problem, you may want to hold a meeting with other health workers or community members. These meetings should follow the steps indicated below.

Set Priorities

First, **decide what is the most important and easiest step to take**. Start with something that relates to your direct responsibilities in the health facility. Then move on to the community. For example,

1. ***If you have run out of essential supplies:***

- ☑ **Order** supplies immediately and, in the future, order them on a regular basis to ensure that they arrive before you need them.

2. *If you have learned from your discussions in the community or in the health center that more women are likely to take their children for early preventive infant care if the service were combined with curative clinic sessions:*

- ☑ **Change** the way you provide preventive infant services **and let people know about it!**

3. *If women do not accept the importance of early preventive infant care:*

- ☑ **Find out why and learn** more about local customs and beliefs; and
- ☑ **Speak** to women who have used the service and ask them why other women may not want do the same.

4. *If the population does not have enough information about the importance of early preventive infant care and the services that are offered at the health center:*

- ☑ **Conduct** information, education, and communication (IEC) activities in the villages with women's groups and associations, village representatives, and net works to increase local knowledge of the benefits of early care for infants.

5. *If some women cannot come to the health center because they live too far away or cannot find appropriate transportation:*

- ☑ **Form** a network of local groups to provide services such as IEC and identify high risk newborns;
- ☑ **Supervise and support** the networks; and
- ☑ **Conduct outreach services** regularly in the villages.

6. *If cultural beliefs may be discouraging women from coming for early preventive infant care:*

- ☑ **Respect** cultural differences, but **find out** more about them;
- ☑ **Choose** health messages that reflect local beliefs;
- ☑ **Collaborate** with local leaders to encourage them to accept the importance of early preventive infant care; and
- ☑ **Collaborate** with women's groups and associations, and others.

Only you and the community together can decide the best steps to take to address the problem in your community.

Develop an Action Plan

Work with other health staff or community members to make a plan. A plan is an agreed set of activities that will be conducted to address a problem or achieve a result. This plan might include improving the health service, setting a coverage target for the next few quarters, or introducing new activities to encourage more women to come for early preventive infant care. The plan should list all the activities that will be done, when they should be completed, and who is responsible for completing them.

Work with the Community

Next, **continue to work with the community to implement the plan.** While both the health workers and the community can take responsibility for implementing the action plan, the community may need your help to do their part.

Seek Support

If you need help, you could request support from the district, a local NGO, local government, or other community groups. Teachers can help spread health messages. A local NGO might have found effective ways to deliver preventive infant care. Hold a meeting with local NGOs and share experiences. Solving health problems in the community is everyone's responsibility.

Action Plan for Improving Coverage of First Preventive Infant Visit

Activities to improve coverage of first infant preventive visit	Date to be completed?	Who is responsible?	Results achieved or not? Comments
Order new scale	9/2/02	Mary	
Begin to provide PIV during curative clinics	Starting March 2002	Mary	
Start IEC activities, such as encouraging women to bring their six-week-old child for the first preventive infant visit	21/3/02	Health workers Management committee Women's groups	

* Blank tables are located in Annex 2 at the end of the document.

STEP 5: Monitoring the Results of the Action Plan

It is important to monitor what happens as a result of your action plan. Did your activities lead to an improvement in coverage of early preventive infant care?

Fill In the Action Plan and Note the Results that were Achieved

- ☑ **Assess** the same indicator after a period of time to see if there has been any change. Be sure to share that information with all those involved in identifying and addressing the problem.

If you reach the target or make any improvement:

- ☑ **Inform** the management committee and the community of this success, congratulate them, and thank them;
- ☑ **Ask** them to make an effort to maintain or even improve on this good result; and
- ☑ If necessary, **work** with the community to reach a higher target for the next period and define activities that will help you reach it.

If you do not reach the target, or your indicators remain low:

- ☑ **Identify** the villages in the area with the lowest participation; and
- ☑ **Hold** a meeting with the committee to help identify the causes for low coverage and find solutions.

The Results of Self-Evaluation

Once Mary reviewed the data, she discovered that the overall number of first preventive infant visits increased dramatically in March. She remembered that the women's committee had begun a campaign in February to promote early preventive infant care. They had made posters and started informal discussions in the market about the importance of immunizing children at the age of six weeks and taking them to the health center for regular check-ups. Mary invited the head of the women's committee to attend the next meeting of the health center management committee. At that meeting, she thanked the women's committee for raising the issue of preventive care and showed them how the number of visits had increased since their campaign. However, Mary also showed the committee a graph that she made after calculating the coverage of preventive infant visits.

This graph showed that even with the increase in the number of visits, coverage was still below the target. Mary pointed out that the preventive infant coverage target for this year was 50%, so there was still time to realize their goal. She encouraged the committee to work even harder at promotion and to assist her in reaching women who live far from the health center. The head of the women's committee agreed that if they could find a vehicle, they would contact all the members of the women's committees in every village with this important health message. Mary agreed to let them use the health center vehicle twice a month, and the head of the health center management committee agreed to lend them his vehicle every Saturday. Mary said she would continue to monitor the results of these efforts and report the findings to both committees at the end of every quarter.

Essential Service: Childhood Immunization

The Story of Fatima's Children: Mohamed & Mariam

Fatima and her five children live fifteen kilometers from Kasemeni health center. Fatima has brought her three-year-old daughter, Mariam, to the health center because the girl has a fever, a rash, red and watery eyes, and a runny nose. Fatima tells Mary, the nurse, that her daughter needs a measles immunization because she believes the girl has measles. Mary examines the girl and confirms the mother's fear that the girl has measles. Luckily, it is a mild case, and the girl is well nourished and strong. She explains to Fatima that she can give the child some medicine to reduce her fever, but measles immunization only prevents measles before the disease affects the child. Fatima says that she came to the health center two times to receive immunization for her daughter, and she asks why the immunization did not work.

Mary asks to see Mariam's vaccination card and finds that she has received BCG, OPV1, DPT1, OPV2, and DPT2, but has not received OPV3, DPT3, or measles vaccine. She praises Fatima for

bringing the card and for knowing how important immunization is for her children. Then she explains how important it is that children come to the health center five times before they reach one year of age to get all the necessary immunizations. Immunization can only prevent disease if the child receives the correct number of injections and drops. The measles immunization cannot be given until the child is nine months old. It is usually the last immunization the child receives and, consequently, is often forgotten. The nurse also gives Mariam her third dose of OPV and DPT as well as one dose of vitamin A. She then explains to Fatima how to give the child medicine to reduce the fever.

Fatima then takes out her baby boy Mohamed's card and asks the nurse to check it. Mohamed is eight months old, and he has had only one dose each of BCG, OPV, and DPT. The nurse explains that he needs one dose of OPV and DPT today and one more dose after one month. During the next visit, Mohamed will also receive measles vaccine so he does not get measles like his sister. Mary has noticed that many women bring their children for one or two immunizations, but many fail to complete immunization for their children. Consequently, coverage of OPV3, DPT3, and measles in her area is well below the national and district targets. Mary decides to check the records from last year to see if there are certain villages where immunization coverage is particularly low.

Elements of Childhood Immunization Services

- Confirm age of child
- Check previous vaccination status (using vaccination card, BCG scar, and mother's history)
- Ensure appropirate interval between doses
- Explain importance of immunization
- Administer all appropriate vaccines, even if the child has a cold or fever
- Advise on side effects and actions the mother can take to relieve pain and lower fever
- Advise on care of BCG immunization site
- Advise on when to return for the next dose and how many more doses are needed
- Record doses and dates on immunization card

Reflection

Many mothers like Fatima have heard about immunization and understand its importance. In spite of this, they may not come to the health center to have their children immunized or return to complete the immunization schedule. Health workers know that if a child is not fully immunized, it will not be protected from diseases like diptheria, whooping cough, tetanus, tuberculosis, polio, and measles. Moreover, the more children that are immunized in the community (the higher the coverage), the lesser the chance that these diseases will spread to other children.

Consider these questions:

- How does this story relate to your work at the health facility?
- Do most women bring their children for immunization? Do they complete all the necessary doses?
- Do you know what percentage of children under one year of age in your area are fully immunized?
- Which area has the lowest immunization coverage? Why?
- How can you encourage more women to complete immunization for their children?

To answer these questions, **begin** by looking at the data that you collect at your health center and the data available on the community. From this data, you can calculate indicators related to the coverage and quality of immunization services.

Self-Evaluation

Step 1: Choose and Define an Appropriate Indicator

From community and facility data you can calculate indicators of the strengths and weaknesses of immunization services. There are four basic indicators that health workers can use to conduct self-evaluation of this service (see box). To begin, the health workers should select only one indicator and analyze it. Here we suggest starting with the first indicator in the box—**coverage of DPT 3**—which is a key indicator for assessing the effectiveness of childhood immunization services.

Define the Indicator for Coverage of DPT3

$$\frac{\text{Number of children aged 0-11 months who received DPT3 vaccine } \textit{last quarter}}{\text{Total number of children aged 0-11 months in the catchment population } \textit{last quarter}} \times 100$$

Key Indicators for Child Immunization Services

- Coverage of DPT3
- Coverage of OPV3
- Drop out rate between DPT1 and DPT3
- Vaccine usage per immunized child

REMEMBER! The numerator and the denominator can cover any period of time (quarter, year, etc.). However, the time period related to the numerator and the denominator in a single indicator must always be the same.

STEP 2: Analyze the Data (Calculate—Interpret—Present)

Calculate the Indicator

The Numerator

The numerator is calculated with information recorded in the quarterly report.

***Example*:** 65 children received DPT3 last quarter.

The Denominator

The denominator is calculated using the total catchment population measured in the last census multiplied by .04 (equals 4%, or the percent of children 0-11 months).[4] These figures should be provided by the district health office or local government.

Example: Total catchment population of 10,000 multiplied by .04 (10,000 x .04) = 400 children aged 0-11 months in the catchment population.

[4] The denominator should reflect the total number of children surviving to 12 months (live births minus infant deaths). However, in the interest of simplicity and to ease calculation, the total number of children aged 0-11 months is taken as 4% of the population. Used consistently over time, this estimate will provide adequate evidence of change for decision making at the facility level.

This means that there are an estimated 400 children aged 0-11 months each year for a population of 10,000. Since the numerator relates only to one quarter, the denominator should be divided by four. 400/4 = 100 children aged 0-11 months who were eligible for DPT3 last quarter.

Coverage

Using examples from above, **divide the numerator by the denominator and multiply by 100:** (65/100) x 100 = 65%.

Interpret the Indicator: What Does this Indicator Tell You?

You can use this indicator to:

- **Describe the problem: Is it big or small?**
  — 65% of all children have received DPT3 last quarter.
  — 35% of eligible children **did not** receive DPT3 last quarter.

- **Compare the indicator with the target. Describe the relationship of coverage compared to the objective. Did you reach the target? Is coverage improving?**
  There is probably an annual target for immunization

coverage in your country. There may even be a target set for your district or your catchment area. While DPT3 coverage does not tell you if a child is fully immunized, it is a sound indicator of immunization program performance. If the target for last quarter is higher than 40%, interventions may be needed to raise coverage. How does cumulative coverage for your area compare to your target? Are you on track? (Refer to the help section.)

- **Determine who is affected most by this problem?**
  The data can also tell you where immunization coverage is the lowest and where it is the highest. Look at coverage in each village and make a list of the ten villages with the lowest coverage. Then mark these villages on a map of the catchment area. Are all the low coverage villages in the same location? What do these villages have in common that might cause coverage to be especially low?

Presenting the Data

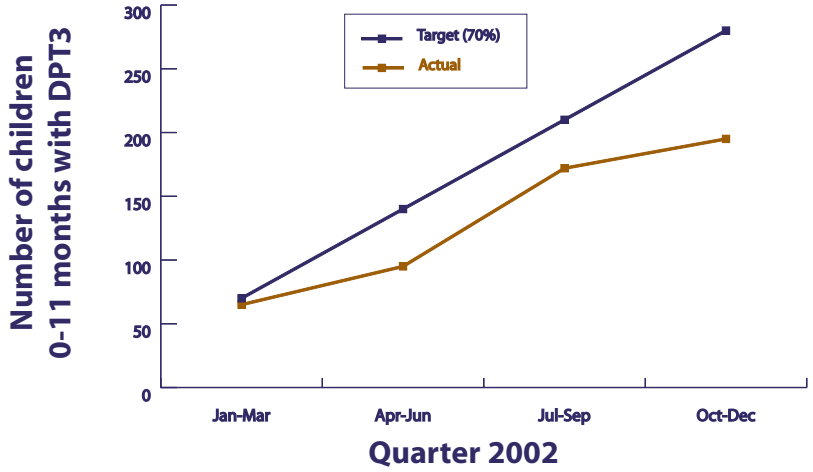
In addition to mapping the villages where coverage is low, it is useful to present the data in different ways to understand the situation. Three different types of pictures can be used to explain immunization coverage: line graphs, bar graphs, and tables.

Making a Graph or Table

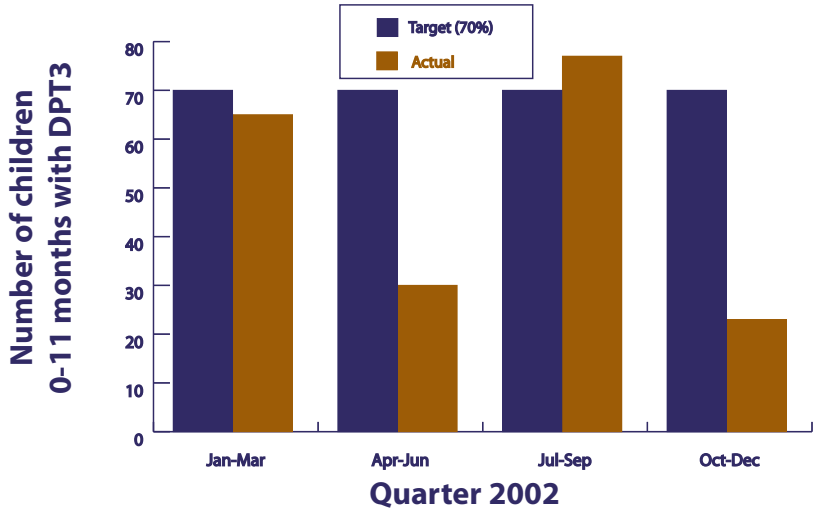
You can make a **line graph** to show changes in immunization coverage over time. To depict cumulative coverage for the year, record a marker or dot across from the total number of DPT3 immunizations given in the first quarter. For the next quarter, add the total number of immunizations to that of the first quarter, and so on for the rest of the year. You can then compare one quarter with the next to see if your total coverage is improving. Each point is connected with a line until the year is complete.

You can also place markers or dots on the graph relating to the coverage target set for your area. Then you can compare your coverage with the target. Using the example above, if the annual coverage target for DPT3 is 70%, then each year you should aim to immunize 280 children. Dividing that annual target by four quarters gives you a quarterly target of 70 children. In **Graph 1** (pg. 79), cumulative coverage has fallen below the target each quarter, even though coverage in the third exceeded the target. You can also make a bar graph to compare actual coverage and targets each quarter. For each quarter, you make a bar at the same height as the total number of children immunized with DPT3 that quarter. You should then make a bar the same height as the target for that quarter. You can then compare one quarter with the next to see if the total number of children with DPT3 is below, the same, or higher than the target. In **Graph 2** (pg. 79), immunization coverage exceeded the target in the third quarter, but fell below the target in the three other quarters.

Graph 1: Cumulative Coverage of DPT3



Graph 2: Coverage of DTP3 - Realized vs. Objective



A third way of presenting the data is to make a **table** to show the actual number of children immunized with DPT3 per village and compare it to the target.

Using the tally sheet below, take information from the register and count the number of children immunized in each village. The tally sheet might look like **Table 1** below.

TABLE 1: Tally Sheet for First Immunization Coverage

Health center: Kasemeni **Indicator:** Immunization coverage **Year:** 2002

Village	Quarter 1 DPT3 immunizations under 12 months	Quarter 2 DPT3 immunizations under 12 months	Quarter 3 DPT3 immunizations under 12 months	Quarter 4 DPT3 immunizations under 12 months	Total
Villages less than 5 km					
1. Mwavumbo	IIII	III	~~IIII~~ I	I	14
2. Mtaa	~~IIII~~ IIII	II	~~IIII~~ ~~IIII~~ I	III	25
3. Mwabilla	~~IIII~~ I	III	~~IIII~~ I	I	16
4. Mwatete	~~IIII~~ I	I	~~IIII~~ II	III	17
5. Kalalani	IIII	II	~~IIII~~ I	I	13
6. Mwamdudu	~~IIII~~ I	IIII	~~IIII~~ IIII	II	21
7. Bofu	~~IIII~~ I	IIII	~~IIII~~ II	III	20
8. Msambweni	~~IIII~~	II	III	I	11
Total <5 km	**46**	**21**	**55**	**15**	**137**
Villages 5 km or more					
1. Kenango	~~IIII~~	II	~~IIII~~ I	II	15
2. Kafundi	~~IIII~~ ~~IIII~~	IIII	~~IIII~~ ~~IIII~~ I	IIII	29
3. Mwashanga	I	I	II	I	5
4. Mgandini	III	II	III	I	9
Total > 5 km	**19**	**9**	**22**	**8**	**58**
Total by period	**65**	**30**	**77**	**23**	**195**

When you finish the tallies, you can fill in the numbers in **Table 2** (page 82) and calculate DPT3 coverage by village and total catchment population in the same way you calculated the coverage indicator above. When this is done, look at the information carefully to see what it tells you. You can see that by the end of the year, coverages in Msambweni and Kalalani are lower than in any other villages located less than 5 km from the health center. Based on this data, the health worker may want to speak to the health committees in Msambweni and Kalalani and ask for their assistance in encouraging women to take their children to the health center to complete their immunization before the children are 12 months old.

STEP 3: Assess the Situation

Now use the indicator, the graphs, and the table **to assess the situation and decide what to do**.

The indicator tells you the overall size of the problem at a specific time. DPT3 coverage last quarter was 65%, and the annual target is 70%.

Graph 1 tells you whether there have been improvements over time and how actual coverage compares to the target.

Graph 2 tells you how close to the target you have come each quarter.

Table 2 tells you where coverage is the lowest.

WHAT IF...

- ☑ If the level of coverage is acceptable (getting closer, equal to, or exceeding the target), then you may decide that no extra effort is needed.
- ☑ If overall coverage is too low, or coverage is not improving fast enough to meet your annual target, you may want to consider **possible causes and solutions**.

The causes of low immunization coverage may be found in the community, the health center, or in both.

In the community, you might consider:

- ☑ The distance a woman lives from the health center that offers immunization services;
- ☑ The mothers' fear of side effects;
- ☑ The lack of knowledge about the importance of completing the immunization schedule or the number of times the

TABLE 2: Immunization Coverage by Village

Health center: Kasemeni **Indicator:** Immunization coverage

Target: 70% **Year:** 2002

Village	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Year
	DPT3	Children 0-11 months 1/4	Coverage rate	DPT3	Children 0-11 months 1/4	Coverage rate	DPT3	Children 0-11 months 1/4	Coverage rate	DPT3	Children 0-11 months 1/4	Coverage rate	Total coverage
Villages less than 5 km													
1. Mwavumbo	4	7	57	3	7	43	6	7	86	1	7	14	50
2. Mtaa	9	12	75	2	12	17	11	12	92	3	12	25	52
3. Mwabilla	6	8	75	3	8	38	6	8	75	1	8	13	50
4. Mwatete	6	9	67	1	9	11	7	9	78	3	9	33	47
5. Kalalani	4	7	57	2	7	29	6	7	86	1	7	14	46
6. Mwamdudu	6	11	55	4	11	36	9	11	82	2	11	18	48
7. Bofu	6	8	75	4	8	50	7	8	88	3	8	38	63
8. Msambweni	5	6	83	2	6	33	3	6	50	1	6	17	46
Total <5 km	**46**	**68**	**68**	**21**	**68**	**31**	**55**	**68**	**81**	**15**	**68**	**22**	**50**
Villages 5 km or more													
1. Kenango	5	8	63	2	8	25	6	8	75	2	8	25	47
2. Kafudni	10	16	63	4	16	25	11	16	69	4	16	25	45
3. Mwashanga	1	3	33	1	3	33	2	3	67	1	3	33	42
4. Mgandini	3	5	60	2	5	40	3	5	60	1	5	20	45
Total 5+ km	**19**	**32**	**59**	**9**	**32**	**28**	**22**	**32**	**69**	**8**	**32**	**25**	**45**
Total per period	**65**	**100**	**65**	**30**	**100**	**30**	**77**	**100**	**77**	**23**	**100**	**23**	**49**

* Blank tables are located in Annex 2 at the end of the document.

child should return to complete the immunizations; and
- ☑ Cultural beliefs or influential people that discourage women from using immunization services.

In **the health center,** you might consider:
- ☑ Whether women are treated politely during immunization sessions;
- ☑ The information given to mothers (Is it complete? Does the nurse remind mothers when to return?);
- ☑ Poor technical performance, such as a malfunctioning cold chain or non-sterile injection technique; and
- ☑ Shortages of vaccines on the days when immunization are given.

There may be many other causes of low coverage. Explore these and other ideas with the community and colleagues at the health facility. Ask your supervisor her opinion. Hold a meeting with the health center management committee and show them the data. When you explain the problem, use the graphs and tables to illustrate and explain it.

Depending on the cause, these are steps you could take to improve coverage of DPT3:
- ☑ Improving communication between health workers and mothers by:
  - — Addressing the way mothers are greeted;
  - — Making the waiting area more comfortable;
  - — Encouraging questions and listening to concerns raised by mothers; and
  - — Ensuring that mothers understand the information given to them about when to return, how many times to return, and side effects.
- ☑ Improving technical quality by:
  - — Ensuring that there are no stockouts of vaccines;
  - — Ensuring that the cold chain is functioning properly; and
  - — Using a sterile needle and syringe for each injection.
- ☑ Making it as easy as possible for mothers to have their children immunized by:
  - — Offering immunization every day; and
  - — Asking about all children's immunization status at antenatal visits.
- ☑ Conducting outreach services in remote areas and during market days.
- ☑ Increasing the use of information, education, and communication (IEC) activities in low-coverage areas to encourage use of the immunization services.
- ☑ Engaging village leaders, traditional healers, local midwives, and women's groups in increasing awareness of immunization and encouraging mothers to bring their children for immunization.

In addition, a special, one-time intervention might be used each year to reach those children missed in routine services and raise coverage to as close to 100% as possible. Reports from these special interventions should be reported with routine service data when conducting self-evaluation.

STEP 4: Finding a Solution

Hold a Meeting

To begin to address the problem, you may want to hold a meeting with other health workers or community members. These meetings should follow the steps indicated below.

Set Priorities

First, decide what is the most important and easiest step to take. Start with something that relates to your direct responsibilities in the health facility. Then move on to the community. For example:

1. *If you have run out of essential supplies, such as DPT vaccine:*

☑ **Order** supplies immediately and, in the future, order them on a regular basis to ensure that they arrive before you need them.

2. *If you have learned from your discussions in the community or in the health center that more women are likely to come for childhood immunization if it were combined with curative clinic sessions:*

☑ **Change** the way you provide immunization services and let people know about it!

3. *If women do not accept the importance of completing the immunization schedule or fear side effects:*

☑ **Find out why** and learn more about local customs and beliefs;
☑ **Speak** to women who use the service and ask them why other women may not want to attend; and
☑ **Reassure** women that the benefits of immunization outweigh the discomfort of side effects.

4. *If the population does not have enough information about the importance of immunization, the correct number of visits, and the services that are offered at the health center:*

☑ **Conduct** IEC activities in the villages with women's groups and associations, village representatives, and networks to increase local knowledge of the benefits of immunization.

5. *If some women say they cannot come to the health center because they live too far away or cannot find appropriate transportation:*

☑ **Form** a network of local groups to provide services such as IEC and identification of children with incomplete immunization status;
☑ **Supervise and support** the networks; and
☑ **Conduct outreach services** regularly in the villages.

6. *If cultural beliefs may be discouraging women from using immunization:*

- ☑ **Respect** cultural differences, but **find out** more about them;
- ☑ **Choose** health messages that reflect local beliefs;
- ☑ **Collaborate** with local leaders to encourage them to accept the importance of immunization; and
- ☑ **Involve** women's groups and associations and others to help promote immunization.

Only you and your community together can decide the best steps to take to address the problem in your community.

Develop an Action Plan

Work with other health staff or community members to make a plan. A plan is an agreed set of activities that will be conducted to address a problem or achieve a result. This plan might include improving the health service, setting a coverage target for the next few quarters, or introducing new activities to encourage more women to come for early preventive infant care. The plan should list **all the activities** that will be done, **when** they should be completed, and **who** is responsible for completing them.

Action Plan for Improving Immunization Coverage

Activities to improve immunization coverage	Date to be completed?	Who is responsible?	Results achieved or not? Comments
Order vaccine regularly	9/2/02	Mary	
Begin to provide immunization during curative clinics	Starting March 2002	Mary	
Conduct IEC activities that explain: (1) the side effects to women; (2) the benefits of immunization; and (3) the number of visits to be completed before age one	21/3/02	Health workers Management committee Women's groups, etc.	

* Blank tables are located in Annex 2 at the end of the document.

Work with the Community

Next, continue to work with the community to implement the plan. While both the health workers and the community can take responsibility for implementing the action plan, the community may need your help to do their part.

Seek Support

If you need help, you could request support from the district, a local NGO, local government, or other community groups. Religious leaders can help spread health messages. A local traditional healer might understand the benefits of immunization or the necessity of completing the schedule. Engage him in spreading positive messages about immunization. Solving health problems in the community is everyone's responsibility.

STEP 5: Monitoring the Results of the Action Plan

It is important to monitor what happens as a result of your action plan. Did your activities lead to an improvement in immunization coverage?

Fill in the Action Plan and Note the Results That Were Achieved

- ☑ **Assess** the same indicator after a period of time to see if there has been any change. Be sure to share that information with all those involved in identifying and addressing the problem.

If you reach the target or make any improvement:

- ☑ **Inform** the management committee and the community of this success, congratulate them, and thank them;
- ☑ **Ask** them to make an effort to maintain or even improve on this good result; and
- ☑ If necessary, **work** with the community to reach a higher target for the next period and define activities that will help you reach it.

If you do not reach the target or your indicators remain low:

- ☑ **Identify** the villages in the area with the lowest participation; and
- ☑ **Hold** a meeting with the village leaders to help identify the causes for low coverage and find solutions.

The Results of Self-Evaluation

Mary mapped out coverage in each village in the health center catchment area. She noticed two patterns. The first was that coverage was lower in the villages located more than five kilometers away from the health center. This finding corresponded with coverage rates for many other services. She concluded that distance was clearly affecting use of the health facility. Mary decided to conduct additional outreach activities in these villages, including immunization and preventive infant care. The second pattern revealed that immunization coverage was also lower in a group of villages near the health center. Mary had no idea why this was happening, so she decided to contact the health center management committee to discuss this problem. She presented the graph and explained that overall immunization coverage was increasing. Then she showed them the map to indicate that there were still pockets of low coverage, mostly in remote villages, but also in a village closer to the health center.

The committee suggested that Mary contact the NGO working in the school that serves the villages with low coverage. They could provide support in conducting an information campaign on the benefits of immunization.

Later that week, Mary presented the same data to the staff of the education NGO, and they agreed to assist the health service in improving immunization coverage. First, however, they suggested conducting some focus group research to understand people's views of immunization and their reasons for not immunizing their children. Mary was on the way to solving the problem of low immunization coverage using data and her relationship with the community.

Essential Service: Family Planning

The Story of Martha and Helen

Martha and Helen grew up together in Mwara, a village without a primary health care program. Helen married a native of the same village. Martha married a man from Mazari, a village that is covered by a primary health care program. Martha and her family are fairly well off and have four healthy children. Helen has seven children, and she and her husband have trouble finding enough resources to care for them adequately. Consequently, Helen and the children are often very ill.

After a long time apart, Martha meets Helen during a visit to Mwara. Martha cannot believe how Helen has changed. She is very thin, her face looks tired, and her color is not good. Helen explains to Martha that since the birth of her ninth child, which was a difficult village delivery, she has felt increasingly weak and ill. Moreover, the child died during delivery just like the one before.

She added that, in the last few years, their situation has deteriorated, and they can no longer meet even the basic needs of the family. Martha was surprised to see that Helen was pregnant again. She said to Helen, "So you've been pregnant ten times and delivered nine times in 15 years of marriage! That is too many pregnancies in such a short time."

Helen explained that, in the village, women are valued only for the housework they do, the help they provide to their husbands in the fields, and the number of children they deliver. She added that she and her husband recognize that her pregnancies are too close together, but no woman can prevent a pregnancy except by refusing her husband, which is not part of the marriage customs. Martha agrees, but asks Helen why she has not visited the health center to get advice on family planning and to treat the children's illnesses.

Martha kindly explained that a midwife from the village health center brought methods for spacing pregnancies so a woman is able to choose when she wants to become pregnant. She explained that this was the reason she has only four children, yet is the same age as Helen. These family planning methods helped her and her husband decide when to have a child without having to sacrifice sexual pleasure.

Helen agrees to talk to her husband about it and contact the nurse, Esther, at the Mazeras health center, which is 30 km from Mwara. When Helen and her husband contact Esther, she informs them about the different methods of family planning and helps them choose the one that best suits their needs. She explains that there are many couples like Helen and David who have not learned about the benefits of family planning. Esther decides to examine the health records to determine whether family planning adoption is increasing or decreasing.

Elements of Family Planning Services

- Ensure confidentiality
- Discuss the woman's needs (desired family size, birth spacing, etc.)
- Explain and discuss the different family planning methods available
- Ask her which method she would prefer
- Discuss side effects
- Help her choose a method
- Provide the method using appropriate clinical procedures if required
- Tell the woman when to to return
- Listen to her concerns
- Answer all her questions

Reflection

This story shows that despite the attention that family planning programs have received in recent years, there are still many people who are not using family planning methods to space or limit pregnancies. Health workers deal with the effects of multiple pregnancies, lack of birth spacing, and large families on a daily basis. However, efforts to encourage more people to adopt family planning may be hindered by:

- A lack of knowledge of family planning or understanding of its benefits;
- The fear of the side effects;
- The difficulty of traveling to the health center; and
- The quality of the care and counseling provided at the health center.

There may also be other reasons. To reduce these constraints, health workers must work closely with the community and try to improve service quality and encourage more couples to adopt family planning.

Consider these questions:

- How does this story relate to your work at your health facility?
- Do most women come to your health center for family planning?
- Do they continue to use family planning after the first visit?
- Do you know how many eligible women in the community are not using family planning?
- Do you know where these women are located?
- Why don't women in your community use family planning?
- What can you do to encourage more women to use family planning regularly?

To answer these questions, **begin** by looking at the data you collect at your health center and the data available about the community. Then follow the five steps of self-evaluation.

Self-Evaluation

Step 1: Choose and Define an Appropriate Indicator

From community and facility data you can calculate **indicators** of the strengths and weaknesses of the family planning service. There are two basic indicators that health workers can use to conduct self-evaluation of family planning services (see box). To begin, the health worker should select only one indicator and analyze it. Here we suggest starting with the first indicator in the box—**family planning recruitment rate**—which is an important indicator for improving family planning services.

Key Indicators for Family Planning

- Family planning recruitment rate
- Ratio of new adopters by method

Define the Indicator for the Family Planning Recruitment Rate

The indicator compares the number of women who have actually adopted family planning methods for the first time to the total number of women of reproductive age.

$$\frac{\text{Number of women who used family planning methods for the first time } \textit{last quarter}}{\text{Number of women of reproductive age (between the ages of 15 and 49 years) } \textit{last quarter}} \times 100$$

REMEMBER! The numerator and the denominator can cover any period of time (quarter, year, etc.). However, the time period related to the numerator and the denominator in a single indicator must always be the same.

STEP 2: Analyze the Data (Calculate—Interpret—Present)

Calculate the Indicator

The Numerator

The numerator is calculated with information recorded in the family planning register. Use your tally sheet or quarterly report form to find the number of new adopters of family planning last quarter. This should include adopters of all methods that are offered at the health center.

Example: 24 women adopted family planning last quarter.

The Denominator

The denominator is calculated by estimating the number of women of reproductive age in the community. This is generally estimated at 24% of the total population. The figure can be calculated from the information provided by the district health office or local government.

Example: Total population of 10,000 multiplied by 0.24 (equal to 24%, or the percent of women of reproductive age each year) = 2400.

This means that there are an estimated 2400 women of reproductive age each year for a population of 10,000 people. Since the numerator relates to only one quarter, the denominator should be divided by four. 2400/4 = 600 women of reproductive age per quarter.

Recruitment Rate

Using examples from above, **divide the numerator by the denominator and multiply by 100:** (24/600) x 100 = 4%.

Interpret the Indicator: What Does this Indicator Tell You?

You can use this indicator to:

- **Describe the problem: Is it big or small?**
  - 4% of eligible women in the community adopted family planning last quarter.
  - 96% of eligible women are either already using family planning or did not come to the health center to adopt family planning for the first time.

  If you have reliable information on the contraceptive prevalence rate in your area from a national or local survey, such as the DHS, it will help you interpret the meaning of the family planning recruitment rate. The recruitment rate is

likely to be rather small, since adoption of family planning methods often proceeds slowly. As a health worker, you should try to ensure a steady rate of increase in this indicator. Do not expect dramatic changes in short periods of time.

Compare the Indicator with the Target

- **Did you reach the target? Is coverage improving?**
  There may be an annual target for family planning recruitment that has been set for your district. Is your indicator for the last quarter higher or lower than the target? What does that indicator tell you about your family planning service? If the annual target was set at 10% for this year, what can you do to ensure that the rate reaches this level?

- **Determine who is affected most by this problem.**
  You may want to know where the majority of family planning adopters live and whether there are some areas where few people are adopting family planning. To identify these areas, look at the recruitment rate per village or collection of villages.

REMEMBER! A target is different than the denominator. The denominator represents 100% of all possible family planning adopters. A target is usually a certain portion of the total target population that you believe you can reach in a specific time period. It can be expressed as a percentage or as a number. For example, you may want 10% of all women of reproductive age to adopt family planning this year. Based on the examples above, your target would be 10% of 2400, or 240 (calculation: 2400 x 0.10 = 240). Over the year you would plan to reach 240 women. Each quarter you would hope to reach 60, or one quarter of 240. If there is no target set for family planning recruitment for your area, you can choose a target based on the indicator you have just calculated (see the help section on target setting in Annex 4).

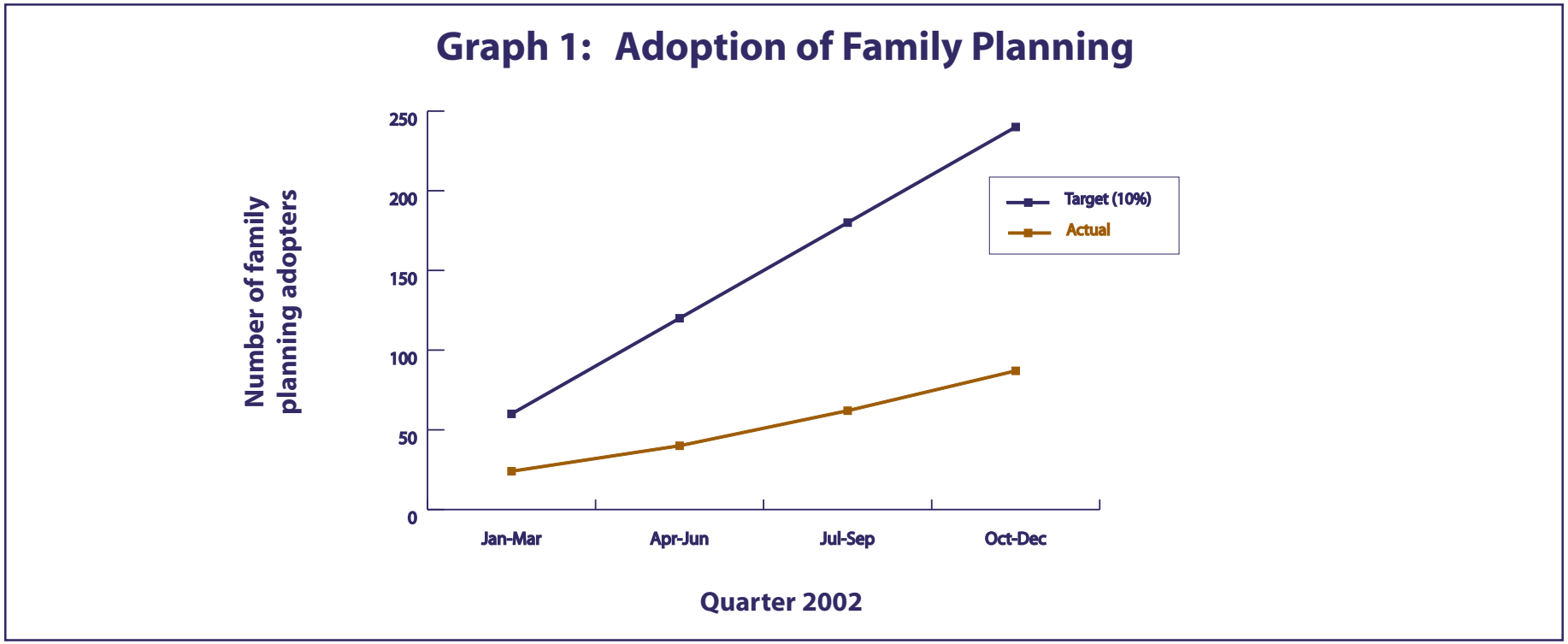
Presenting the Data

It is sometimes helpful to make a picture with the data (a graph or table) to illustrate changes in recruitment rate, discover where recruitment is the lowest, and compare recruitment rates to the target. These pictures can be used to explain the data to others, such as members of the management committee, other community leaders, and your supervisors.

Making a Graph or Table

You can make a **graph** that shows changes in family planning recruitment rate over time. To depict the cumulative adoption rate for the year, record a marker or dot across from the total number of adopters for the first quarter. For the next quarter, add the total number of adopters to that of the first quarter, and so on for the rest of the year. You can then compare one quarter to the next to see if your total recruitment rate is improving. Each point is connected with a line until the year is complete.

You can also place markers or dots on the graph relating to the recruitment rate target set for your area. Using the example above, if the total annual target is 10%, then each year 240 women must adopt a family planning method. Each quarter you would expect about 60 visits. Connect the dots to make a line that shows the cumulative progress of the target throughout the year. Compare the two lines to compare your actual numbers to the target. In **Graph 1** below, the family planning recruitment rate is below the target and only increasing slowly each quarter.



A second way of illustrating the data is to make a **table** that shows the actual number of family planning adopters per village, the total number of expected adopters (100% of the target), and the actual recruitment for each quarter. You can only complete this table if you collect the name of each woman's village when you fill in the forms or the register. If you do not collect this information, you might consider changing the patient record form or the register. From your register, you tally up the number of women from each village who adopted family planning for the first time. The tally sheet might look like **Table 1.**

TABLE 1: Tally Sheet—Family Planning Adopters

Health center: Mazeras **Indicator:** Family planning adopters **Year:** 2002

Village	Quarter 1 Family planning adopters	Quarter 2 Family planning adopters	Quarter 3 Family planning adopters	Quarter 4 Family planning adopters	Total
Villages less than 5 km					
1. Mazeras	~~IIII~~	III	III	IIII	15
2. Mazari	I	I	II	I	5
3. Dambara	IIII	II	I	I	8
4. Keriya	II	I	II	II	7
5. Sambari	III	II	III	IIII	12
6. Kota	I	I	I	II	5
7. Bissi	II	II	I	III	8
Total <5 km	**18**	**12**	**13**	**17**	**60**
Villages 5 km or more					
1. Basoro	I	I	II	II	6
2. Kafundi	II	I	II	II	7
3. Mwashanga	III	II	IIII	III	12
4. Mgandini	–	–	I	I	2
Total >5 km	**6**	**4**	**9**	**8**	**27**
Total by period	**24**	**16**	**22**	**25**	**87**

When you finish the tallies, you can fill in the numbers in **Table 2** (page 98) and calculate the recruitment rate for each village and the total catchment population in the same way you calculated the recruitment rate above. Next, look at the information carefully to see what it tells you. From this table, you can see that the recruitment rate in Mazari is lower than it is in Mazeras. Based on this data, you may want to make an extra effort to encourage women from Mazari to adopt family planning.

STEP 3: Assess the Situation

Now use the indicator, the graph, and the table to **assess the situation and decide what to do**.

The indicator tells you the overall size of the problem at a specific time. The recruitment rate last quarter was 4%, and the target is 10%.

The graph tells you whether there have been improvements over time and how actual recruitment rates compare to the target.

Table 2 tells you where the problem is greatest.

WHAT IF...

- ☑ If the overall recruitment rate is acceptable (getting closer, equal to, or exceeding the target), then you may decide that you do not need to make any additional effort to improve the family planning recruitment rate. Give this information to the community and tell them that things are going well.
- ☑ If the indicator is too low, or improvements are not happening fast enough to meet your target by the end of the year, you may want to consider possible **causes and solutions**.

The cause of low family planning recruitment rate may be found in the community, in the health center, or in both.

In the community, you might consider:

- ☑ The distance women live from the health center and the time it takes them to reach it;
- ☑ The lack of information or understanding about the importance of family planning;
- ☑ Cultural constraints; and
- ☑ The cost of family planning (in terms of fees or time lost away from work to visit the health service).

TABLE 2: Family Planning Recruitment Rate by Village

Health center: Mazeras **Indicator:** Family planning recruitment

Target: 10% **Year:** 2002

Village	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Year
	FP adopters	Women 15-45 yrs.	Recruitment rate	FP adopters	Women 15-45 yrs.	Recruitment rate	FP adopters	Women 15-45 yrs.	Recruitment rate	FP adopters	Women 15-45 yrs.	Recruitment rate	Total coverage
Villages less than 5 km													
1. Mazeras	5	81	6	3	81	4	3	81	4	4	81	5	5
2. Mazari	1	47	2	1	47	2	2	47	4	1	47	2	3
3. Dambara	4	55	7	2	55	4	1	55	2	1	55	2	4
4. Keriya	2	51	4	1	51	2	2	51	4	2	51	4	3
5. Sambari	3	62	5	2	62	3	3	62	5	4	62	6	5
6. Kota	1	50	2	1	50	2	1	50	2	2	50	4	3
7. Bissi	2	53	4	2	53	4	1	53	2	3	53	6	4
Total <5 km	**18**	**399**	**5**	**12**	**399**	**3**	**13**	**399**	**3**	**17**	**399**	**4**	**4**
Villages 5 km or more													
1. Basoro	1	53	2	1	53	2	2	53	4	2	53	4	4
2. Mwara	2	54	4	1	54	2	2	54	4	2	54	4	3
3. Banango	3	57	5	2	57	4	4	57	7	3	57	5	4
4. Hamissa	0	37	0	0	37	0	1	37	3	1	37	3	1
Total > 5km	**6**	**201**	**3**	**4**	**201**	**2**	**9**	**201**	**4**	**8**	**201**	**4**	**3**
Total per period	**24**	**600**	**4**	**16**	**600**	**3**	**22**	**600**	**4**	**25**	**600**	**4**	**4**

* Blank tables are located in Annex 2 at the end of the document.

In the health center, you might consider:

- ☑ Whether women are received politely and how long they wait for services;
- ☑ The perceived quality of the family planning (Do women believe they will benefit from the service? Do they believe their discussions about family planning will be confidential?); and
- ☑ The technical quality of the family planning service. (Are basic supplies available, such as family planning methods and IEC materials?)

There may be many other causes of low recruitment rates. These are only examples. To explore the possible causes and solutions, you should discuss the problem with other health staff, the management committee for the health center, your supervisor, district managers, and especially the community. Key sources of information in the community are village health workers and traditional birth attendants. During the meeting, use the data you have analyzed to explain the problem. Use the tables and graphs that you have made to illustrate the problem. Then hold a discussion about possible solutions.

Depending on the cause, these are steps you could take to improve the family planning recruitment rate:

- ☑ Improve the quality of the service by ensuring that all methods are available at all times and that women receive counseling on family planning.
- ☑ Organize the service differently. For example, combine the family planning service with vaccination days and provide family planning services every day that the health center is open.
- ☑ Avoid interruptions in inventory of contraceptives by ordering supplies earlier and collecting them to ensure that they do not run out.
- ☑ Improve the way in which women are treated at the health center. Communication is important. Make the woman feel welcome. Invite her to sit down and tell her that your conversation will be confidential. Encourage her to ask questions. Listen attentively to her concerns. Encourage her to come back again.
- ☑ Conduct IEC (information, education, and communication) activities in remote villages with the support of the management committee. During these sessions, emphasize the importance of family planning and its availability at the health center.
- ☑ Provide family planning in remote villages either with an advance strategy or by forming networks with the trained birth attendant to follow up.
- ☑ Get support from village representatives as well as women's groups and associations to promote family planning.

STEP 4: Finding a Solution

Hold a Meeting

To begin to address the problem, you may want to hold a meeting with other health workers or community members. These meetings should follow the steps indicated below:

Set Priorities

First, decide what is the most important and easiest step to take. Start with something that relates to your direct responsibilities in the health facility and then move on to the community. For example:

1. *If you have run out of essential supplies, such as pills or condoms:*

☑ **Order** supplies immediately and, in the future, order them on a regular basis to ensure that they arrive before you need them.

2. *If you have learned from your discussions in the community or in the health center that more women are likely to come for family planning if curative care was offered on the same day:*

☑ **Change** the way you provide family planning services **and let people know about it!**

3. *If women do not accept the importance of family planning:*

☑ **Find out why** and **learn** more about local customs and beliefs; and

☑ **Speak** to women who use the service and ask them why other women may not want to attend.

4. *If the population does not have enough information about the importance of family planning and all the services offered at the health center:*

☑ **Conduct** IEC activities in the villages with women's groups and associations, village representatives, and networks to increase local knowledge of the benefits of family planning and encourage utilization of these services.

5. *If some women say they cannot come to the health center because they live too far away or cannot find appropriate transportation:*

☑ **Form** a network of local groups to provide services such as IEC and identification of potential family planning users;

☑ **Supervise and support** the networks; and

☑ **Conduct outreach services** regularly in the villages.

6. *If cultural beliefs may be influencing women and preventing them from seeing the advantages of family planning:*

- ☑ **Respect** cultural differences, but **find out** more about them;
- ☑ **Choose** health messages that reflect local beliefs;
- ☑ **Collaborate** with local leaders to encourage them to accept the importance of family planning and promote it in their communities; and
- ☑ **Involve** women's groups and associations and others to help improve the family planning recruitment rate.

Only you and the community together can decide the best steps to take to address the problem in your community.

Develop an Action Plan

Work with other health staff or community members to make a plan. A plan is an agreed set of activities that will be conducted to address a problem or achieve a result. This plan might include improving the health service, setting a new target for the next few quarters, or introducing new activities to encourage more women to adopt family planning. The plan should list all the activities that will be done, when they should be completed, and who is responsible for completing them.

Action Plan for Improving Family Planning Recruitment Rate

Activities to improve family planning recruitment rate	Date to be completed?	Who is responsible?	Results achieved or not? Comments
Order family planning supplies	3/3/02	Esther	
Begin to provide family planning everyday	When family planning methods arrive	Esther	
Start IEC activities and promote outreach	21/3/02	Esther Management committee Women's group	

* Blank tables are located in Annex 2 at the end of the document.

Work with the Community

Next, continue to work with the community to implement the plan. While both the health workers and the community can take responsibility for implementing the action plan, the community may need your help to do their part.

Seek Support

If you need help, you could request support from the district health management team, a local NGO, local government, or other community groups. Teachers can help spread health messages. A local NGO might let you borrow essential supplies while you wait for yours to arrive. Solving health problems in the community is everyone's responsibility.

STEP 5: Monitoring the Results of the Action Plan

It is important to monitor what happens as a result of your action plan. Did your activities lead to an improvement in the family planning recruitment rate?

Fill In the Action Plan and Note the Results That Were Achieved

- ☑ **Assess** the same indicator after a period of time to see if there has been any change. Be sure to share that information with all those involved in identifying and addressing the problem.

If you reach the target or make any improvement:

- ☑ **Inform** the management committee and the community of this success, congratulate them, and thank them;
- ☑ **Ask** them to make an effort to maintain or even improve on this good result; and
- ☑ If necessary, **work** with the community to reach a higher target for the next period and define activities that will help you reach it.

If you do not reach the target, or your indicators remain low:

- ☑ **Identify** the villages in the area with the lowest participation; and
- ☑ **Hold** a meeting with the committee to help identify the causes for the low rate of family planning recruitment and find solutions.

The Results of Self-Evaluation

Esther constructed a table and a map that demonstrated that most family planning adopters were young women from villages near the health center. She also reviewed information on the residents of Mwara and visited the village to discuss their health problems. Esther discovered that several families from Mwara and the surrounding areas have come to the health center with problems that could be related to closely spaced pregnancies and large family size including anemia, infection, neonatal mortality, and childhood malnutrition. She relays this information to the women's organization in Mazeras and asks them to assist in spreading the message of the benefits of family planning to the women of Mwara. The women's organization and Esther requested resources from the health center management committee to develop an information campaign and regular outreach clinics for Mwara. The management committee was convinced of the severity of the problem and granted a small amount of funds to support this activity. Esther agrees to provide the committee, the village, and the woman's committee with regular reports of the family planning recruitment rate in Mwara as well as the entire catchment area of the health center.

Essential Service: Community Involvement in Health Care Management

The Story of Bonderi Health Center

The patients at the Bonderi health center have been grumbling for weeks about the poor service provided to them. The health staff have not been able to fill the majority of prescriptions because of medication stockouts at the health center. The village leaders who live a few hours' walk from the health center have even complained about the large number of measles, neonatal tetanus, and whooping cough cases in the past year and the deadly bouts of malaria afflicting the children. No one from the health center has even visited their area for several months, and no committee meeting has been held since the health center opened.

Because there has been no committee meeting, the chairman has neglected to make any plans for spending the funds earned at the center. No income was recorded, and there has been no audit of expenditure. Consequently, the health center can no longer

provide the most basic services or even pay the salaries of its workers. The health workers did encourage the committee to comply with the management recommendations made by the district health management team during its supervisory visits. However, when nothing happened, they finally threatened to resign if the situation did not improve.

Elements of Health Center Management

- Management committee meets regularly
- Problems are solved in consultation with the health staff and the community
- Action plans are made with goals, timetables, and assigned responsibilities
- Basic information on the functioning of the health center is reviewed regularly by the health committee

Ibrahim, the nurse, informed the committee chairman about the complaints they were receiving from the community. When Ibrahim consulted the register, he was unable to find any cases of measles, whooping cough, neonatal tetanus, or malaria reported in any village. The reason for this is that people from the villages located some distance from the health center had stopped going to the center due to the inadequate patient care and shortages of medication. Eventually, the chairman began to grasp the consequences of his poor management on the health of the community. Ibrahim and the committee chairman therefore visited these villages and confirmed the situation. Outstanding illnesses were treated, and Ibrahim and the committee chairman agreed to monitor the activities of the health center more closely and address management problems.

Reflection

This story shows that community support for managing the health services is critical to success. The health committees and the health center staff should work as a team to ensure that the health services run smoothly and that community needs are being met. As seen in Bonderi, community members complain as soon as the quality of care at the health center declines. Lack of attention to management and financing of services can often result in this type of poor performance at the health center and an increase in the occurrence of basic diseases. There are many reasons why the health committees do not function as they should:

- Sometimes the committee members are too busy to meet;
- The committee's responsibilities may not be clear;
- Some committee members may live far from the health center;
- Committee members may not have the skills to fulfill their management responsibilities; and
- The health workers and the committee members may not communicate regularly.

To reduce these constraints, health workers must work closely with the health committee and the community and try to improve service quality and encourage regular involvement of the health committee in the management of the health center.

Consider these questions:

- How does this story relate to your work at your health facility?
- Does the health committee for your area meet regularly?
- Does the health committee help manage the funds raised at your facility?
- Does the health committee consult with the community about their needs in relation to the health center?
- If the health committee is not actively involved in the work of the health center, do you know why?
- What can you do to encourage the health committee to contribute to the management of the health services?

To answer these questions, **begin** by looking at the data you collect at your health center and from the health management committee. Then follow the five steps of self-evaluation.

Self-Evaluation

Step 1: Choose and Define an Appropriate Indicator

From facility and health management committee data you can calculate indicators of the strengths and weaknesses of community involvement in health center management. There are two basic indicators that health workers can use to conduct self-evaluation of community involvement in health center management (see box). To begin, the health worker should select only one indicator and analyze it. Here we suggest starting with the first indicator in the box—**percentage of meetings held by the management committee**—which is an important indicator for assessing the effectiveness of community involvement in health center management.

Key Indicators for Community Involvement in Health Center Management

- Percentage of meetings held by the management committee
- Number of new activities undertaken by the health center staff with funds managed by the management committee

Define the Indicator for Percentage of Meetings Held by the Management Commitee

$$\frac{\text{Number of meetings held by the management committee } \textit{last quarter}}{\text{Number of meetings planned by the management committee } \textit{last quarter}} \times 100$$

REMEMBER! The numerator and the denominator can cover any period of time (quarter, year, etc.). However, the time period related to the numerator and the denominator in a single indicator must always be the same.

This indicator only measures the amount of effort made to hold meetings. It does not indicate attendance by committee members, the relevance of decisions made, the decision-making process used, and to what extent recommendations were implemented. Yet the committee meeting is an important factor in the successful management of health centers. Committee meetings offer opportunities to share information about community management and community health as well as chances to make decisions, formulate recommendations, and assess decisions and recommendations.

STEP 2: Analyze the Data (Calculate—Interpret—Present)

Calculate the Indicator

The Numerator

The numerator is calculated with information found in the records kept on the management committee.

Example: The management committee met once last quarter.

The Denominator

The denominator is calculated using information from the health center planning document.

Example: The management committee planned to meet once per month, or three times, last quarter.

Percentage of Meetings Held

Using examples from above, divide the numerator by the denominator and multiply by 100: (1/3) x 100 = 33%.

Interpret the Indicator: What Does this Indicator Tell You?

You can use this indicator to:

- **Describe the problem: Is it big or small?**
  - The committee met only one-third the number of times it planned to meet;
  - The committee is expected to meet one time each month (it missed two-thirds of its meetings for this quarter).

- **Compare the indicator with the target. Did you reach the target? Is community involvement in health center management adequate? Is it improving or becoming worse?**
  There are normally standards set for the number of meetings a management committee should hold per year. In this case, the target is 12, or 3 per quarter. Is your indicator for the last quarter higher or lower than the target? What does that tell you about your management committee and its role with respect to the health center? If the annual target was set at 100% for this year, what can you do to ensure that the frequency of meetings improves? Should you reconsider the target? Perhaps it was too high?

- **Does this problem occur more often at certain times of the year?**
  You may want to look back at the number of meetings held by the management committee over the past year. Perhaps there were fewer meetings during a particular time of the year due to harvests or rains? Perhaps it is unrealistic to expect the management committee to take a whole day to meet every month when it is time for the crops to be harvested? You may want to hold shorter meetings at a busy time of the year or meet with committee members individually.

Presenting the Data

It is sometimes helpful to make a picture with the data (a graph or table) to illustrate changes in meeting rates over time or to discover when meeting rates are highest or lowest. These pictures can be used to explain the data to others, such as members of the management committee, other community leaders, and your supervisors.

Making a Graph or Table

You can make a graph that shows the number of times the management committee meets over the year. For each quarter, you first make a bar that indicates how many meetings took place and then make a similar bar for the target, or number of meetings planned. From this graph, you can then tell whether the committee met as many times as expected. In addition, you can also determine if there are certain times of the year when holding a meeting appears to be more difficult.

Graph 1: Frequency of Committee Meetings

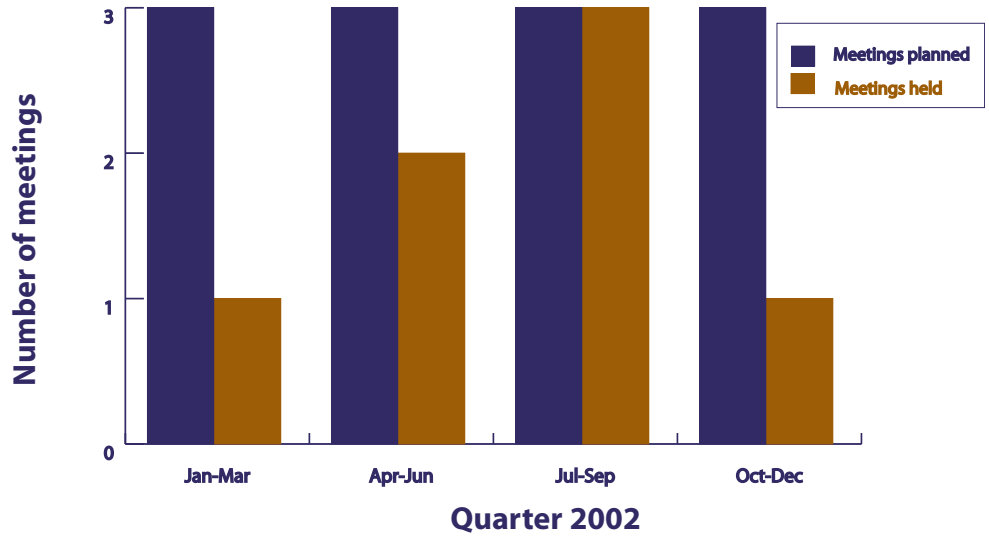


TABLE 1: Percentage of Management Committee Meetings Held Versus Target

Health center: Bonderi **Indicator:** Management committee meetings **Year:** 2002

Meetings	Planned	Held	Percentage
Quarter 1	3	1	33%
Quarter 2	3	2	66%
Quarter 3	3	3	100%
Quarter 4	3	1	33%
Total	**12**	**8**	**66%**

STEP 3: Assess the Situation

Now use the indicator, the graph, and the table **to assess the situation.**

The indicator tells you the overall size of the problem at a specific time. The percentage of management meetings held last quarter was 33%, and the target was 100%.

The graph tells you whether there is any seasonal pattern to the frequency of meetings.

Table 1 tells you the overall annual meeting rate compared to the target.

WHAT IF...

- ☑ If the overall percentage of management meetings is acceptable (getting closer, equal to, or exceeding the target), then you may decide that you do not need to make any additional effort to improve community involvement in health center management. Give this information to the community and tell them that things are going well.
- ☑ If the indicator is too low or not showing much improvement, you may want to consider possible causes and solutions.

The cause of low frequency of management meetings may be found in the management committee, in the health team, or in both.

In the health committee, you might consider:

- ☑ The distance members live from the health center and the time it takes to hold a meeting;
- ☑ The lack of information or understanding about the importance of the role of the management committee; and
- ☑ The lack of skills to perform the role of the management committee.

Among the health team, you might consider:

- ☑ Whether relations with the committee members are open and supportive;
- ☑ Whether the health team is keeping the committee well informed about the work of the health center by sharing reports and data with them;
- ☑ Whether the health staff actively participate in the management committee meetings;
- ☑ Whether the health staff show their appreciation for the work of the management committee; and
- ☑ If there are certain committee members who do not feel confident contributing to the meetings, such as women or the youth representatives.

There may be many other reasons that the management committee is not meeting regularly. These are only examples. To explore the possible causes and solutions, you should discuss the problem with other health staff, the management committee for the health center, your supervisor, district managers, and especially the management committee and the community. Key sources of information in the community are village leaders, village health workers, and teachers. During the meeting, use both the data that you have analyzed and the tables and graphs that you have made to explain and illustrate the problem. Then hold a discussion about possible solutions.

Depending on the cause, these are steps you could take to improve the frequency of management committee meetings:

- ☑ Ensure that all members of the management committee understand their roles and the importance of their contribution to the management of the health center.
- ☑ Ensure that committee members have the information they need to make decisions about the health center.
- ☑ Arrange for assistance if members of the committee are not comfortable working in accounting or reading reports.
- ☑ Suggest that the committee add additional members with specific skills as needed.
- ☑ Show your appreciation of the work of the committee by telling others in the community about the importance of their role.
- ☑ Attend all the committee meetings and make a good contribution to the discussion.
- ☑ Ensure that all members have a chance to contribute.

STEP 4: Finding a Solution

Hold a Meeting

To begin to address the problem, you may want to hold a meeting with other health workers or community members. These meetings should follow the steps indicated below.

Set Priorities

First, decide what is the most important and easiest step to take. Start with something that relates to your direct responsibilities in the health facility. Then move on to the community. For example:

1. *If you have not been keeping the management committee well informed about health center operations or problems:*

- ☑ **Prepare** information for the committee members;
- ☑ **Inform** them verbally about the health center; and
- ☑ **Give** them monthly targets and reports of service performance.

2. *If you have learned from your discussions in the community or in the health center that management committee members are more likely to attend meetings if they are held in the evening or on weekends:*

- ☑ **Change** the day or time of the meetings **and let people know about it!**

3. *If management committee members do not accept the importance of their role in health center management:*

- ☑ **Find out why and learn** more about their views of their role; and
- ☑ **Encourage** them to attend and explain what they can do to improve the health services and the health of people in the area.

4. *If members of the management committee do not have the skills or the knowledge to do their jobs:*

- ☑ **Conduct** a short training on the importance of primary health care, management and accounting procedures, and community involvement.

5. *If women or young people feel uncomfortable speaking during the meeting:*

- ☑ **Suggest** forming a sub-committee, which would give them specific tasks, or responsibilities; and
- ☑ **Encourage** the chairperson to promote participation among all members.

Only you and the community together can decide the best steps to take to address the problem in your community.

Develop an Action Plan

Work with other health staff or committee members to make a plan. A plan is an agreed set of activities that will be conducted to address a problem or achieve a result. This plan might include improving the format of meetings, setting a more reasonable target for the frequency of committee meetings, or planning a training to orient the management committee members to their role in supporting the health center. The plan should list all the activities that will be done, when they should be completed, and who is responsible for completing them.

Work with the Community

Next, continue to work with the committee to implement the plan. While both the health workers and the committee can take responsibility for implementing the action plan, the committee may need your help to do their part.

Seek Support

If you need help, you could request support from the district health management team, a local NGO, local government, or other community groups. Teachers can help encourage the management committee to take their role seriously. A local NGO might explain to the committee their experience with community involvement in health center management. Solving management problems in the health center is everyone's responsibility.

Action Plan for Improving Community Involvement in Health Center Management

Activities to improve the frequency of management committee meetings	Date to be completed?	Who is responsible?	Results achieved or not? Comments
Conduct orientation of management committee	3/3/02	Ibrahim Health center staff	
Reschedule meetings to the evening during harvest time	Starting at the beginning of the harvest	Committee chairman Ibrahim	
Provide monthly reports to the management committee	21/3/02	Ibrahim Health center staff	

* Blank tables are located in Annex 2 at the end of the document.

STEP 5: Monitoring the Results of the Action Plan

It is important to monitor what happens as a result of your action plan. Did your activities lead to an improvement in the frequency of management committee meetings?

Fill in the Action Plan and Note the Results that Were Achieved

- ☑ **Assess** the same indicator after a period of time to see if there has been any change.

Be sure to share that information with all those involved in identifying and addressing the problem.

If you reach the target or make any improvement:

- ☑ **Inform** the management committee and the community of this success, congratulate them, and thank them; and
- ☑ **Ask** them to make an effort to maintain or even improve on this good result.

- ☑ If necessary, **work** with the committee and the community to reach a higher target for the next period and define activities that will help you reach it.

If you do not reach the target or your indicator remains low:

- ☑ **Identify** the reasons why this might have happened; and
- ☑ **Hold** an emergency meeting with the committee and the community to help identify the causes and find solutions.

The Results of Self-Evaluation

Ibrahim made a table to show the management committee that they had only met 66% percent of the time proposed for meetings last year. He noted that meetings were apparently not held during harvest time and the period following the harvest, when people were involved in local holidays. Ibrahim suggested to the committee that they reduce the expected target for annual meetings to ten and hold only one long meeting just before the harvest begins to address any problems. At that time, the committee can make plans for the next few months, when most people are too busy to commit time to managing the health center. The committee members agreed to this plan. However, they also suggested that Ibrahim conduct an orientation for new members of the committee so they could understand their roles better. Ibrahim agreed to do this and thanked the committee for their interest in improving the support they provide to the health center.

Annexes

Annex 1:
Indicator Definitions

1. Coverage of Antenatal Care (Third Visit)

$$\frac{\text{Number of women who came to the health center for the third antenatal care visit}}{\text{Number of expected pregnancies in the health center catchment area}} \times 100$$

Limits

Women from the catchment population may go to another center for antenatal care, and women outside the catchment area may come to your health center. Thus, it is not always possible to assess coverage as accurately as could be accomplished with a survey.

Use

Use this indicator to periodically assess coverage and decide when and where to begin interventions to improve low coverage.

Reference Standard

Pregnant women represent approximately 5% of the total population. Although one cannot expect that all women will seek antenatal care (100%), a realistic target should be set based on the current rate of coverage. An increase of 5 to 10% per year could be contemplated if the current rate is 50% or less. The higher the current rate, the more difficult it is to improve it.

2. Coverage of Assisted Deliveries

$$\frac{\text{Number of deliveries in the health center catchment area handled by a qualified health professional or trained birth attendant}^{1}}{\text{Number of expected pregnancies in the health center catchment area}} \times 100$$

[1]A trained birth attendant refers to a local woman who has received training in the past year and is supported by the health center. Each health center should keep a list of all the trained birth attendants in the catchment area and the date of their most recent training.

Limits

Women from the catchment population may go to another center to deliver. Women outside the catchment area may come to the health center to deliver. Thus, it is not always possible to assess coverage as accurately as could be accomplished with a survey.

Use

Use this indicator to periodically assess coverage and decide when and where to begin interventions to improve low coverage.

Reference Standard and Target

Pregnant women represent approximately 5% of the total population. Although one cannot expect that all women will seek assisted delivery (100%), a realistic target should be set based on the current rate of coverage. An increase of 5 to 10% per year could be contemplated if the current rate is 50% or less. The higher the current rate, the more difficult it is to increase.

3. Coverage of First Preventive Infant Visit

$$\frac{\text{Number of children aged less than 8 weeks who attended the health facility for the first preventive infant visit}}{\text{Number of children aged 0-11 months present in the community}^{2}} \times 100$$

Limits

Children in the catchment area may be taken to another facility, and children outside the catchment area may attend this facility. The denominator will be inflated because it does not exclude neonatal deaths.

Use

Use this indicator to take account of the use of postnatal/well-baby services. It can also be used to assess the coverage of DPT1 at the correct age period, if you have information on immunization status for the same children. If coverage is low or declining, the data can encourage health workers to introduce new interventions.

[2]This denominator should reflect the total number of children surviving to 12 months (live births minus infant deaths). However, to ease calculation, the total number of children aged 0-11 months is taken as 4% of the population. Used consistently over time, this estimate will provide adequate evidence of change for decision making at the facility level.

Reference Standard

Children 0-11 months represent 4% of the population. Once you know the number of children born each year in your catchment population, you should set a target for postnatal/ well-baby checks. If there is a national- or district-level target for DPT1, this could serve as the target for first preventive infant visits as well.

4. Coverage of DPT3

$$\frac{\text{Number of children aged 0-11 months who received DPT3 vaccine}}{\text{Number of children aged 0-11 months in the catchment population}} \times 100$$

Limits

Children in the catchment population may go to another health center for immunization, and children living outside the catchment area may seek immunization at this facility. Unless individual patient records are kept, there is no way to know whether the interval between doses is correct. If intervals between doses and the correct age of administration are not verified with a card, one can only assume correct administration.

Use

Use this indicator to:

- Determine if the facility is reaching the immunization coverage target set for its catchment area;
- Follow changes in coverage over time;
- Determine whether children drop out between first and subsequent doses; and
- Determine when to start an intervention, such as IEC activities, community mobilization, etc., to improve low coverage.

Reference Standard

Children aged 0-11 months represent approximately 4% of the total population. National immunization program targets are often set at 80%. Each year you should set a realistic target based on the current rate of coverage in the catchment population, keeping in mind the importance of reaching the national target. You might consider setting an annual target that is 10% higher than the current coverage. The closer coverage is to 100%, the more difficult it is to increase it.

5. Family Planning Recruitment Rate

This indicator compares the number of women who adopt a method of family planning (contraception) and the number of women of child–bearing age.

$$\frac{\text{Number of women who used a family planning method for the first time}}{\text{Number of women of reproductive age (between the ages of 15 and 49 years)}} \times 100$$

Limits

Women in the catchment population may go to another place for family planning, and women living outside the catchment area may seek family planning from this facility. You may wish to collect this information from every place that family planning is available in your area (pharmacies, kiosks, etc.).

Unless the woman is asked whether this is first time that she has ever used family planning, women may be considered "new adopters" even if they have used family planning previously.

Use

Use this indicator to assess whether the family planning program is increasing the use of family planning among women who have never used family planning.

Reference Standard

Women of reproductive age represent 24% of the total population. The national contraceptive prevalence rate, which is often found in the DHS report, will indicate what proportion of this population is currently using a modern method of family planning. This number may be quite low in many developing countries. The family planning recruitment rate represents women who have adopted family planning for the first time. It is also likely to be quite low. For this indicator, you should set a target that reflects client behavior in your area.

6. Percentage of Meetings Held by the Management Committee

$$\frac{\text{Number of meetings held by the management committee}}{\text{Number of meetings planned by the management committee}} \times 100$$

Limits

This indicator only measures the amount of effort made to hold meetings. It does not indicate attendance by committee members, the relevance of decisions made, the decision-making process used, or to what extent recommendations were implemented. Yet it is an important factor of successful management of community-based health centers. Committee meetings offer opportunities to share information about community management and community health as well as opportunities to make decisions, formulate recommendations, and assess the results of action plans.

Use

Use this indicator to assess the management committee's commitment to assisting in the management of the health facility. In many countries, community-level health center management committees are expected to support and guide health service delivery and help health workers communicate with community members. This indicator can also be used to motivate committee members to improve their performance and fulfill their responsibilities to the health facility and other community members.

Some Suggestions for Additional Indicators

Name	Definition	Use
Antenatal Care		
Average number of antenatal visits by pregnant women	Number of antenatal visits to the health center / Number of pregnant women visiting the health center	Use this indicator to determine the extent to which pregnant women are making the recommended number of antenatal care visits
Coverage of tetanus toxoid vaccine	Number of women aged 15-49 receiving two doses of tetanus toxoid / Number of women aged 15-49	Use this indicator to assess performance of immunization programs and antenatal care
Percentage of time with a stockout of tetanus toxoid vaccine or other essential commodity in the last six months	Number of days when any commodity needed for antenatal care is not available in the health center in the past six months / Number of days in the past six months	Use this indicator to assess the quality of antenatal care (types of commodi-ties must be specified)

Some Suggestions for Additional Indicators (continued)

Name	Definition	Use
Delivery		
Percentage of villages located more than one hour by foot (5 km) served by a qualified health provider or trained birth attendant (who is supervised by the health center staff)	Number of villages located more than one hour by foot (5 km) served by a qualified health provider or trained birth attendant (who is supervised by the health center staff) / Number of villages in the catchment area	Use this indicator to assess access to attended delivery services
Percentage of time with a stockout of essential supplies for safe delivery in the past six months	Number of days when any commodity needed for safe delivery services is not available in the health center in the past six months / Number of days in the past six months	Use this indicator to assess the quality of delivery services (types of commodities must be specified)
Coverage of postnatal care	Total number of women visiting the health center or receiving a visit from a health worker within six weeks after delivery / Number of expected pregnancies	Use this indicator to assess the coverage of postnatal care

Some Suggestions for Additional Indicators (continued)

Name	Definition	Use
Preventive Child Health		
Coverage of DPT1 and OPV1	Number of children 0-11 months who have received one dose of DTP and OPV / Number of children aged 0-11 months in the catchment population	Use this indicator to assess performance of preventive infant care and immunization programs
Coverage of measles immunization	Number of children aged 11-23 months who have received one dose of measles vaccine / Number of children aged 11-23 months in the catchment population	Use this indicator to assess performance of preventive infant care and immunization programs

Some Suggestions for Additional Indicators (continued)

Name	Definition	Use
Child Health		
Coverage of OPV3	Number of children aged 0-11 months who have received three doses of polio vaccine / Number of children aged 0-11 months in the catchment population	Use this indicator to assess performance of preventive infant care and immunization programs
Immunization drop out rate	Number of children 0-11 months who have received DPT1 minus the number of children 0-11 months who have received DPT3 / Number of children 0-11 months who have received DPT1	Use this indicator to assess the extent to which children fail to return to complete their immunization schedule, continuity of service, and quality of care Like coverage, this indicator is most useful if one makes a cumulative calculation throughout the course of a year
Vaccine use/wastage	Number of doses of DPT vaccine used in a month / Number of children immunized with DPT vaccine in a month	Use this indicator to assess the extent to which specific contraceptive methods are being adopted

Some Suggestions for Additional Indicators (continued)

Name	Definition	Use
Family Planning		
New family planning adopters by method	Number of women who agree to use a particular contraceptive method for the first time in the past month / Number of women who agree to use a particular contraceptive method in the past month	Use this indicator to assess the extent to which specific contraceptive methods are being adopted

Annex 2:
Blank Tables

Reproduce these tables each month or quarter as needed.

TABLE A: Population Figures

Health center: _____ **Year:** _____

	Percent of total population	Number in your community
Total population of the catchment area (catchment population)	100%	
Total population of pregnant women in the catchment area	5%	
Total population of women of child-bearing age in the catchment area	24%	
Total population of children aged 0 to 11 months in the catchment area	4%	
Total population of children aged 12 to 23 months in the catchment area	4%	
Total population of children aged 0 to 35 months in the catchment area	11%	
Total population living within a range of 0 to 5 km of the health center	No formula	
Total population living farther than 5 km from the health center	No formula	

TABLE B : Village Population and Size of Target Groups

Health center :_____ **Year :** _____

Village	Total population	Pregnant women 5%	Women of child-bearing age 24%	Children 0-11 months 4%	Children 12-23 months 4%	Children 0-35 months 11%
Villages less than 5 km from the health center						
1.						
2.						
3.						
4.						
5.						
6.						
total <5 km						
Villages 5 km or more from the health center						
1.						
2.						
3.						
4.						
5.						
total > 5 km						
Total population						

TABLE C : Influential People in the Community

Health center :_____ **Year :** _____

Village	Names	Positions
Villages less than 5 km from the health center		
1.		
2.		
3.		
4.		
5.		
Villages 5 km or more from the health center		
1.		
2.		
3.		
4.		

TABLE D : Health Center Management Committee

Health center : _____ **Year :** _____

Member (name)	Function
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

TABLE 1: Tally Sheet of Essential Health Services by Quarter

Health center: _____ **Indicator:** _____ **Year:** _____

Village	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Villages less than 5 km from the health center					
1.					
2.					
3.					
4.					
5.					
6.					
Total <5 km					
Villages 5 km or more from the health center					
1.					
2.					
3.					
4.					
Total > 5 km					
Total by period					

TABLE 2: Coverage

Health center: _____ **Indicator:** _____

Target: _____ **Year:** _____

Village	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Total
	Visit	Target Population 1/4	Coverage rate	Visit	Target Population 1/4	Coverage rate	Visit	Target Population 1/4	Coverage rate	Visit	Target Population 1/4	Coverage rate	
Villages less than 5 km from the health center													
1.													
2.													
3.													
4.													
5.													
6.													
Villages 5 km or more from the health center													
1.													
2.													
3.													
4.													
Total > 5km													
Total per period													

TABLE 3: Percentage of Management Committee Meetings Held Versus Target

Health center : _____ **Indicator:** _____ **Year :** _____

Meetings	Planned	Held	Percentage
Quarter 1			
Quarter 2			
Quarter 3			
Quarter 4			
Total			

Action Plan For: _____

Activities for improving:	Date to be completed	Who is responsible?	Results achieved or not? Comments
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Annex 3:
Glossary: Words You Should Know

In this annex, we explain some concepts and terms that are used in this guide.

Analysis: The process of studying data to extract information.

Census: A measurement of all the individuals in a population.

Coverage: The proportion of the target group that has received a service.

Data: A set of observations collected through monitoring and research activities. Information is derived from data through analysis.

Denominator: The lower number of a fraction or indicator that represents the total population being studied. For example, when calculating an indicator of measles immunization coverage, the denominator represents the total number of children in the health center catchment area aged 11-23 months.

Evaluation: The systematic application of research methods for assessing the design, implementation, and utility of programs. Evaluation helps us use research methods to judge and improve the way in which services are conducted.

Indicator: An indicator is a unit of information measured over time that documents changes in a specific condition. A given goal, objective, or program can have multiple indicators. A good indicator meets the criteria of being measurable, precise, consistent, and sensitive. An indicator is often expressed as a fraction consisting of a numerator and a denominator. For example, weight-for-age is an indicator of a child's nutritional status, and immunization coverage is an indicator of immunization program performance. Most indicators consist of one number (the **numerator**) divided by another number (the **denominator**). Indicators are often calculated by counting what was achieved and dividing it by the total target population.

Monitoring: The periodic collection and evaluation of data relative to stated project or program goals, objectives, and activities. Monitoring occurs more frequently than evaluation and is used to assess progress of a program or activity and make strategic changes as needed. The self-evaluation approach promoted in this guide is a type of monitoring.

Numerator: The numerator is the upper number of a fraction or indicator that represents the number of people in the study population who possess a certain characteristic of interest. For example, when calculating an indicator of measles immunization coverage, the numerator represents the total number of children in the health center catchment area aged 11-23 months who have been immunized.

Objective: A specific statement detailing the desired accomplishment(s) or outcome(s) of a program or activity. If the program is well conceptualized and well designed, realization of a project's objective(s) should lead to the fulfillment of the project's goal(s). A good objective meets the criteria of being impact oriented, measurable, time limited, specific, and practical.

Target: A number or an indicator that is the same, higher, or lower than the current indicator and represents a goal to be achieved over a specified period of time.

Target group: Specific groups of people designated to receive an essential health service, such as pregnant women.

Annex 4:
Help Section

Self-Evaluation

Question: How Often Should I Conduct Self-Evaluation?

At the beginning you might consider conducting self-evaluation each quarter using only one or two indicators. As you become more comfortable with self-evaluation, you may wish to calculate one or two additional indicators each quarter. Most indicators should not be assessed more than once per quarter.

It may not be possible to develop and carry out action plans for every service that you assess in your self-evaluation. Once you have calculated a few indicators, you may wish to meet with supervisors or committee members and decide which service requires special attention. For example, both the first antenatal visit and immunization coverage indicators may be low, but if measles outbreaks are occurring often in your community, you may choose to address low immunization coverage first. Calculating indicators should help you prioritize your activities. Then you can go on with the next steps of self-evaluation.

Targets

Question: What Is a Target?

A target is a number or an indicator that is the same, higher, or lower than the current indicator and represents a goal to be achieved over a specified period of time.

Question: Why Should Targets Be Used?

Targets help health workers set a goal for improving the coverage and quality of the health services they provide to the community. By setting targets, health workers are also encouraged to measure their progress towards reaching a goal. Without a target and regular self-evaluation, you may not know if your service has improved, worsened, or stayed the same.

Question: How Are Targets Set?

There are two parts to target setting. One part is determining the goal (e.g., increase immunization coverage to 65%). The other part is choosing a time period for achieving that goal (e.g., six months, one year, two years, etc.). For example, improving the use of antenatal services is a common objective for health centers. When trying to define a plan of action for improving the service, health workers should choose a realistic, but challenging target and an appropriate time period for reaching a goal. It might be a long time period or a short one. As each time coverage is assessed, it should be compared to the target.

In choosing a target, review current coverage in your area or district as well as regional and, perhaps, national coverage and targets. The target for your health facility should be based on your assessment of your area, the priority given to this service, and the amount of time you think it will take to reach a specific coverage or quality target. In general, a target should be high enough to be challenging, but not too high so as to discourage health workers.

Question: When Should a Target Be Changed?

If you have reached the target, it is time to set a new goal. Your goal may be to maintain a certain level of coverage, or it may be to increase or decrease it. If you do not reach your target in the time period specified, try and determine the reasons why. Was the target too high (unrealistic)? Did you have a gap in service delivery (shortages of vaccines)? Determine whether you should change the target to be more realistic or work harder to achieve the target next period.

Question: What Is the Difference between a Target and the Target Population?

The target population is the group of people who are the primary users of a certain health service. For example, women of child-bearing age are the target population for tetanus toxoid vaccination. A target represents a certain number of people or a certain percentage of the target population who are expected to use a service.

Question: Why Is It Preferable to Use a Percentage As a Target Rather Than an Absolute Number?

Use of absolute numbers or measures allows one to determine how many people have received a particular service. However, it is often more informative to understand what proportion of the total target population has been covered by a particular service. For example, if the number of children receiving immunization has grown from 100 to 150 in six months, one knows that coverage has improved, but does not know what portion of the target population has not yet been reached. 150 immunized could represent either 80% or only 25% of the target population.

If the *percentage* of children covered by immunization services increases from 50 to 70% in six months, one knows that the program is reaching a larger portion of the target population and that 30% of the population still requires immunization.

Question: Should One Include Nomadic Populations in Self-Evaluation?

In many African communities, families travel from one place to another during different seasons. Sometimes they live in the catchment area of the health center, and sometimes they live elsewhere. When people who do not reside in the health center catchment area for most of the year seek services, it is important to indicate their status as part-time residents when the health worker records information in the register or on the card. Normally these people should not be included in monthly or quarterly calculations of service coverage (i.e., they should not be counted in the numerator or the denominator). However, if health workers want to understand the influence of these people on service coverage or estimate supply needs, the health worker could make two calculations each month, one that excludes the part-time residents and one that includes them.

Graphs

Question: How Does One Construct and Read a Line Graph?

The horizontal line on a line graph is called the x-axis, and the vertical line is called the y-axis. Each axis represents a certain type of number. For example, in the graph on cumulative immunization coverage on page 79, the x-axis represents time (quarters of the year), and the y-axis represents the number of children immunized. When you make a line graph, you take data on both time and numbers of children, combine it, and place a marker or dot on the graph to represent that data. In the first quarter of 1998, 60 children received DPT3. The first dot represents the point where 60 on the y-axis intersects with the first quarter on the x-axis.

Each quarter, you will have new data on the number of children immunized with DPT3. In a cumulative coverage graph, you add the total number of immunizations for the second quarter to that of the first, and so on for the rest of the year. When you connect the dots with a line, you can see whether the coverage is increasing slowly or rapidly, or whether it is staying the same. If you also plot markers for your target, you can compare the target line with the line representing actual coverage to determine if you are reaching the quarterly and overall targets.

Question: How Does One Construct and Read a Bar Chart?

Constructing a bar chart is similar to constructing a line graph. You put a marker across from points on the x- and y-axes that represent the number of children immunized with DPT3 during a specific quarter. Then you shade or color the space between the marker and the x-axis to make a bar. A similar marker and shaded bar is made for the expected target. This process is repeated for each quarter until the year is complete.

To read the graph, you can compare the height of the actual coverage bar with that of the target. If the height of the bar for actual coverage is higher than the bar for target coverage, then you have exceeded your target for this quarter. If it is lower, then you have not reached your target for that quarter. When you compare your performance in different quarters, you may find that you have done better in some quarters than in others. You may want to discover why this happened. It is helpful, however, to look at quarterly and cumulative coverage together because this will give you a more complete picture of immunization activities.

When you are showing your graphs to the management committee or others who are not used to reading graphs, it will be helpful to give them a clear explanation about graphs before explaining the results of your self-evaluation.

Question: What Is a Demographic and Health Survey (DHS)?

The DHS is a nationally representative survey or sample of a group of people that seeks to answer questions about their characteristics, behavior, and use of health facilities. The results are published in a large report that is used for national-level planning in health and population programs. DHS surveys often report on specific regions of the country. However, the data is often not reliable enough to draw conclusions about different districts, due to the sampling approach and the limited number of people interviewed in any given district. Data from the DHS provide a standard against which to assess local indicators. You may wish to seek assistance from your supervisor or district health management team about the results of the latest DHS and their relationship to the indicators reported on your facility, district, or region.

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