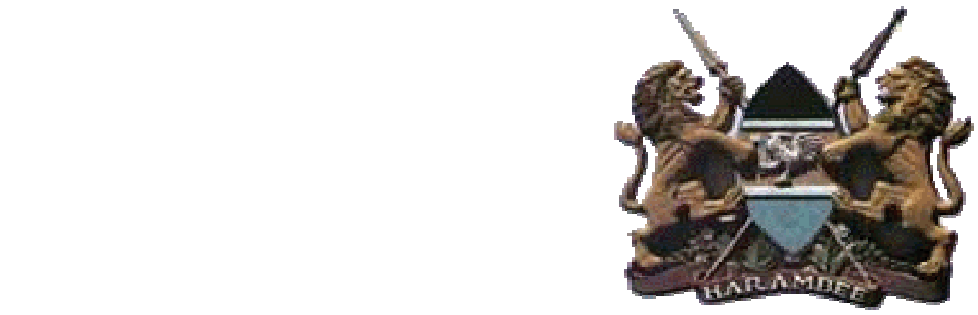

Division of Reproductive Health
Ministry of Health, Kenya

Training Module On Data for Decision-Making

May 2007
Nairobi, Kenya

Division of Reproductive Health, MOH, Kenya and
Family Health International (FHI)

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Dr Josephine Kibaru and Dr Marsden Solomon and Mrs. Anne Njeru from the Division of Reproductive health were instrumental in the conceptualization and review of many drafts of the manual.

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FOREWARD

The design, implementation and evaluation of effective reproductive health programs require adequate data for decision-making. The utilisation of data for decision-making starts at project conceptualization and design, using different sources such as baseline surveys or needs assessments. Through data collection and utilization, the program is able to evaluate its performance and cost; track daily changes in resource inputs, outputs, and use of services; inform management whether program implementation is being conducted as planned; and, identify problems and unexpected results, if any.

The publication of Data for Decision Making Trainers Manual fills therefore an enormous need in Kenya's Reproductive Health program. With its user friendly but thorough approach, this trainer's manual makes data collectors and users aware of the complexities, advantages, and uses of timely, accurate and reliable data. The five units in the manual cover a wide range of topics and guide the trainer through every phase of data collection, analysis and utilization. It addresses the issues data collectors and users may face at every stage of the process. The manual also provides useful examples and case studies where relevant. It is systematically organized and attractively presented, enabling trainers to access information that responds to trainees' need and interests.

This is an invaluable module for trainers, programme managers and researchers working in the Division of Reproductive Health (DRH) in the Ministry of Health. Currently, these staff members work closely and collaborate in various capacities with many organizations, donors, and institutions who are conducting RH research in the country. By providing them with research skills, they will be able to guide, direct and assure quality research is being undertaken using sound scientific and ethical procedures.

This training manual is also useful for front-line health workers, field workers and service providers. At each level of the program, whether at the community, facility or central level, data is vital tool for decision making. Acquiring skills to enable health workers to make informed program and service delivery decisions is crucial for effective delivery of health services.

I hope readers will find this training manual timely, informative, and useful for reproductive health research and ultimately service delivery in Kenya.

Dr Josephine Kibaru
Head, Division of Reproductive Health
Ministry of Health

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GLOSSARY

Advocacy	The act or process of supporting a cause or proposal.
Aggregate (adj.)	Taking all units as a whole.
Aggregate (v.)	To collect or gather into a mass or whole.
Analysis	Identification of and explanations for patterns of information collected to provide answers to research questions being studied.
Antenatal Care	Percentage of pregnant women attending ANC at least once. This visit should be a booking visit where all initial procedures relating to assessing/preparing a woman for pregnancy and delivery occur.
Assessment	A systematic process of gathering information, analyzing it and then making a judgment.
Average	The sum of all, divided by the total number of cases. Also called the arithmetic mean.
Baseline Survey	A structured way of collecting factual information from multiple respondents about the state of a population before an intervention begins.
Biased Sample	A sample that is not representative of the population from which it is taken.
Calculate	To determine by mathematical process.
Catchment Area	The geographic territory of a service, programme or facility.
Checklist	A list that enumerates key features of a setting or process that users can check off during observations.
Client	An individual who receives services or participates in a programme.
Couple Year Protection (CYP)	Percentage of women in the community protected by “modern” family planning methods.
Coverage	The extent to which those who need something are actually receiving it.

Data	Facts and information collected for a special purpose.
Data entry	The process of entering data into a computer programme prior to analysis.
Descriptive Statistics	Analysis of the general characteristics of a set of data through such measures as frequencies, counts, averages and percentages.
Disaggregate	To separate into parts.
Drop out	One who abandons an attempt, activity or chosen path, such as schooling or attendance at a family planning facility for services.
Exit Interview	A conversation designed to produce feedback from clients after they have participated in a programme activity or received a programme service.
Facility	A place, such as a hospital or clinic, that is built, installed or established to serve a particular purpose.
Flow Chart	A graphic design that shows the separate parts of a larger whole and the ways they are linked to one another.
Frequency	A univariate (single variable) measure used to summarize a number of observations, for example, the number of women who attend a particular clinic for family planning services.
Goal	A description of the overall impact expected of a programme. A goal identifies the specific situation to be changed, defines the direction and emphasis of change and (where appropriate) sets priorities.
Health Information System	A paper based information system that used a combination of forms, procedures and analytical tools to convert routine anonymous data into useful management information that can be used by programme and facility managers.
Indicator	A measurable statement of programme objectives and activities. It may be expressed in numeric or non-

	numeric terms, and express quantitative or qualitative factors.
Infant Mortality Rate	The death rate during the first year of life.
Intervention	An activity that aims to maintain or alter the condition of those it reaches.
Interview	An intensive one on one exchange.
Line graph	A drawing that connects points on a graph, using straight lines.
Management Information System	A framework set up to systematically compile and maintain programme information.
Mean	The mathematical average of series of numbers (the sum of all scores divided by the number of cases).
Measure	To examine the extent or quantity of something by comparing it with a fixed unit or object of known size.
Morbidity	The relative incidence of a disease.
Mortality	The number of deaths in a given time or place.
Objective	A measurable statement of programme outcomes.
Percentage	The number of people with a particular characteristic in a group, divided by the total number in the group and multiplied by 100.
Pie Chart	A circular chart used to show the different parts of a whole in relation to one another.
Programme Outcome	The specific result that a programme hopes to achieve.
Proportion	A frequency divided by the total number of cases. The numerator is a portion of the total, the denominator is the total number of cases.
Provider	An individual who gives or provides a service, such as a doctor, nurse or family planning service provider.

Qualitative	Non numeric data or indicators that are expressed in words.
Quantitative	Measured or concerned with amount or quantity, and expressed in numbers or quantities.
Random Sample	Selection of members of a population or other items in such a way that everyone or everything has an equal chance of being included.
Reliability	The extent to which a survey estimate differs from the true value of an indicator due to random error.
Reproductive Health	The health and well being of women and men in terms of pregnancy, birth and related conditions, diseases and illnesses.
Sample	A part of a whole selected to represent that whole.
Sampling	The process and techniques of studying part of something to gain information about the whole, like the population.
Secondary Data	Data that are already available through recent surveys, qualitative community research or administrative reports.
Service Delivery	The different components or operations offered to clients, such as training, clinical services, counseling education or commodities.
Service Statistics	Programme information usually compiled in the form of counts that provide a quantitative description of programme activities undertaken, such as number of events or number of clients.
Social Marketing	A process of promoting or selling ideas, products or values that contribute to improvements in the health or social welfare of a group or population.
Statistics	Numerical facts that are systematically collected, organized and presented in a special way.
Strategic Plan	Longer-term plans that allow an organization to visualize where it wants to be in three to five years (even 10 years) and how it will get there.

Survey	An instrument that collects factual information from multiple respondents.
Table	A graphic presentation of facts and numbers in an orderly fashion, usually in columns and rows, so that they can be easily understood.
Tally Sheet	A list that enumerates key features of a setting or process that users can check off during an observation; a checklist.
Target	The level of an objective that one plans to achieve within a stated time.
Total Fertility Rate	The average number of children a woman is likely to have in her reproductive life time.
Validity	The ability of a study design to measure the true impact of a programme or intervention.
Vision	An over-riding idea of what the organization or project should be. A vision must be sufficiently clear and concise so that everyone in the organization or project understands it and can buy into it with passion.
Work Plan	A document at a project or individual level that shows the objectives of individual units and the activities that must be performed to meet those objectives.

TRAINING MODULE ON
DATA FOR DECISION MAKING

INTRODUCTION

Welcome to this training module about data for decision-making. The Division of Reproductive Health (DRH), in partnership with Family Health International (FHI), has realized the need to strengthen the capacity of DRH staff to collect and utilize data more effectively for strategic planning, implementing, managing, and evaluating reproductive health programmes in a decentralized environment. The use of evidence-based data, therefore, best supports timely and relevant decision-making.

TRAINING MODULE OBJECTIVES

The training module on Data for Decision Making has the following general objectives:

- Equipping trainers/data collectors with knowledge and skills on the collection, storage, retrieval, and use of reproductive health data for programme management

- Equipping trainers/data collectors with content and skills to train others on the collection, storage, retrieval, and use of data for programme management

- Motivating trainers/data collectors to appreciate the value and importance of timely and accurate data for managers and policy-makers

- Providing instruction and skills on how to interpret and present data for managers and policy-makers

Write these on a manila card, newsprint, or chalkboard or use a transparency and overhead projector or any other appropriate material to share them with your colleagues and trainees.

Some Assumptions

The *Training Module on Data for Decision Making* has been designed with several assumptions in mind, including the following:

- Policy-makers and programme managers can make well- informed decisions when they have complete, accurate, and unbiased information

- Data collectors need opportunities to gain the appropriate information and skills about collecting, analyzing, synthesizing and maintaining evidence-based data for decision-making

- Experiential learning, including role-plays, games, and songs, is an excellent way to learn

One of the most crucial assumptions that this curriculum makes is about you, the facilitator. You are the key to success for this intervention. You should:

- Like working with people

- Be knowledgeable about reproductive health and health information systems

- Be respectful of others

- Be enthusiastic about teaching this module

- Have good communication and group facilitation skills

- Be nonjudgmental

- Be comfortable discussing issues related to reproductive health and sensitive information

- Be proficient at using a variety of experiential programme techniques

Feel free to add questions to exercises or alter the sessions in other appropriate ways to make the content more relevant to your participants.

If you are training people who have little experience with this subject matter, you are advised to present the training in its entirety. If trainees have had some exposure to this type of information, conduct a needs assessment to determine what information they have and what gaps exist. Then, select the topics that best fulfill their training needs.

HOW TO USE THE TRAINING MODULE

This module is primarily intended for use by trainers and programme managers for the staff of the Division of Reproductive Health as well as by family planning and reproductive health organizations. However, it can also be used to train front-line health workers, field workers and service providers. It has been written specifically for the Kenyan context. You may need to adapt it to suit the needs of the trainees or learners in your organization

In total, the training module has five units. Each unit has several sessions. All the sessions have experiential activities that address the topic's objectives in a variety of interesting ways. Each unit specifies the purpose, the materials needed, approximate time required, and the steps to follow. All the units specify the preparation that must be done prior to the session. Some sessions have handouts for the trainees.

To design and conduct a programme tailored to the needs of your colleagues you need to do the following:

- Familiarize yourself with the entire training module. In particular, note that one unit has several sessions and that each new session begins on a new page
- The time allocated to each session is only a guide. Adjust the time according to the needs of the trainees
- Prepare handouts or other materials that may be needed before the session begins. If guest speakers are required, make sure they are invited well ahead of time and have been properly briefed about what you expect of them
- Introduce each unit by presenting the unit’s objectives

FACILITATION APPROACHES AND TECHNIQUES

Experiential Education

Experiential activities in this manual are designed to help trainees gain information, examine attitudes, and practise skills. There are structured exercises in which the trainees do something and then process the experience together, generalizing about what they learned and, ideally, attempting to see how the information would apply to their work. Experiential learning is participant-centred. While your role as facilitator is crucial, creating the learning experience is ultimately a group responsibility.

One way to make this training successful is to involve the trainees in their own education. Here are some tips for conducting experiential activities:

- Review the unit and activities thoroughly until you feel comfortable with the steps
- If possible, do a 'dry-run' before introducing a new activity to the group
- Consider the learning points of the activity and prepare questions to trigger discussion
- Keep an eye on the clock so there is sufficient time for group sharing and discussion
- Remember. doing the activity is fun, but it is in processing the experience that learning takes place

Specific Techniques

The training module employs a variety of techniques, some of which you may be more comfortable with than others. Do not be afraid to try new techniques. There are many different kinds of activities, including role-plays, games, values clarification and voting, brainstorming, small group work, problem-solving scenarios, and presentations by guest speakers. Here is a brief description of some training techniques.

Visualisation in Participatory Programmes (VIPP): VIPP involves the use of different shapes of coloured cards so that everything that is done during a session, either individually or collectively can be visualised, processed, synthesized, and shared. VIPP encourages everyone to participate and is based on well-founded theories of adult learning.

Lecturette: A lecturette is a short, (10-15 minutes) structured and orderly presentation of information delivered by a facilitator. A lecturette can be used to impart knowledge or introduce skills. A lecturette that allows for an exchange between you and the trainees is usually more effective.

Discussions: Discussions are useful in both large and small groups. Small groups may offer shy or less verbal learners more of an opportunity to speak. During group discussions, facilitator should try to control the flow of conversation if necessary.

Role-plays: Role-plays are short dramas in which learners can experience how someone might feel in a situation, try out new skills, and learn from each other. Role-playing in small groups or pairs is usually

less threatening for learners and allows more people a chance to participate. Ask for volunteers, because many people are embarrassed or uncomfortable acting in front of a large group. After the role-play, be sure to declare the role-play over and ask questions about it. Throughout the handbook there are examples of one-minute role-plays and ten-minute dramas that you can use either as part of the session you are facilitating or as exercises or energizers.

Case studies/scenarios: Case studies are stories, either fictional or true, that put information into context by describing a problem and discussing how it might be or how it was resolved. Feel free to adapt any scenarios in the handbook to better suit your trainees. Asking the trainees to come up with case studies or scenarios, sometimes as an assignment, is a good way to ensure realistic situations and language.

Brainstorming: Brainstorming is a free-flowing exchange of ideas on a given topic. You ask a question, pose a problem, or raise an issue, and learners suggest answers or ideas. Write all suggestions down for the group to see. No editorial comment or criticism is allowed. When the brainstorming is finished, the group evaluates the ideas together, perhaps to identify those they consider most useful or to categorize them in some helpful way.

Guest speakers: Guest speakers can bring a topic alive by discussing personal experiences and sharing their feelings. You need to identify guest speakers and invite them in early enough to ensure they can participate in the workshop. Make sure they are dynamic, knowledgeable about the topic, and comfortable speaking in front of an audience. Prepare the trainees for the speaker's presentation so that they know what to expect, are ready with questions, and act respectfully. Prepare the speaker with information about the group and a clear understanding of your expectations.

Games and exercises: Games and exercises are very much a part of this training. They include such things as introductions, energizers, and warm-ups. These games and exercises enhance the amount and the quality of interaction in the group. Energizers and warm-ups can be done just before the start of a session, immediately before or after a break. or just before the end of the day's sessions. You can use the ones that are described here or substitute others.

EVALUATION OF TRAINING SESSIONS

There are several ways the training should be evaluated.

Moodmeter: At the beginning of the topic, prepare a chart called 'The Moodmeter.' The moodmeter is an instrument for the subjective measurement of the mood and atmosphere of the group. It is not directly related to the content of the workshop.

Prepare a chart on a newsprint with the total number of days or sessions written in a horizontal line. In a column, draw at least three different mood symbols, for example, faces showing happiness, indifference, or sadness, frustration or anger. Alternatively, temperature indicators such as 15/25/35 degrees can be used. Ask the trainees to place an "X" or a dot in line with the emotion they are feeling at the end of the day or the session. You can draw a line through the dots or "Xs" which reflects the group feeling or the ups and downs of the group. This could be used to discuss the energy level of the group or possible success or dissatisfaction.

Flash: Stand in a circle with the participants. Ask a direct question to the group, for example, "Tell me how you feel about the workshop today?" or "What two new things did you learn today?" Ask each person to give a personal opinion in a very short statement, going round the circle. It is called "flash" because of the speed in which opinions are given. It should not take more than 30 seconds for each person. No discussion is allowed as the flash is going on.

Your role is always to ask the opinion of the trainees and permit a variety of ideas to be stated. However, you should remind the group to be constructive in their criticism and to look for ways to improve the training.

ORGANIZING FOR A TRAINING COURSE

Here is a list of tips you can follow when organizing for and facilitating a training course.

Before the training begins…

1. Obtain a full list of participants.
2. Finalise times, venues and dates.
3. Visit the training venue/site before the training.
4. Get necessary approval.
5. Prepare a budget.
6. Organize workshop files.
7. Make tentative board and lodging arrangements.
8. Arrange programme agenda.
9. Identify/invite resource persons and special guests.
10. Send invitations to speakers, resource persons, and special guests.
11. Send confirmation letters to participants with programme summary and arrangements information.
12. Order and prepare certificates.
13. Arrange for equipment by reviewing session content to identify what is needed and when it is needed. This includes projectors, models, posters, video equipment.
14. Prepare participant folders with name tags, welcome letter, programme schedule, participant list, pen and paper.
15. Arrange to photocopy all handouts that are going to be required during the training workshop.
16. Ensure that you have all the required newsprints, index cards, the training manual and a newsprint stand.
17. Ensure that you read the reference documents accompanying the training modules to prepare yourself for conducting the training, including additional information materials in the appendix.
18. Confirm room allocations (accommodation), access to toilets, and food/catering arrangements.
19. Ensure that you have nametags, an attendance register, felt pens and masking tape.
20. Arrange seating so that all participants can see each other (semi-circle) and make sure that you can walk around during your presentation, so that you can interact with your participants.
21. Practice your presentations if you think it is necessary. Arrive 30 minutes prior to the start of the training workshop. Set up the room and organize all the tools that you'll require for the day.
22. Ensure that you are totally prepared for each session.
23. If you feel the need to practice certain sessions, make use of a mirror and practice.

During the training…

1. Arrive a few minutes prior to the start of the workshop. Check the room and organize any equipment that is needed for the day.
2. Ensure that you are totally prepared for each session.
3. Greet and establish rapport.
4. State the topic/objectives is important to set the stage.
5. Write on the board/newsprint. Your handwriting should be legible and in big enough letters.
6. Explain in a simple, clear and concise way.
7. Ask simple, clear questions.
8. Distribute and re-direct questions to all participants.
9. Respect and appreciate that adult learners have experience and knowledge that can enhance the learning process.
10. Be knowledgeable on the subject matter. Prepare in advance.
11. Your voice should be clear, varied and audible.
12. Use exercises and energizers to keep the class active.
13. Sum up the session by repeating the main points covered.
14. Direct class activities to ensure learning within the allocated time, and manage disruptive elements.
15. Answer questions as they are asked. Give short and clear answers or throw the question back to the participants.
16. Give examples to clarify information and increase understanding.
17. Use illustrations appropriately to facilitate learning.
18. Keep to the allocated time. Do not go overtime, if possible.
19. Paraphrase statement and questions if necessary.
20. Encourage and reward participants for good answers by using encouragers, e.g., saying ‘thank you’, ‘ehe…’, ‘Yeah’, nodding, etc.
21. Facilitation/learning should be fun.
22. Reach consensus with the participants instead of being too directive.
23. Keep eye contact with participants to check the mood of the class and individual attention.
24. Be economical with paper and other facilitation material.
25. Encourage participants to participate fully. Give compliments when they do well, allow all participants to ask or answer questions, do not discourage participants in any way.
26. Facilitator and participants should have a sense of humour, while maintaining seriousness for the task at hand.
27. Maintain workshop files
28. Prepare participant address/contact list.

After the training…

1. Meet with staff to discuss successes and problems and give general feedback.
2. Send thank you letters to all those who helped with the programme.
3. Complete or revise/edit manuals for trainers.
4. Tabulate evaluation results.
5. Draft, edit and reproduce final report and recommendations.
6. Disseminate final report.

WORKSHOP AGENDA

SESSION TOPIC	TOPIC LEARNING OBJECTIVE	CONTENT	SESSION PLAN			MATERIALS REQUIRED
			Session	**Activity**	**Timing**	
Unit 1: **Using Data for Decision-Making**	By the end of this unit, trainees should be able to: • Describe how a decentralized District Health Information System works • Explain the information cycle • Describe the five stages of the cycle of data for decision making • Distinguish between decision making with and without data • Describe LMIS • State the importance of LMIS • Describe the three activities that happen to supplies in a logistics system • Identify the benefits of applying logistics in health management	**A. The District Health Information System** - What is data, information, decision-making and logistics? - What is a DHIS? - The six epidemiological questions that a DHIS answers - Other information that program managers and the DHIS need in order to make effective decisions - The principles of the DHIS B. **Health commodities logistics.** • Introduction to health commodities logistics • Definition of LMIS - Role of LMIS in ensuring the six rights - Importance of LMIS - Activities that happen to supplies in a logistics system - Benefits of logistics in Health Management System **C. The Information Cycle** - The elements in the information cycle - The purpose of the Information Cycle - The types of data routinely collected at facility level - Other types of program related data that they should collect - Phases and the sub phases of the information cycle	The District Health Information System Logistics Management Information System (LMIS) The Information Cycle		(30-45 minutes) (120 minutes) (45 minutes)	• Flip chart paper and markers or • Board and chalk • Masking tape • Paper, pens, VIPP cards • Transparencies • Handouts

SESSION TOPIC	TOPIC LEARNING OBJECTIVE	CONTENT	SESSION PLAN			MATERIALS REQUIRED
			Session	**Activity**	**Timing**	
Unit 1 (continued): **Using Data for Decision - Making**		**D. The Cycle of Data for Decision-Making** - Concepts of decision making - The decision making cycle and the importance of each step influencing the next - The cycle of data for decision-making - The relationship between the components of the programme management cycle - Ways that data can be used to make a strong point to a donor **E. Making Informed and Uninformed Decisions**	The Cycle for Data for Decision-Making Making Informed and Uninformed Decisions		(40 minutes) (45 minutes)	
Unit 2: **Why Using Data to Make Decisions is Powerful**	By the end of this unit, trainees should be able to: • Discuss why using data to make decisions is powerful • Explain why local decisions should be compatible with national goals • Describe the national reproductive health programme in Kenya	**A. Evidence versus Intuition** - Informed decisions and those arrived at through intuition - List and consider examples of informed & uniformed decisions that have been made in their organisations or that they know - The negative effects of uninformed decisions or those made by intuition - The importance of using data for making informed and strategic programmatic decisions	Evidence versus Intuition		(60 minutes)	• Flip chart paper and markers or • Board and chalk • Masking tape • Paper, pens, VIPP cards • Transparencies • Handouts

SESSION TOPIC	TOPIC LEARNING OBJECTIVE	CONTENT	SESSION PLAN			MATERIALS REQUIRED
			Session	Activity	Timing	
Unit 2 (continued): **Why Using Data to Make Decisions is Powerful**		**B. The Big Picture-Where Does Your Organisation Fit In and How Well Are You Doing?** - The importance of maintaining one's perspective of how the work of one's programme fits into the national strategy - How their facility or office fits into "the big picture" - The data sources they use to determine the their programme's goals and objectives - How programmes derive their goals and objectives from the national goals and policies of the government - How family planning and FP organizations contribute to the national government policies	The Big Picture-Where Does Your Organisation Fit In and How Well Are You Doing?		(60 minutes)	
Unit 3: **Tools for Using Data Effectively**	Participants should be able to: • Describe what strategic plans and work plans are • Set targets and identify the key performance indicators	**A. Strategic Plans and Work Plans** - The planning cycle - What is a strategic plan - The importance of having/asking planning questions	Strategic Plans and Work Plans		(60 minutes)	

SESSION TOPIC	TOPIC LEARNING OBJECTIVE	CONTENT	SESSION PLAN			MATERIALS REQUIRED
			Session	Activity	Timing	
Unit 3 (continued): Tools for Using Data Effectively	• Explain how to clearly present data using numeric and pictorial representations • Distinguish between quantitative and qualitative data • Explain how to represent data, compute calculations and collect non-routine data • Describe types of records in inventory management • Assess the quality of services provided	**B. Essential Data for a Health Facility** - Essential reproductive health data needed by the health facility - Essential data required for reproductive health facilities at the facility level - Definitions of individual data elements and indicators - Criteria for assessing data collection tools **C. Types of Records in Inventory Management** - Stock Keeping Records - Transaction Records - Consumption Records **D. Routine and Non-routine Data Collection** - The relationship between routine and non-routine data **E. Ensuring Data Quality** - Processing data to ensure quality, consistency and accuracy - Cleaning data to prevent bias in decision-making data quality - How to handle errors and prevent future errors	Essential Data for a Health Facility Types of Records in Inventory Management Routine and non routine data collection Ensuring Data Quality		(60 minutes) (60 minutes) (30 minutes) (60 minutes)	

SESSION TOPIC	TOPIC LEARNING OBJECTIVE	CONTENT	SESSION PLAN			MATERIALS REQUIRED
			Session	Activity	Timing	
Unit 3 (continued): **Tools for Using Data Effectively**		**F. Indicators and Targets** - Planning tools - Targets and indicators and how to set targets - Different types of indicators	Indicators and Targets		(90 minutes)	
		G. Numeric Representation of Data - Transforming data into useful information - Ways of displaying the processed data - Types and ways of describing data - How to check each data element for correctness, completeness, range and consistency	Numeric Representation of Data		(90 minutes)	
		H. Pictorial Representation of Data - The ways of presenting data pictorially. - Rules to follow when drawing or preparing graphs	Pictorial Representation of Data		(60 minutes)	
		I. Quality Assessment - Definition of quality assessment. - The importance of quality assessment - How quality assessment assists in making strategic decisions about programmatic directions - How quality assessment should be done	Quality Assessment		(30 minutes)	

SESSION TOPIC	TOPIC LEARNING OBJECTIVE	CONTENT	SESSION PLAN			MATERIALS REQUIRED
			Session	Activity	Timing	
Unit 4: **A Blue Print for Using Data for Decision – Making**	Participants should be able to: • Describe the five steps of the framework to use data for decision making • Explain why data should be collected in a timely fashion • Explain the importance of feedback at all levels	**A. A Framework for Using Data for Decision-Making** - How to collect data in a timely fashion - How to put data into perspective and convert it into information - How to interpret and explain data - Report on analysis and actions - Giving feedback	A Framework of Using Data for Decision - Making	Group dis-cussion	(60 minutes)	• Paper, pens, flip chart, marker pens • Handouts - Framework for using data for decision making • Transparencies - Data for decision making
Unit 5: **Examples of Using Data To Make Better Decisions**	Participants should be able to: • Use data for informed decision making • Explain the steps in establishing an MIS • Describe how to maintain an MIS • Describe the design of LMIS • Identify the characteristics of a functional LMIS • Identify the benefits of applying logistics in health management	**A. Using Data for Decision-Making** - Using data in different ways and levels to guide their decisions and staff. - How to make decisions at district level - What the national level managers are responsible for **B. Establishing a Management Information System** - The six steps in a management information system - The ten requirements for a quality information system - Design of LMIS - Characteristics of a functional LMIS	Using Data for Decision-Making Establishing an MIS	Group dis-cussion	(60 minutes) (90 minutes)	• Flip chart • Markers • Transparencies - Establishing a management information system • Pens and paper • Handouts - Establishing a management information system - The information cycle

UNIT 1 USING DATA FOR DECISION-MAKING

OBJECTIVES By the end of this unit, trainees should be able to:

- Describe how a decentralised district health information system works
- Explain the information cycle
- Describe the five stages of the cycle of data for decision-making
- Distinguish between decision-making with and without data
- Describe LMIS
- State the importance of LMIS
- Describe the three activities that happen to supplies in a logistics system.
- Identify the benefits of applying logistics in health management.

PURPOSE OF THE UNIT This unit introduces learners to the concept of a decentralised health information system and describes the five stages of data collection and explains why using data to make decisions is important.

TIME 4 hours

UNIT OVERVIEW

A. The District Health Information System (30-45 minutes)
B. Logistics Management Information System (LMIS) (60 minutes)
C. The Information Cycle (45 minutes)
D. The Cycle of Data for Decision-Making (40 minutes)
E. Making Informed and Un-informed Decisions (45 minutes)

MATERIALS Newsprint and markers, or board and chalk, masking tape, paper, pens, VIPP cards

HANDOUTS Handout 1.1 The DHIS Information Flow
Handout 1.2 Scenario

Handout 1.3 An Example of the Data for Decision-Making Cycle

TRANSPARENCIES

Transparency 1.1 The Information Cycle
Transparency 1.2 Data for Decision-Making Cycle

ADVANCE PREPARATION

Prepare three cards. One should read “Agree,” one “Disagree,” and the third should read “Unsure.” Make four or five sets of cards with the following information:

- Action
- Feedback
- Data Analysis
- Data Collection
- Decision-Making

Session A. The District Health Information System

…30-45 minutes

Step 1: Introduce this session by presenting the unit's objectives. Ask participants if they have any questions about the objectives. Then write the following letters – D, H, I, S - on a flip chart and ask the trainees what comes to mind first when they hear these letters.

Step 2: Explain that a DHIS (District Health Information System) is a paper-based information system that uses a combination of forms, procedures, and analytical tools to convert routine anonymous data (data that have no names attached) into useful management information that can by used by local programmes and facility managers.

Point out that this training module assumes that the district is the first place where the data collected is entered into the computer, and all phases of the information cycle described here assume that the user does not have a computer.

Explain to trainees that within most districts of the country, there are government and nongovernmental organisations, including faith-based organisations, that run and manage health facilities. The data collected by all these organisations should also be of interest to the government, since the data provide a district-wide comprehensive picture of the health status of the people.

Step 3: Now explain that the DHIS attempts to answer the six classical epidemiological questions *Who, What, When, Where, Why, and How* about the health status of the people. Ask trainees to answer the following questions individually for their respective communities/districts:

- *Who* is the target population for our services?
- *What* conditions make our clients come for service?
- *Where* do clients come from?
- *When* do clients come for our services?
- *Why* do clients come?
- *How* can we overcome problems and improve our services?

Allow about 10 minutes for this exercise and then share one or two responses in plenary.

Step 4: What other information do programme managers and the DHIS need to make effective decisions? Explain that the following information is also important:

- Quality of service provision
- Staff workload
- Cost of services
- Contraceptive supplies
- Client satisfaction
- Measures of efficiency

Step 5: End this session by explaining that the DHIS is based upon a number of well-grounded principles, which include the following:

- The DHIS is dedicated to supporting Primary Health Care (PHC) as its fundamental health care approach by providing a set of tools that encourages the use of information for decentralised management of health services.

- The DHIS collects essential data based on indicators regularly and on a routine basis. The DHIS concentrates on information that programme managers **must** know, for example, the contraceptive prevalence rate. Information that is not useful to management should not be collected.

- The DHIS encourages decentralised planning and management. A manager who displays data on graphs and uses information to plan and evaluate makes better decisions. The DHIS is designed to encourage all health workers and local managers to use the information collected at facilities to monitor progress toward the targets they themselves have set.

- The DHIS includes all service providers at all levels. The team of people providing and using information should include service providers from all facilities, whether they are from government or private facilities, vertical programmes, mobile or outreach clinics, health centres, or hospitals. Information - its

proper collection, timely analysis and regular display and use - is the brain of a district health system.

- The DHIS is integrated with other information systems. The DHIS is designed to feed into all other levels of the health and social services system and will provide provincial and national information systems with the specific information they need. It is designed to facilitate the capture and use of essential data at each facility to improve the quality of health services provided there.

Step 6: End this session by pointing out that the key to the success of a well-run HDIS is the ability of the team of people who work together to provide and use information at the district, provincial, and national levels. Distribute **Handout 1.1,** discuss the various paths and flows of information in it and ask trainees if they have any questions.

Session B: INTRODUCTION TO HEALTH COMMODITIES LOGISTICS

Session Objectives

By the end of the session, the participants will be able to do the following:

1. Define a logistics system.
2. Describe the purpose of a Logistics system.
3. Explain logistics concepts.
4. List and explain the components of a logistics cycle.

DEFINITION OF LOGISTICS SYSTEM

Logistics system is the movement of commodities from one place to another according to schedule.

PURPOSE OF LOGISTICS SYSTEM

Analogy of a restaurant

In a restaurant the kitchen serves as the WAREHOUSE, the waiters and waitresses are TRANSPORTATION and the tables are the SERVICE DELIVERY POINTS.

This is what logisticians refer to as the SIX RIGHTS:

To serve the customer (client) by delivering:

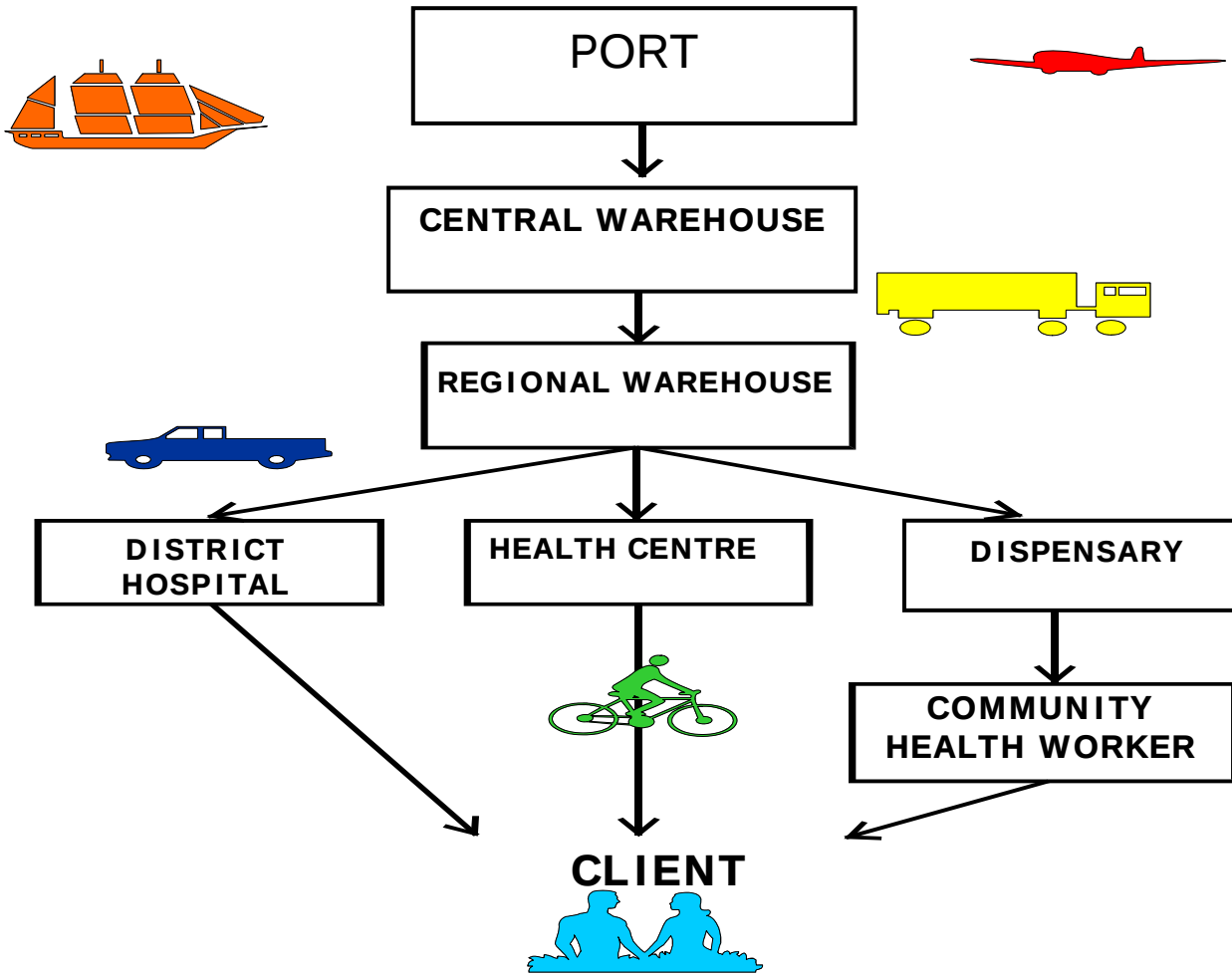
- The right goods
- In the right quantities
- In the right condition
- To the right place
- At the right time
- At the right cost

Why the six rights?
Without a reliable supply of good quality products, whether the product is an antibiotic, HIV test kit, Vitamin A, or a condom, your program cannot provide the services your customer needs.

CONCEPTS OF LOGISTICS

Now that we have looked at the purpose of the logistics system, lets spend a few moments explaining about some logistics concepts. The concepts are Pipeline, pipeline length, lead-time, pull vs. push system and stock status.

HEALTH COMMODITY PIPELINE



Pipeline

The pipeline in a logistics system is the facilities through which products flow and the transportation modes.

It is not liquids that flow through our logistics system, but they're like a real pipeline in two ways:

- The most you can put through the whole system is the amount that will pass through the smallest pipe.
- The more continuous the flow, the better everything works.

If the water pressure in your house goes up and down, your pipes clank, and your shower is unsatisfactory.

Pipeline length

Pipeline length is the total time it takes a product to get from the top of the pipeline to the customer at the service delivery point.

So, if you keep a maximum of 6 months of stock at the central warehouse, and 6 months at the regional warehouse, and 2 months at the service delivery point, then the ***in-country*** segment of your pipeline is 14 months long (if the transit time doesn't amount to anything). That's fine for contraceptives, which typically have a five-year shelf life, but not well for some HIV test kits that have a twelve-month shelf life.

Lead-time

Lead-time is the amount of time between placing the order and receiving the commodities in your store ready for use.

So, if you're the one who orders stock for your store, and it takes **4** weeks from the time you place the order to the time you receive the products, plus **1** week before you get around to unpacking them and putting them on the shelves, then what is your lead time?

Answer: **5** weeks

Push vs. Pull

This brings us to the concept of **push vs. pull**, which is just the question of who decides what products and how many move down the system, and when they move.

- A push system is one where the higher-level facilities decide. This system is also called **allocation** system, because the higher-level facilities ***allocate*** products to client facilities.
- In a pull system, the lower-level facilities decide how much and when, and ***pull*** the products down. Pull system is also called **requisition** system or **indent** system. In reproductive health programs, we hope there are always enough commodities to go around. But in an integrated system, there are never enough essential drugs to meet all the need.

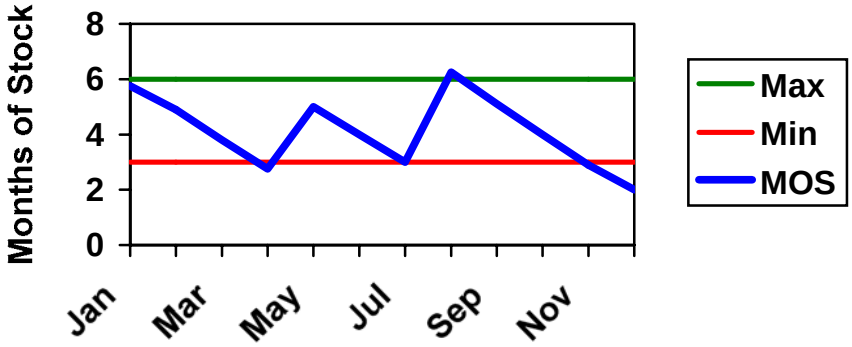
Stock levels (status)

To ensure a continuous supply of health products at service delivery points, logistics managers monitor stock levels and establish ordering and distribution procedures to maintain stocks between recommended Maximum and Minimum levels.

This is called a **Maximum-Minimum inventory control system (Max - Min)**. Ideally you place an order when the stocks hit the minimum. The amount in the minimum assures that there is adequate stock available while awaiting receipt of the order, and in

case of any system breakdowns. The maximum is set to provide enough stock between ordering periods, yet not too high that products expire in storage.
Stock levels are measured in Months of Supply (MOS) because it is important to know how long stock will last. To figure this out you need to know how much stock you have and how much you dispense in a given period of time.

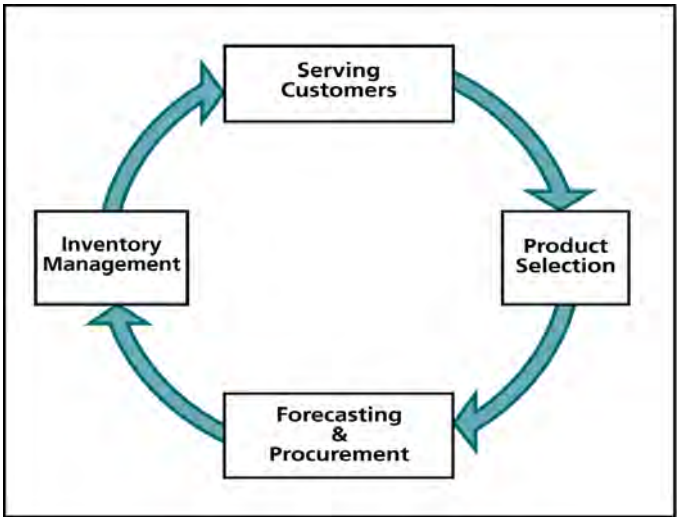
Stock Status - Condoms - Magu District



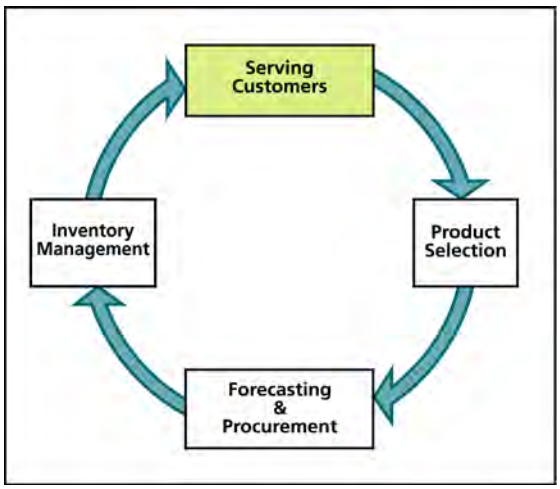
Exercise
If you have 100 bottles of Coke and drink 25 in a month, how long will your stock of Coke last? 4 months.

Answer: 100/25 = 4 months

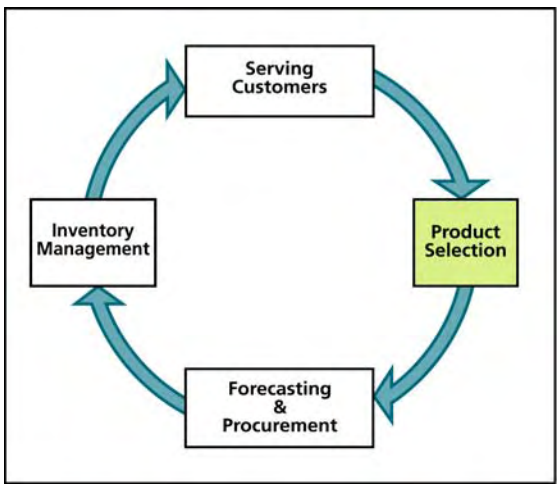
THE LOGISTICS CYCLE



Now let's look at the functions necessary to ensure the 6 rights. Here's a partial depiction of the logistics cycle.
The first thing you will notice that it's circular, indicating the interdependence of the various elements, and the cyclical, ongoing relationships among them. Each activity - serving customers, selecting products, forecasting and procurement, and inventory management - depends on the others. For example, selection of products is dependent on serving customers and learning their preferences, as is forecasting and procurement, which is dependent on consumption data from the service delivery points.



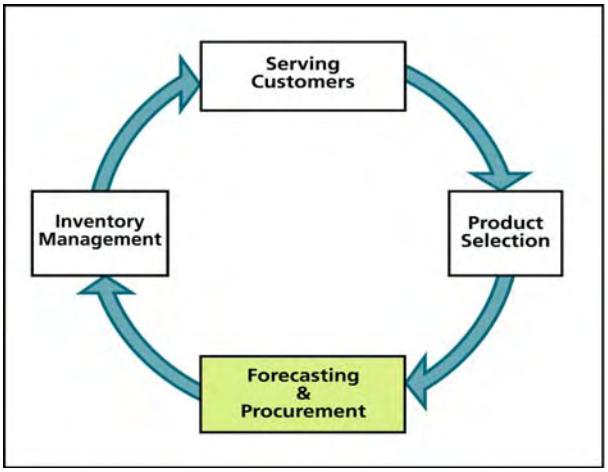
We have put ***"serving customers"*** at the top of the cycle, since each person who works in a logistics system must remember that he or she selects, procures, and distributes products in order to meet **customer** needs.



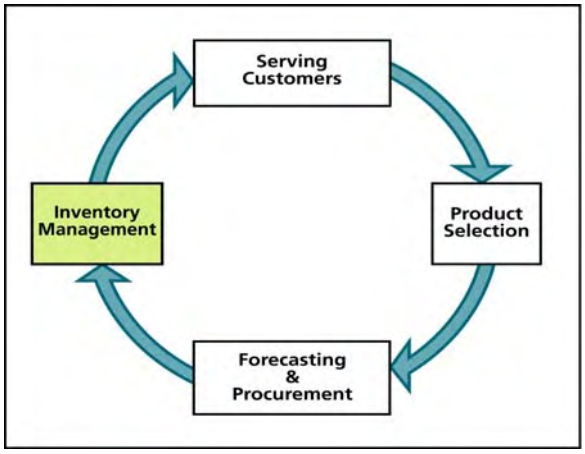
Product selection is dependent on what customers are actually using or what service providers are prescribing. With a family planning program, product selection is straightforward because there are a limited number of contraceptives. In an integrated service delivery system, on the other hand, product selection is more complex: there are many different antibiotics with overlapping uses and your choices have significant cost implications as well as medical consequences.

Considerations for product selection:

1. Collect data from all medical and social sites (public, private and NGO's).
2. Regimens that keep changing.
3. Availability and accessibility of commodities.

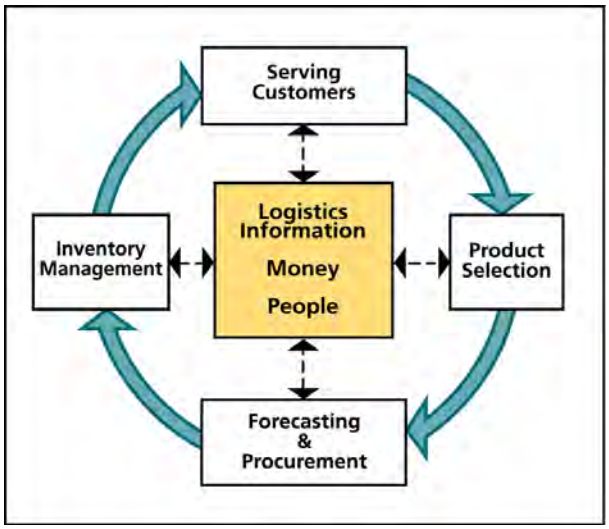


Forecasting and procurement functions are critically important to commodity availability.
Procurement has become increasingly complex, because countries that used to receive most of their commodities, as donations, increasingly have to carry out their own procurements, using either their own funds or bank credits.
For this step of the cycle to succeed, financial resources, technical skills, and management systems must be in place, and policy makers need to care about product availability.



Inventory management encompasses **storage** and **distribution** functions, including **transportation**. These are the functions that are classically thought of as "**logistics**."
However, other considerations include:

1. Cold storage
2. Storage capacity
3. Security

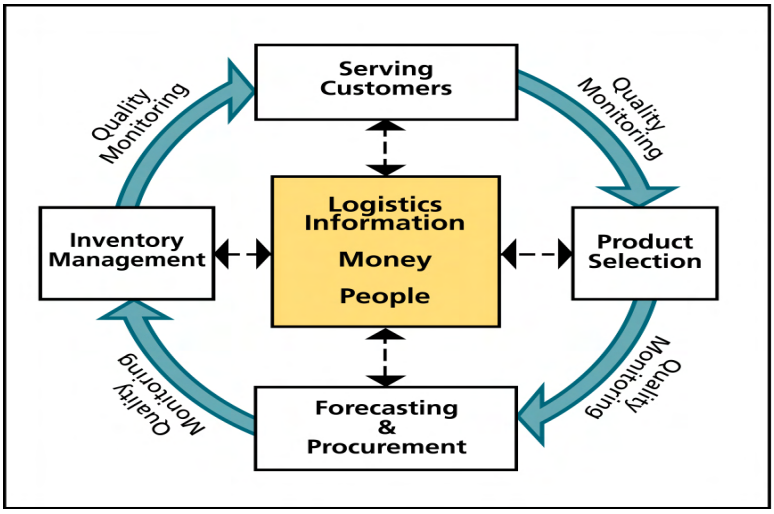


The centre of the cycle is the management of the system. You will see, first and foremost, **logistics information**, which has to be collected by a **Logistics Management Information System**, or **LMIS**.

Logistics information is the motor (engine) that drives the logistics cycle. Without accurate information on **consumption** at the service delivery point level, **stock on hand** at every storage facility, and **losses** throughout the system, no supply chain can run smoothly. And aside, we distinguish between quantities of product **dispensed to clients**, which is what we call "**consumption**," and quantities of

product that move between two levels of the supply chain, which we call **issues** data.

These data items are a very important to monitoring logistics system performance. More on this will be covered on Logistics Management Information Systems session.
And of course there have to be **people** to do something with the information and all the products and **money** to do it.



Surrounding the cycle is **quality monitoring**, which is not only about the products themselves, but also the quality of information and day-to-day logistics decisions.
And of course, all this needs to operate within a supportive **policy** environment.

LOGISTICS MANAGEMENT INFORMATION SYSTEM (LMIS)
…… 60 Minutes

Session Objectives

By the end of the session, the participants will be able to do the following:

- Describe LMIS.
- State the importance of LMIS
- Describe the three activities that happen to supplies in a logistics system.
- Describe the design of LMIS.
- Identify the characteristics of a functional LMIS.

DEFINITION OF LMIS

What Does the Logistics System Ensure?

The Six Rights

1. Right Product
2. Right Quantities
3. Right Place
4. Right Time
5. Right Condition
6. Right Cost

ROLE OF LMIS IN ENSURING THE SIX RIGHTS

LMIS helps answer the following questions to logistics managers for decision making.

In order to determine the right goods that a client requires we need to answer the question: WHICH goods are required?

In order to determine the right quantities of the right goods required we need to answer the question: WHAT QUANTITIES of goods are required?

In order to determine the right condition in which the right quantities of the right goods are required we need to answer the question: WHAT KIND of goods are required?

In order to determine the right place for goods to be delivered we need to answer the question: WHERE are the goods required?

In order to determine the right time for goods to be delivered to the right place, we need to answer the question: WHEN are the goods required?

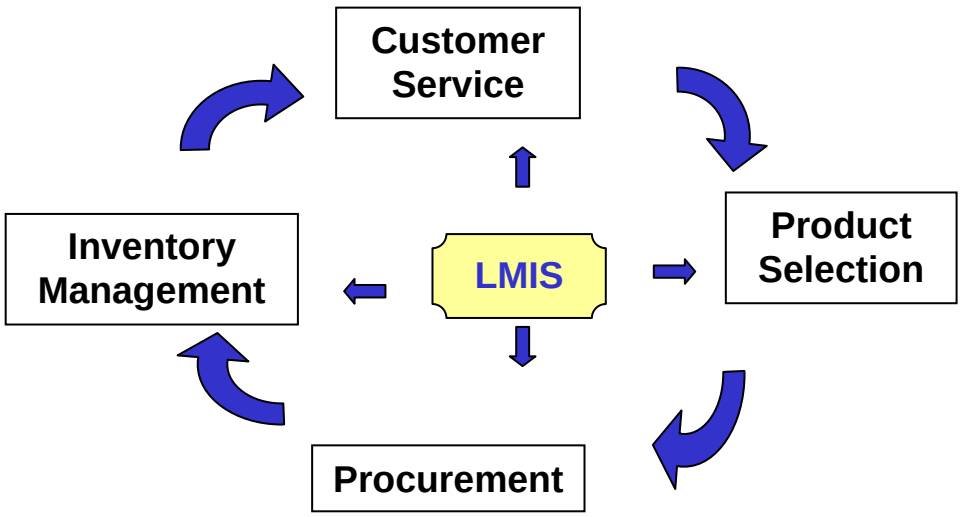
In order to determine how much it will cost to deliver the goods to the right place at the right time, we need to answer the question: HOW are the goods going to get there?

The Logistics Management Information System supports logistics managers in answering these questions in order to make the RIGHT decisions to best serve the customer.

The one thing that all the answers to the questions contain is information.

IMPORTANCE OF LMIS

The place of the LMIS in the Logistics Cycle



IMPORTANCE OF LMIS

1. It indicates when to order supplies.
2. Highlights the position of supplies in the pipeline and whether commodities need to be pushed from higher to lower levels.
3. It captures information on where consumption is highest and whether more resources are required.

4. Highlights losses in the system, which requires action.
5. Points out bottlenecks in the system thus enabling adjustments.
6. Picks out information on nearly expired commodities thus re-distribution. Expired ones are also picked out thus enabling destruction.

In the logistics cycle, goods do not only flow to the customer; information also flows to and from each element in the logistics cycle.

LMIS is at the centre of the cycle, interacting with each element. Therefore LMIS is the engine that runs the Logistics System.

ACTIVITIES THAT HAPPEN TO SUPPLIES IN A LOGISTICS SYSTEM

There are only three things that happen to supplies in a logistics system.

1. Supplies can be STORED as inventory
2. Supplies can be DISTRIBUTED from one facility to another
3. Supplies can be DISPENSED to customers at a facility

These are the only three activities that a Logistics Management Information System needs to track in order to support managers in decision-making.

DESIGN OF LMIS

Data items needed for Logistics Management Information System are:

- **STOCK ON HAND:** Quantities of usable stock available at all levels of the system. Do not count any items that are unusable. These should be considered losses to the system

- **RATE OF CONSUMPTION:** The average quantity of a particular item dispensed to users during a particular time period

- **LOSSES AND ADJUSTMENT:** Losses are the quantities of stock removed from the pipeline for any reason other than consumption by client (e.g.

expiration, theft, damage, etc). Adjustments include quantity issued to or received from other facilities. Adjustments may also be administrative changes, such as physical count that discovers a different amount from the quantity listed in the bin cards. Remember, adjustments may either be positive or negative changes in stock

CHARACTERISTICS OF A FUNCTIONAL LMIS

A functional LMIS should:

- Keep the data items that need to be collected to a minimum. Do not collect unnecessary data
- Ensure that the forms are not complicated. Include precise and concise instructions for completion
- Forms must not take a long time to complete. Staff completing forms should not take time off other activities

Benefits of Logistics in Health Management

We assert that logistics contributes to the success of a service delivery program in three ways:

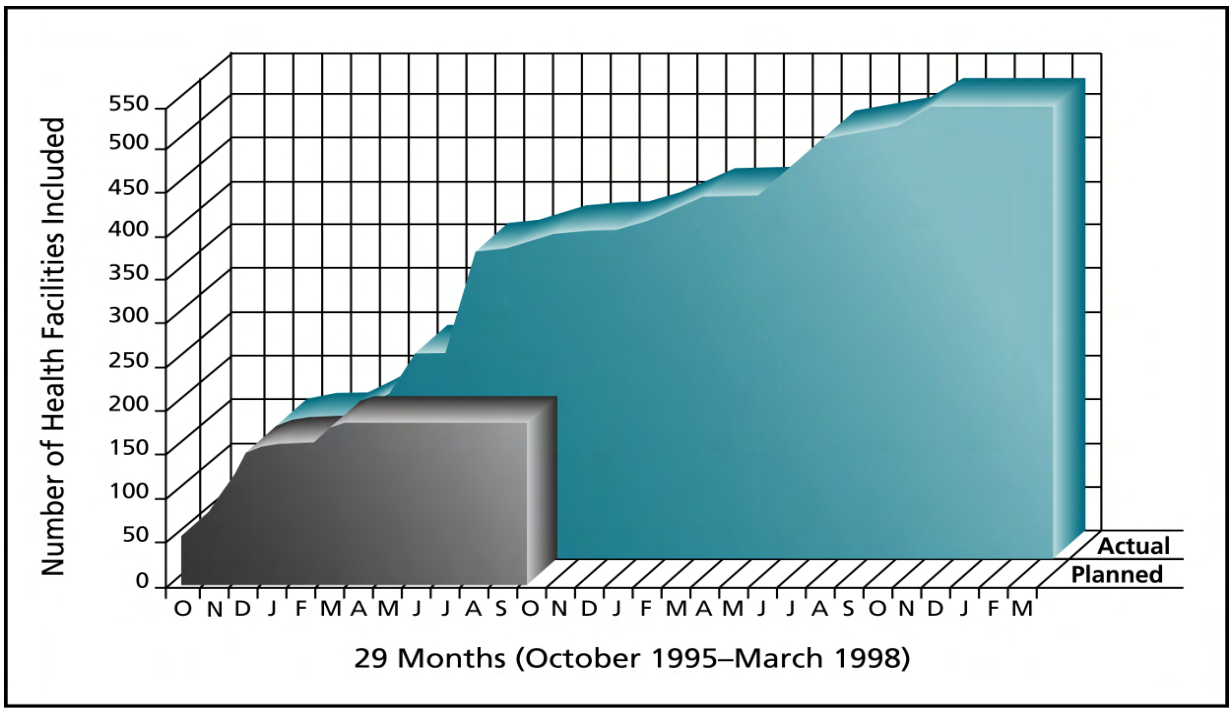
1. Improving customer service
The reliable availability of essential products is a critical element of quality care even from the clients' point of view.

2. Saving money
Logistics done correctly helps you use resources more effectively and saves you money.

3. Increasing program impact
A properly functioning logistics system helps improve the impact of health programs. Actually, it determines whether they succeed or fail.

Example of Logistics Impact

Kenya STI Kits



Here's an example of the effect logistics can have on program impact. This data came from Kenya, where kits for the diagnosis and treatment of sexually transmitted infections (STI) have been funded since 1995 by DfID. Without accurate data on usage, and without a reliable distribution system, a $600,000 supply of STI kits was projected to serve 143 sites for one year. That's the small gray hill in the bottom left corner.

With the design and implementation of a new tracking and distribution system, the same commodity budget for STI kits was used to supply more than 500 service sites for more than 29 months - that's the big blue mountain.

A better logistics system, better supply chain management, vastly improved the impact, customer service, and the cost-effectiveness of the program, more than quintupling the program's "reach." In this case, "better supply chain management" meant things like breaking up the kits to manage priority products separately; recognizing that different sites serve different populations with different needs; and collecting and using data on actual consumption to determine re-supply quantities.

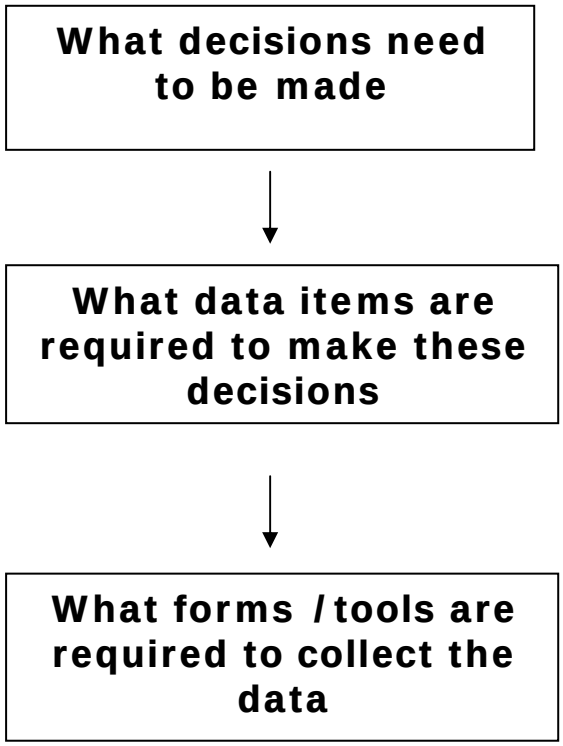
This graph could as appropriately appear under the headings “customer service” or “money” as here under “impact,” because it shows that with better management of the supply chain you can serve more people with essential services. You can stretch finite resources further. And you can exceed program impact objectives.

Session Summary

- Definition of logistics systems
- Purpose of logistics (SIX RIGHTS)
- Logistics Concepts and Cycle
- Benefits of logistics

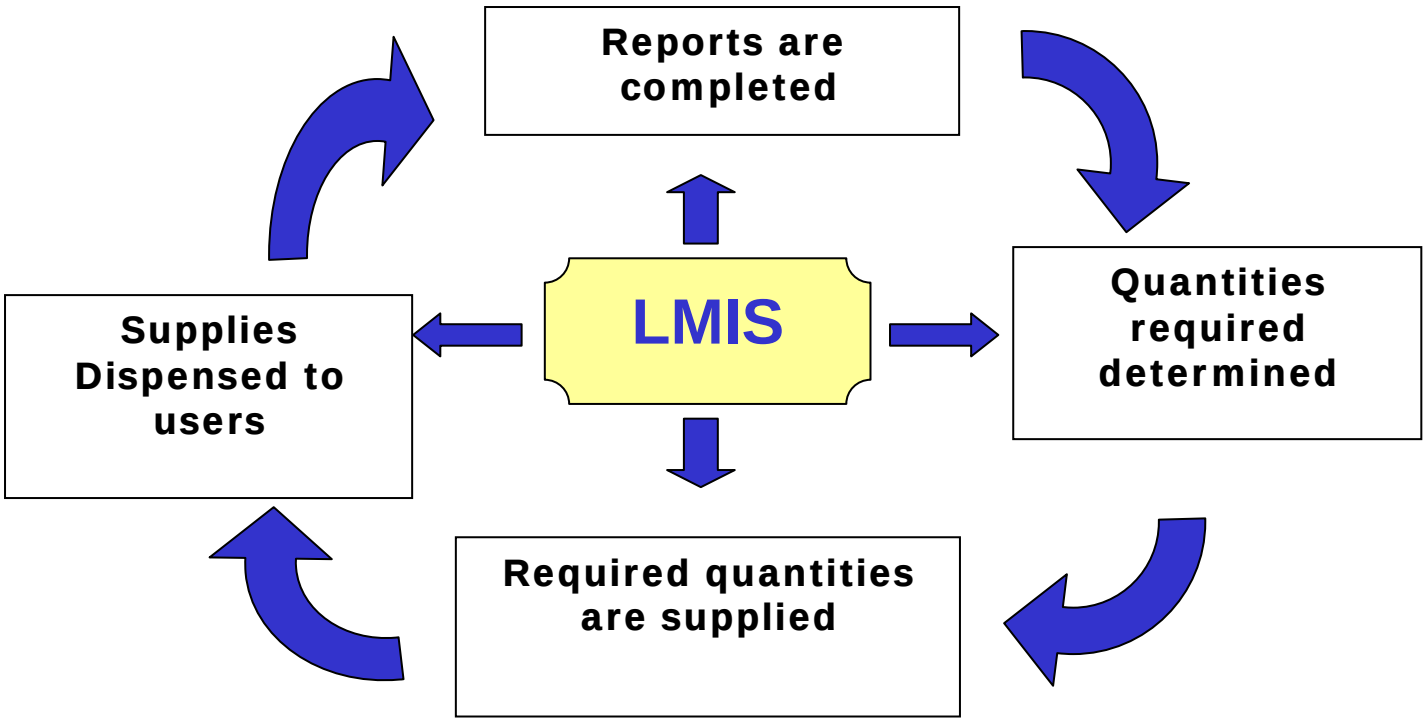
Transparency 1.3

Steps involved in the design of a functional LMIS



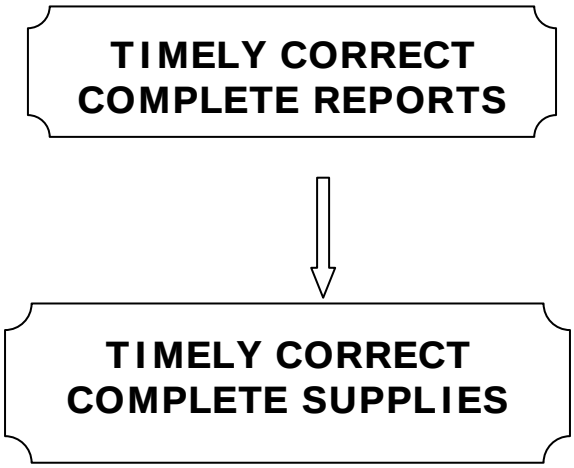
Transparency 1.4

How the logistics system should work

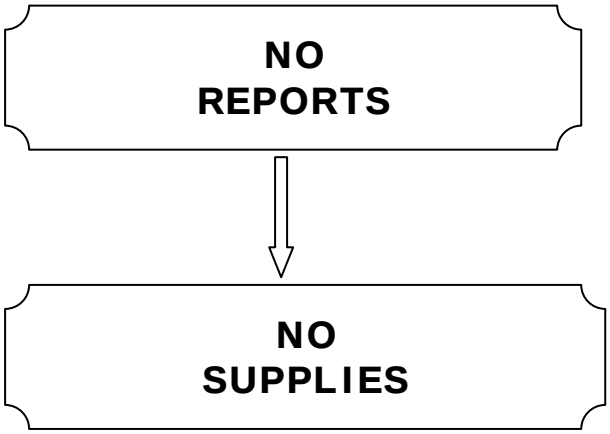


Transparency 1.5

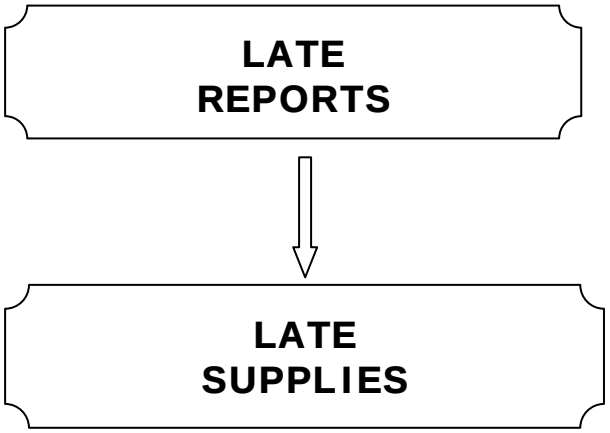
What will make a logistics system work?



What will make a logistics system not work?

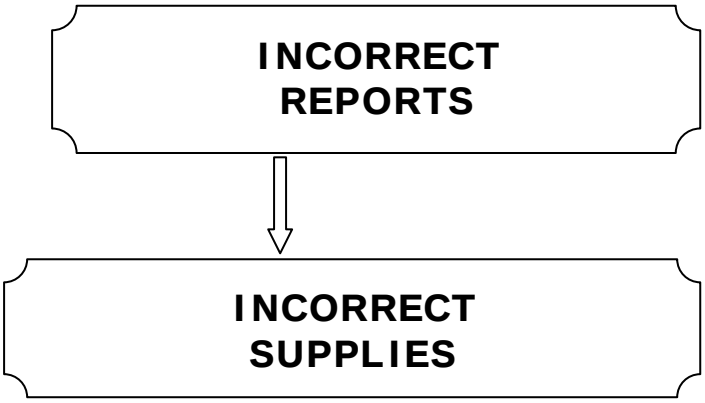


What will make a logistics system not work?



Transparency 1.5 – page 2

What will make a logistics system not work?



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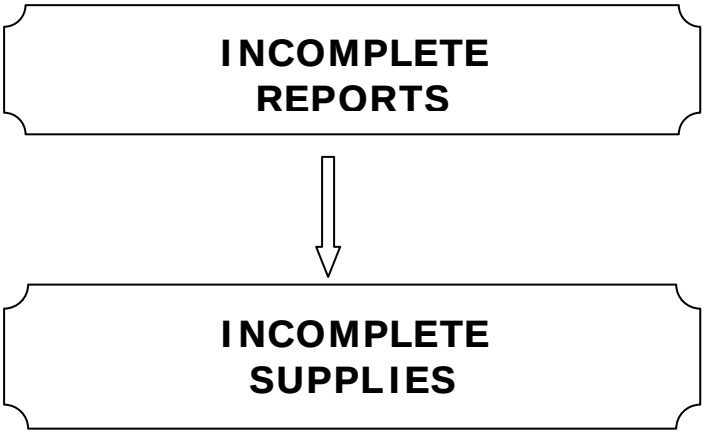


Session C. The Information Cycle……45 minutes

Step 1: Ask participants to name the different elements in the information cycle. As they do so, write them on the flip chart. Point out that this information cycle enables you to see the links between the different phases of collecting, processing, analysing, presenting, interpreting, and using data and information for decision-making. Point out that each **of these phases has several sub-phases.** Also note that quality assessment occurs at each of these phases.

Step 2: Show **Transparency 1.1** on the information cycle. Explain to the trainees that all the data they collect must have a purpose, and that family planning and reproductive health data are to be used to calculate indicators that measure how well the reproductive health and family planning programmes are performing. Data are also to be used by managers to make informed decisions about programmes. Point out that the Use and Collect Feedback mechanism is one of the key points of the cycle.

Step 3: Ask trainees what types of data are routinely collected at the facility level. Make sure the following examples are mentioned:

- Activity data about patients seen and programmes run, routine services, and epidemiological surveillance
- Semipermanent data about the population served, the facility itself, and the staff that run it

Step 4: Ask trainees what other types of programme data, in addition to routine service statistics they should collect. The following points should be made:

- Administrative data, such as stock cards for supplies, lab specimens
- Human resources data, such as number of staff, CBDs, workloads, absenteeism
- Logistical data, such as transport

- Financial data, such as cost-sharing revenues
- Organisational data on the infrastructure and equipment

Step 5: End this session by pointing out that the remainder of this training will focus on the phases and sub-phases of the information cycle.

Session D. The Cycle of Data for Decision-Making

……40 minutes

Step 1: Remind trainees that decision- making is a task for all employees and exists at every level of an organisation. Point out that encouraging all staff members to base decisions on data can foster an environment in which staff at all levels are empowered to make better and informed decisions.

Step 2: Place three signs reading “Agree,” “Disagree,” and “Not Sure” on the wall. To start the exercise, ask participants to stand in the middle of the room. Explain to participants that a series of questions related to data collection will be read out loud, and they will be asked to vote “Agree,” “Disagree,” or “Not Sure” by standing near the sign of their choice placed at the front of the room (See the statements on Values Voting on page 28).

After each statement is read, ask a few participants why they agree, disagree, or are not sure. This will provide an opportunity to then introduce the broader concepts of using data for decision-making.

Step 3: Divide the participants into five small groups. Give each group a set of five cards with the following words written on them: “Decision-Making,” “Action,” “Feedback,” “Data Collection,” and “Data Analysis.”

Ask each group to decide on how it would order these items. They should be thinking in terms of both steps and patterns. Once the groups have come up with their steps and pattern, ask them to explain their reasoning and thinking process to the larger group.

Step 4: After each group has had a chance to share its information, show **Transparency 1.2** “Data for Decision-Making Cycle.” Emphasise especially the cyclical pattern of the figure and the importance of each step influencing the next (no matter where you start in the cycle).

Step 5: Finally, end this session by pointing out that just as each step of the process influences the next, all members of an organisation can influence others. Therefore, data for decision-making is a philosophy that all should be aware of, not just top managers or monitoring and evaluation specialists.

The idea is to help all levels of an organisation integrate data for decision-making into their work. For example, the data collectors contribute to one step of the decision-making process just as the top managers or policy-makers contribute to different parts of the process.

Session E. Making Informed and Uninformed Decisions ….45 minutes

Step 1: Start this session by reminding participants that the decision-making cycle is an ongoing process and that multiple cycles can run at the same time.

Step 2: Divide participants into four groups and give each group a number of different-coloured cards. Ask them to write the components of the programme management cycle and to arrange the cards in a way that captures the relationship between the components of the programme management cycle.

Ask each group to present its findings and point out that at every component of the cycle, managers require data to make informed programme decisions.

Step 3: Divide participants into three groups and give each group a copy of **Handout 1.2**. Ask them to come up with several ways that data can be used to make a strong case to the donor. Make the following points:

- You are responsible for facilitating strategic thinking in the organisation and setting priorities
- Think in terms of the mission of your organisation. You will want to show where your organisation currently stands, by indicating trends in client demands over time, and demonstrate your organisation's strengths and accomplishments in a compelling manner
- Show that your organisation is capable of increasing both its size and scope effectively

Allow about 20 minutes for this activity. Then ask each group to share its report. Ensure that the following ways to use data are mentioned:

- Provide an historical perspective of your organisation by presenting data over a longer time period, and outlining the number of projects you have implemented and the number of FP clients served annually

- Provide other service statistics for your organisation to demonstrate your ability to manage successful projects

- Present statistics that show whether you are having an impact on the communities served. These data may be gathered by periodic evaluation changes in behaviors and health indicators in your community

- Use data that provide an indication of the efficacy of the organisation, such as the number of continuing clients at a clinic (which can be used as a proxy of quality) or the percentage of new clients who return for revisits or for re-supply

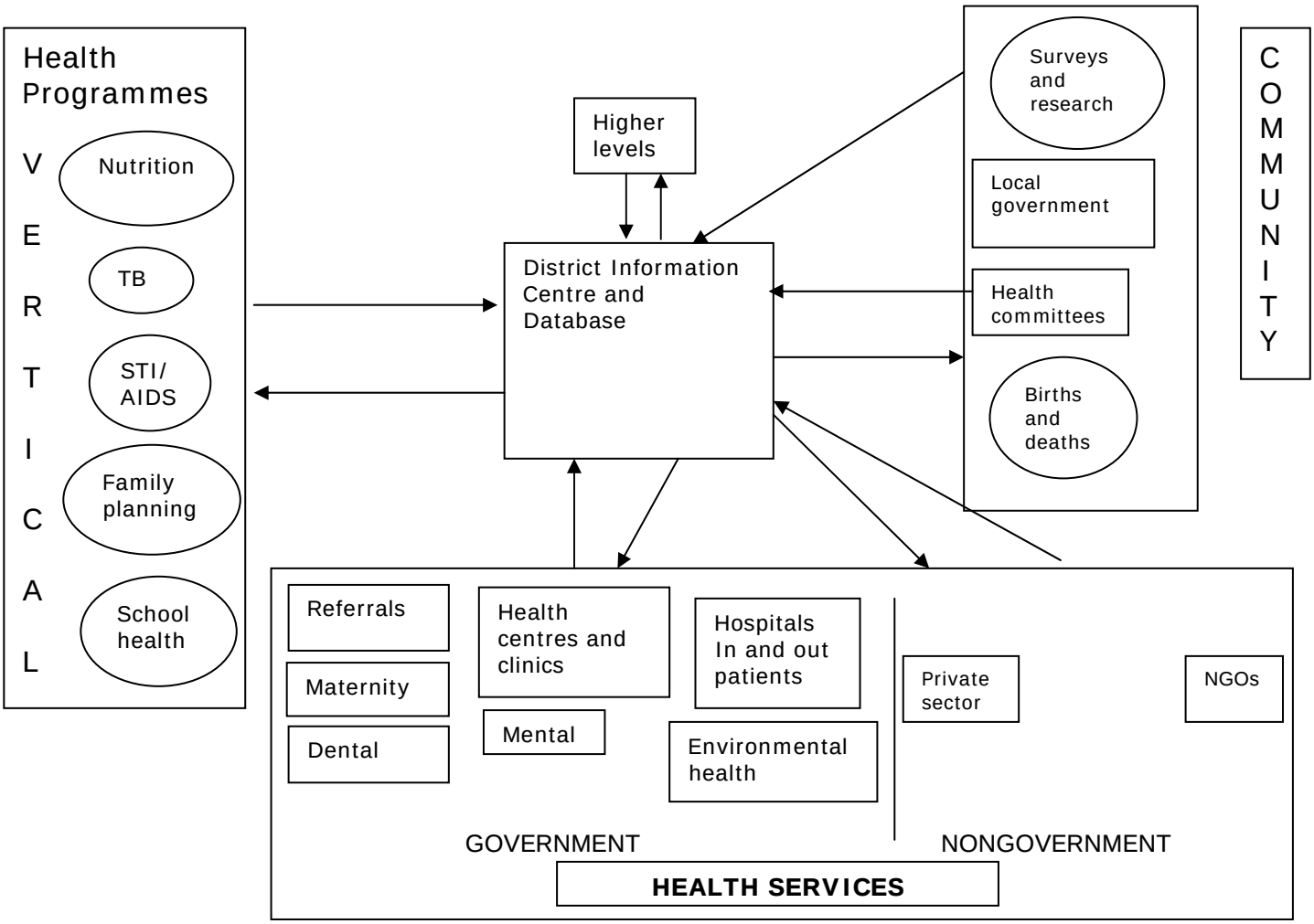
- Use data to demonstrate that you have clients with diverse needs and interests in services you can provide. For example, perhaps you observe that the number of counselling sessions regarding STIs has been increasing recently, so that you could interpret this as a sign that your clients are becoming more aware of or more concerned about STIs. Or you may notice an increased interest in voluntary counselling and testing. This data would show that clients have diverse needs for different types of services

- Use statistics from your project and tie them to the national context. This will display your ability to assess both local and country-wide needs

Step 4: End this session by asking participants if they have any questions about making informed decisions using timely and accurate data and uninformed decisions in the absence of any data.

Handout 1.1

Sample of DHIS Information Flow



Handout 1.2

Scenario

You are a national manager of a family planning organisation who uses data to determine how best to position your organisation for sustained funding. A donor agency releases a document that says it is interested in funding organisations that have integrated family planning and STI/HIV/AIDS projects. As a national manager, you decide that this is an important undertaking for your organisation to pursue. You decide to apply for funding from the donor agency to support new integrated projects in your organisation. There are several ways that you can use data to make a strong case. What data might you use to support your proposal?

Handout 1.3

THE PROCESS OF USING DATA FOR DECISION-MAKING CYCLE

Data Collection

The FP clinic manager decides to determine what might be causing a lower than usual return rate of the clinic's female clientele. She has just entered the **data collection** stage of the cycle. She first asks her staff what they think the causes might be. Nobody can think of any changes in the clinic hours or services, and so they deduce that the recent increase in no-shows is probably not related to the clinic. The manager then contacts several of the women and asks why they missed the last appointment. She learns that there is a new clothing factory in town, and that many of the women who missed their previous appointment are also newly employed at the factory. Because the factory is located in a separate part of town, these women find it difficult to get to the clinic during its operating hours due to travel time and costs.

Data Analysis

The manager reviews this new information with her staff – this is the **data analysis** stage. Everyone agrees that the clinic should accommodate its growing clientele of working women. Ideas are suggested, including the possibility of opening a mobile clinic, hiring a community based distributor to visit the worksite, and reassessing the clinic's hours of operation.

Decision-Making

The staff agrees to a change in the clinic schedule to open later and close later one day per week so that women working in different parts of the town are able to come to consultations and to pick up contraceptive supplies. This is the **decision-making** stage.

Action

The clinic implements this decision in the **action** stage by changing the clinic hours from 9:00 to 16:00 to a new schedule of 12:00 to 19:00 on Tuesdays. Flyers are posted around town and clients are asked to "spread the word" to their working friends about the new hours.

Feedback

> After implementing the new Tuesday schedule, the staff asks their working clients if the clinics hours are making it easier to come to the clinic for scheduled exams, counselling, and supplies. They also check to see if their monthly caseload is increasing. This is the **feedback** stage. The staff notice a 15% increase in returning clients AND a 10% increase in new clients in the first month of implementing the new schedule.

Thus, one cycle of collecting and analyzing data, deciding what changes were necessary, acting on this decision, and assessing the success of the new policy has taken place in an effort to serve the clinic's working clientele. At this stage, because all processes and systems can always be improved, the manager would assess how to make the clinic even more convenient and accessible to this cohort of clients.

FACILITATOR'S NOTES
Statements on Values Voting

Collecting data is the most important part of good management.

Memory is a good tool to rely on when making decisions.

Decision-making is done best when both quantitative and qualitative data are collected.

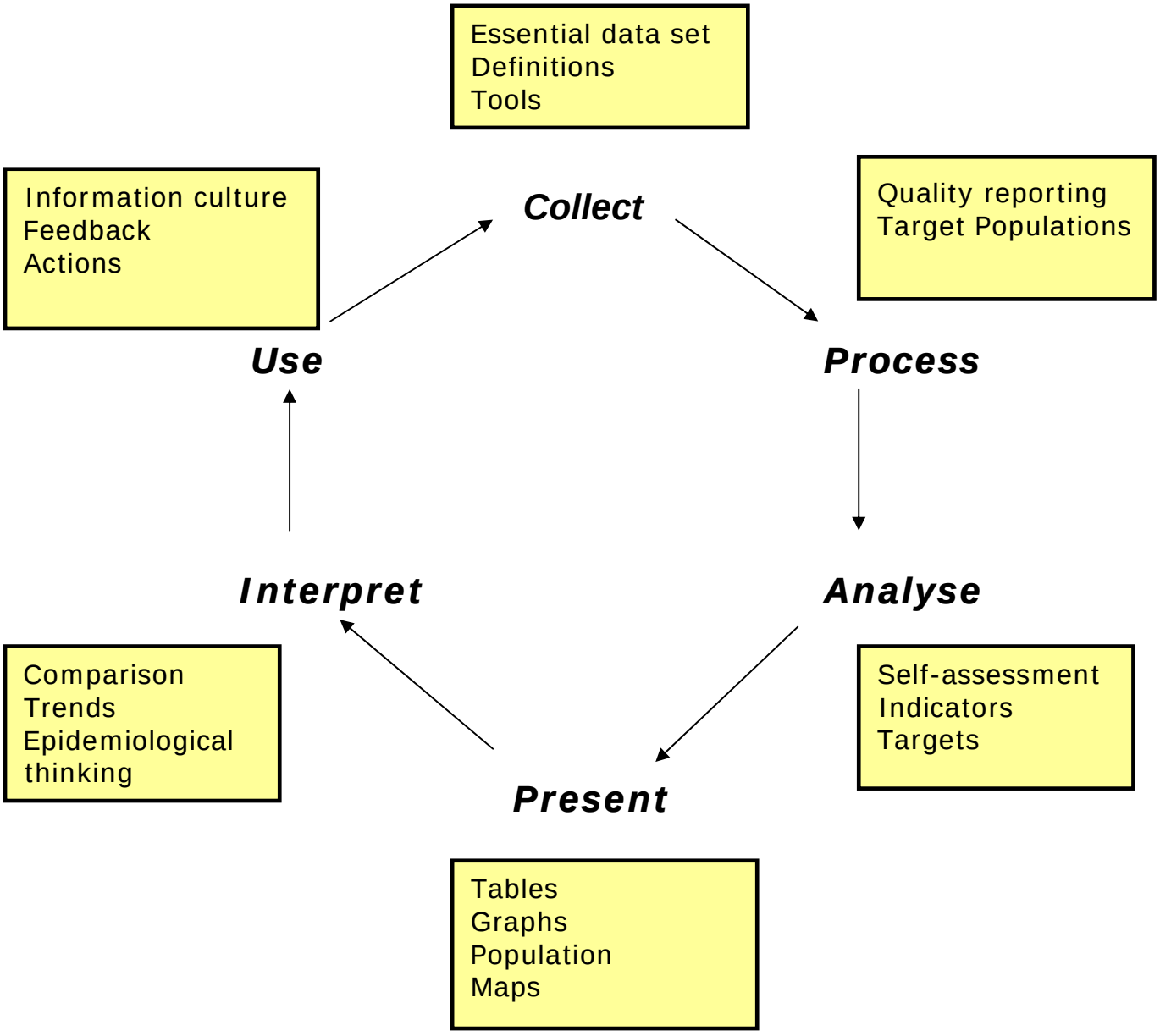
When making decisions, it is more important to use data or evidence based on small samples.

Exit surveys can be a good tool to use to find out what clients think of the service received, and they can help in making decisions related to quality of care.

When making decisions related to reproductive health programming, it is always important to view the data you collect within a larger context.

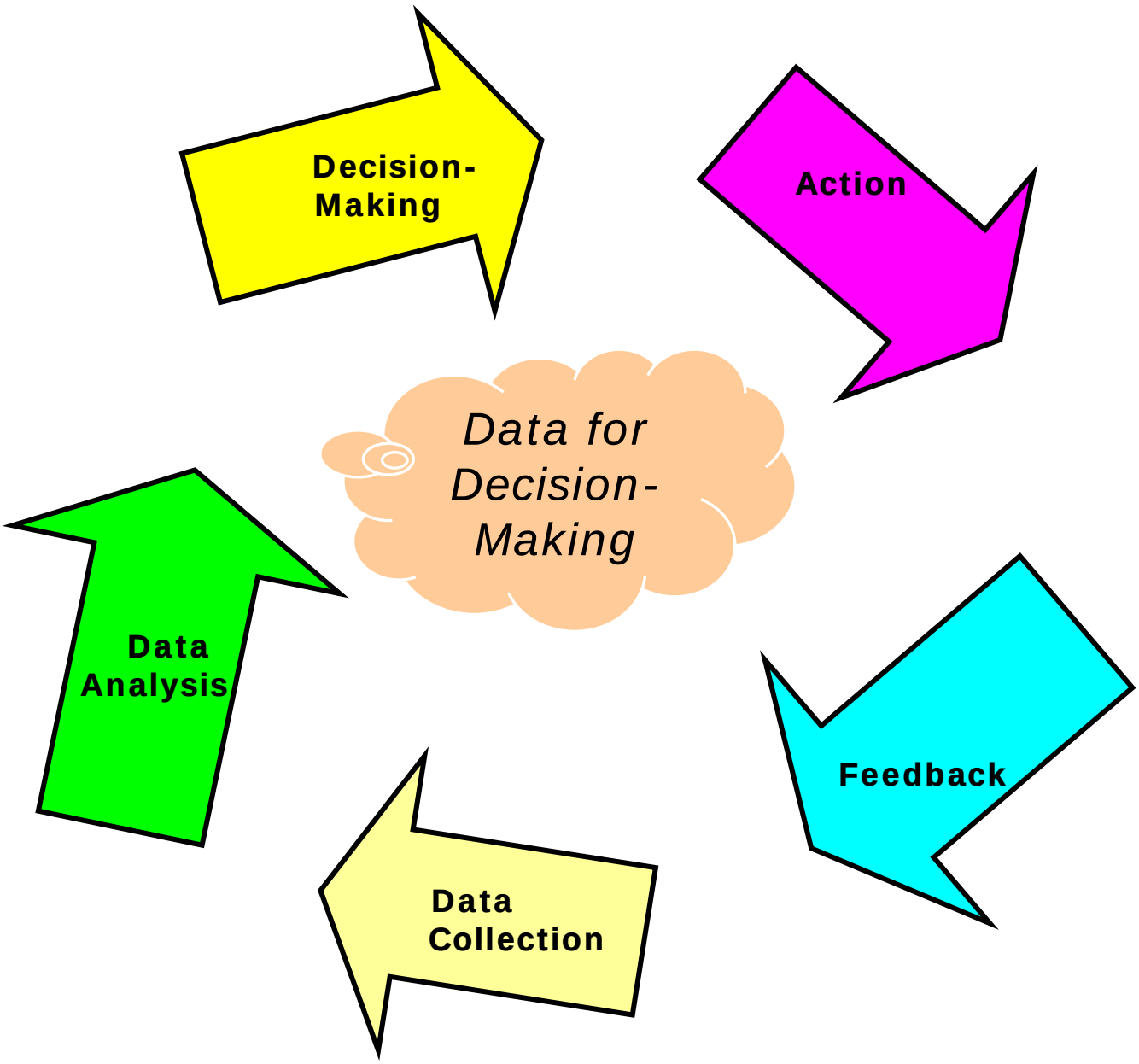
Transparency 1.1

THE INFORMATION CYCLE



Source: Using Information for Action: A Manual for Health Workers at Facility Level, The Equity Project, USAID, South Africa.

DATA for DECISION-MAKING CYCLE



UNIT 2 WHY USING DATA TO MAKE DECISIONS IS POWERFUL

OBJECTIVES By the end of this unit, trainees should be able to:

- Discuss why using data to make decisions is powerful
- Explain why local decisions should be compatible with national goals
- Describe the national reproductive health programme in Kenya

PURPOSE OF THE UNIT This unit helps participants to understand the ways local and national data contribute to the achievement of national reproductive health goals and policies.

TIME 2 hours

UNIT OVERVIEW

A. Evidence versus Intuition (60 minutes)
B. The Big Picture — Where Does Your Organisation Fit In and How Well Are You Doing? (60 minutes)

MATERIALS Newsprint and markers, or board and chalk, masking tape, paper, pens, transparencies

HANDOUTS

Handout 2.1	Making Decisions With and Without Data
Handout 2.2	How Family Planning Organisations Contribute to National Government Policies

TRANSPARENCIES None will be used for this unit

ADVANCE PREPARATION Prepare sufficient copies of handouts for learners. Ask several learners to prepare the role play in Session A. Step 5.

Session A. Evidence versus Intuition ……60 minutes

Step 1: Ask participants to recall why they think data is essential for decision-making. The following points should be made:

- Decisions based on evidence tend to be better decisions
- Data are essential for planning and evaluating project activities
- Workers feel motivated when they have collected the data and when management appreciates their efforts
- Data support an explanation of project activities
- Data can helps a project or a programme team to work harmoniously and efficiently

Step 2: Ask participants to split into groups of three and brain-storm on the differences between informed decisions and those made by intuition. Write their responses on separate flip charts headed: Informed Decisions and Intuition. The following points should come out:

Informed decisions:

- Are made based on accurate and timely evidence and data
- Allow staff at all levels of the organisation to share information

Uninformed decisions arrived at through intuition:

- Are often made in the absence of data and are based on one's feelings or "gut instinct"
- May result in managers disregarding routine events and over-estimating the probability of rare events based on the way the data are presented
- May result in managers making a wrong decision by over-estimating the strength of evidence from a small sample

Step 3: Ask participants to give some examples of real-life informed and uninformed decisions.

Step 4: Divide participants into two groups and give each group one of the following scenarios:

Scenario 1: When you are in the process of hiring someone, you may have conducted all the necessary interviews with two candidates and found that they both have very similar qualifications. In this case, you might make a hiring decision based on intuition and opinion.

Scenario 2: When determining the cost of a contraceptive method like a condom, a project manager may believe that Ksh 30 is a reasonable price per condom. In basing such a decision on intuition and opinion only (without using data to support this decision), the manager may be missing the fact that during exit interviews conducted at local clinics, it was found that most clients would only be willing to pay a maximum of Ksh 10 per condom, since they can get them free at other clinics.

Allow the group about 5 minutes to read the scenario and then discuss the following questions:

- Do you think the manager made the right decision? Why or why not?
- What other factors might the manager have considered before making his/her decision?
- Who else might the manager consult about his/her decision?

Step 5: Explain to participants that very often an uniformed decision can do more harm than good. Ask three participants to perform the following role-play. Allow about 5 minutes for this.

> Two angry clients have come to the manager to complain about the way the clinic staff are treating them and other clients. The manager decides to change the way family planning methods are distributed. Role-play what happens.

After the role-play, ask the following questions:

- What decision did the manager take?
- What was the reaction of the clients?
- What would have been a more effective way to handle this situation?

Explain that it is important to know the magnitude of the problem so that a manager can determine what needs to be done and what priority should be given to fixing the problem.

Step 6: Ask participants to brainstorm on the negative effects of uninformed decisions or those made by intuition. Then make the following points about uninformed decisions:

- They tend to be inaccurate and abrupt
- They may lower or discourage self-esteem
- They may affect service provision
- They may result in regrettable actions which lead to loss of credibility
- They may fail to address the actual system problems
- They may have impact on local and national data
- They may lead to a lack of transparency and unjustifiable actions
- They may make the problem worse

Step 7: Display the following information on a flip chart and pass out **Worksheet 2.1**.

- Selecting appropriate target groups
- Selecting method mix to make available
- Setting fees
- Requesting additional staffing
- Conducting staff performance reviews
- Motivating staff members
- Writing grant proposals
- Reporting to donors

Ask the participants to work in pairs to complete the chart by writing what decisions a manager might make with and without data. Allow about 15 minutes for this

activity and then ask participants to share their responses in plenary. Then distribute **Handout 2.1**.

Step 8: End this session by reminding participants about the importance of using data for making informed and strategic programmatic decisions. Emphasize that it is the responsibility of everyone in the organisation to collect, analyse, interpret, and use data at their level for good decision-making.

Session B. The Big Picture—Where Does Your Organisation Fit In and How Well Are You Doing……60 minutes

Step 1: Explain that while you are analysing information and making decisions that affect your programme on a local level, it is important to maintain your perspective of how the work your programme does fits into the national strategy.

Step 2: Ask participants to work in groups of three to draw a map of their province and district and to plot where their facilities are and how they relate to other RH organisations and the national MOH. Allow about 15 minutes for this and have them share their responses in plenary.

Step 3: Ask participants to brainstorm on how they think their facility or office fits into "the big picture." The following points should be made:

- Data and information from their facility are disseminated and shared locally and in some cases nationally, with other RH organisations and the MOH
- Their facility/office is part of and contributes to the total sum of local implementation of RH services
- Their facility/office is part of the totality of activities at local level that contribute to national goals
- Decisions made at local level affect the national level

Step 4: Ask participants how their programme's goals and objectives are derived. Point out that RH programmes derive their goals and objectives from the national goals and policies of the government and are designed to support them. Ask what data sources they use to determine their programme's goals and objectives.

Some examples:

- DHS
- Reports
- Surveys
- National policies

Step 5: Give a lecturette about how family planning and FP organisations contribute to national government policies. Make the following points:

- Kenya has one of the highest population growth rates in the world (3%)
- Fifty percent of the population is below 15 years of age
- Total fertility rate is 4.7 but is declining
- Contraceptive prevalence rate is 32%
- HIV prevalence is estimated to be 11%

Step 6: In conclusion, distribute **Handout 2.2** and explain to participants that decision-making at local level is rarely straightforward or easy. Decisions should not be made in a vacuum or through intuition. Decisions that each of us make have short- and long-term implications at local and national levels. Therefore, they should take advantage of resources and understand how their decisions fit into the national picture.

Worksheet 2.1

Making Decisions With and Without Data

Issue	Without data	With data
Selecting appropriate target groups		
Selecting method mix to make available		
Deciding where to expand services		
Setting fees		
Requesting additional staffing		
Conducting staff performance reviews		
Motivating staff members		
Writing grant proposals		
Reporting to donors		

Handout 2.1

Making Decisions With and Without Data

Issue	Without data	With data
Selecting appropriate target groups	Manager has a "feeling" that young girls need more information about contraception.	Results of a quick survey indicate that 35% of girls ages 13-15 are engaging in sexual acts; focus-group discussions among girls this age reveal that they have little or inaccurate information about contraception.
Selecting method mix to make available	Manager estimates that only one out of 10 (10%) clients will be interested in long-term contraceptive methods.	Looking at client record data, 25% of clients say they want no more children, which indicates they are good candidates for long-term or permanent contraception.
Deciding where to expand services	Staff thinks that increasing numbers of clients from a certain village are attending the clinic.	Client record cards show that clients from two different villages have increased recently, although more clients are coming from the village they originally identified.
Setting fees	Manager believes Ksh 20 is appropriate.	Exit interviews of condom clients find that they would be willing to pay a maximum of Ksh 10 per condom, since they can get them free at other clinics.
Requesting additional staffing	Manager says, "The staff at this clinic is overwhelmed by all the clients coming in."	Manager says, "The same numbers of staff members are serving 35% more clients in this clinic now than they were six months ago."
Conducting staff performance reviews	Clinic supervisor discusses general performance with a service provider, relying on his/her impressions of the agent's work in the past year.	Tabulating statistics over the past year, a service provider's number of new clients has steadily increased, but continuing clients have decreased, indicating the service provider is spending too much time recruiting new clients and not enough following up with established clients.
Motivating staff members	Manager says, "Good work!"	Manager says, "Good work! You have increased the number of clients you are serving by 10% this year!"
Writing grant proposals	In a discussion about past successes, the manager says, "This clinic has faithfully served thousands of satisfied clients in the past year."	Manager says, "Last year this organisation provided services to 10,500 clients. In exit-interviews, 88% of clients said they were satisfied or very satisfied with the services they received from our clinics."
Reporting to donors	Report says, "This project has been very successful in the last year."	Report says, "This project exceeded its goal of serving 50,000 clients in the last year by having served 77,000 clients at its 11 clinics."

Handout 2.2

How Family Planning Programmes and Organisations Contribute to National Government Policies

The Kenya government has published policies on population (1984) and HIV/AIDS (1998) and has developed a Health Sector Development Plan (1996). These policies include specific, measurable and sometimes numeric objectives. By understanding what the government's objectives are, and developing indicators for your own organisation, you can demonstrate exactly how your work contributes to the larger goals of the Kenyan Government. This can be motivational as well as an effective way to advocate for increased resources for your organisation.

Kenya has one of the highest population growth rates in the world, currently approximately 3% per year. A large proportion of the population is also very young. The 2000 Demographic Health Survey reported that 50% of the population was under the age of 15, which indicates that the growth rate could increase rapidly as those young people mature to reproductive age.

Based on these statistics, the National Population Policy of Kenya examined the negative consequences of this population growth and its effect on the overall development of Kenya and listed several nationwide specific objectives, including the desire to:

- Reduce the current total fertility rate (TFR) of 4.7 children per women (in 1993) to approximately 3.0 by the year 2015

- Increase the prevalence of contraceptive use from the current 33% to 44% by the year 2015

While the TFR has been declining steadily from a record high of 8.1 in the mid-1970s, it has stalled in recent years at around 5 children per woman according to the 1998 and 2003 KDHS. According to the 2003 KDHS, the overall TFR for Kenya is 4.9 children per woman, but is 3.3 children per woman in urban areas and 5.4 children per woman in rural areas. The corresponding figures for the 1998 KDHS were 3.1 for urban areas and 5.2 for rural areas. Approximately 82% of the population lives in rural areas, where contraceptive prevalence estimates are also the lowest. The 2003 KDHS estimates the contraceptive prevalence rate at 39 percent, a

figure that has not changed since the 1998 KDHS. The percentage of currently married women using modern contraception was 27% according to the 1993 KDHS, but has stabilized at 32% in both the 1998 and 2003 KDHS.

Although CPR increases somewhat for currently married respondents (8.1% for all married women, 15.3% for all married men), these rates are even further from the objectives set in the National Population Policy.

In 1998, the government released its policy on HIV/AIDS. Other studies have indicated a growing incidence of STIs, including HIV.

According to a World Health Organization (WHO) assessment of the reproductive health needs of Kenya, one study found an 11% prevalence of syphilis among male blood donors. Another study has estimated the overall prevalence of HIV infection in Kenya to be approximately 11%, with most infections occurring in urban areas and along transportation routes. Given that national prevalence figures of STIs and HIV/AIDS are not known, numeric objectives could not be set for the national policy document. Instead, the policy set more general goals such as:

- Establish effective HIV/AIDS prevention and control strategies in order to curb the spread of the epidemic
- Promote a broad multisectoral response to the HIV/AIDS epidemic, including coordination of the activities of different sectors and mobilization of resources for the control of the epidemic
- Empower women, youth, and other vulnerable groups to take action to protect themselves against HIV/AIDS

By using the data you gather to guide the activities of your programmes, you can place your work in the context of the larger struggle to improve the reproductive health of all Kenyans.

UNIT 3 TOOLS FOR USING DATA EFFECTIVELY

OBJECTIVES By the end of this unit, trainees should be able to:

- Define strategic plans and work plans
- Set targets and identify key performance indicators
- Explain how to clearly present data using numeric and pictorial representations
- Distinguish between quantitative and qualitative data
- Explain how to represent data, compute calculations, and collect non-routine data
- Assess the quality of services provided

PURPOSE OF THE UNIT The unit helps to familiarize learners with commonly used data analysis tools and their application in managing RH programmes effectively.

TIME 9 hours

UNIT OVERVIEW

A. Strategic Plans and Work Plans (60 minutes)
B. Essential Data for a Health Facility (60 minutes)
C. Types of Records in Inventory Management (60 minutes)
D. Routine and Non-routine Data Collection (30 minutes)
E. Ensuring Data Quality (60 minutes)
F. Indicators and Targets (90 minutes)
G. Numerical Representation of Data (90 minutes)
H. Pictorial Representation of Data (60 minutes)
I. Quality Assessment (30 minutes)

MATERIALS Flip chart, markers, transparencies, pens, paper

HANDOUTS Handout 3.1 Definitions of Terms
Handout 3.2 Current and Recommended Indicators used by the Ministry of Health

TRANSPARENCIES

Transparency 3.1 The Planning Cycle
Transparency 3.2 Planning Questions
Transparency 3.3 Criteria for Assessing Data Collection Tools

ADVANCE PREPARATION

Prepare sufficient copies of handouts.

Session A. Strategic Plans and Work Plans……60 minutes

Step 1: Presenting the objectives of this unit. Display **Transparency 3.1** on the planning cycle and discuss each element. Point out that the planning cycle is a recurring process of measurement, analysis, and action designed to improve management. In this planning cycle, information is at the center of the process, and analysis of data provides answers to the four fundamental planning questions:

• Where are we now?	Situation analysis
• Where do we want to go?	Planning tools
• How will we get there?	Action/strategic plans
• How do we know when we have arrived?	Monitoring and evaluation

Explain that in order to assess your achievements; you need to compare what you have done to what you planned to do. Planning requires a clear understanding of what you are trying to accomplish and then determining at each level how you will accomplish it.

Step 2: Ask participants to define "strategic plan." Explain that a strategic plan or a strategy describes how you will achieve the goals you have set. It is a longer-term plan that allows an organisation to visualise where it wants to be in three to five years (even 10 years) and how it will get there. A strategic plan includes a mission statement and both long and short term goals.

Step 3: Display **Transparency 3.2** Planning Questions, and provide a brief explanation of each of the elements. The following points should be made:

- On the left of the figure are the "what" questions, starting with the largest and broadest dream, or **vision.**
- This is broken into specific **goals** that comprise that vision. Each goal is then defined by a number of **objectives** that must be accomplished to reach the goal.

- Generally to achieve objectives, certain **outputs** from your efforts will be needed.

- On the right side are the "how" questions that describe your **mission**, which states in general terms how you will achieve your **vision.** Your **strategy** describes how you will approach the **goals**. The **activities** you choose are designed to reach your **objectives,** and the **tasks** that comprise each activity will result in **outputs**.

Step 4: Ask participants to write down the vision and mission of their organisation. Share some of these in plenary and then present the following example of a mission statement:

> "The mission of Programme or Organisation A is to improve the reproductive health of men, women, and adolescents in Region Y by providing quality family planning services, sexual and reproductive health education, and detection and treatment services for sexually transmitted infections."

Step 5: Ask participants to think about the first word or phrase that comes to mind when they hear the word "goal." Write a few of these on the flip chart.

Explain to participants that goals are broad aims stated in general terms that represent the future direction in which political decision-makers and senior health care managers feel a program should be developing. Also make the following points:

- A goal identifies the specific situation to be changed, defines the direction and emphasis of change, and (where appropriate) sets priorities

- Goals may be achievable over time and therefore measurable, but still general enough to allow for a creative response to the problem

Step 6: Remind trainees that the strategies they developed for their organisations aim to accomplish certain **objectives**, which can be measured and for which people are accountable. Ask participants to write down

one objective of their programme. Share some of them and ask if the objectives are SMART.

Show the following example on the flip chart and ask if it is SMART:

> "To increase condom use amongst young men between the ages of 12-18 years in District X by 5% by the end of 2004."

Step 7: Then explain that **activities** are planned to accomplish objectives and comprise part of the **work plan**. A detailed work plan includes a guide to the **tasks** that will achieve outputs and that will accomplish the objectives that have been set.

Step 8: End this session by distributing **Handout 3.1** on the definition of terms and ask participants to read it during their free time. Ask if there are any questions or further points for discussion.

Session B. Essential Data for a Health Facility……60 minutes

Step 1: Ask trainees to brainstorm and name essential reproductive health data that need to be tracked by the reproductive health facility. Write down their responses on the flip chart and in addition, ensure the following types of data are mentioned:

- Antenatal care coverage
- ANC visits per client
- Age groups served
- TT 3rd booster dose to pregnant women
- Facility delivery coverage
- CYP rate
- FP methods
- Live births
- Still births
- Abortion/Miscarriages
- HIV/AIDS prevalence amongst ANC women
- STIs treated
- STI contact treated
- PAP smear taken

Step 2: Ask trainees what other essential data are required for reproductive health activities at the facility level. This list should include:

- Administrative data
- Facility unit infrastructure and equipment
- Human resources data
- Logistical data - in the terms of transport, drugs, laboratory, and x-ray services
- Financial data
- Population data including births and deaths
- Census data

Divide trainees into three groups and ask each group to identify what is included in each type of data. Allow about 15 minutes for this activity and then ask participants to share their findings in plenary.

Step 3: Remind trainees that in order to ensure comparability between different facilities, districts and provinces, it is essential to standardise definitions of both individual data elements and indicators. Also point out that there are various data collection tools that must be

standardized, including patient record cards, tally sheets, registers, report forms, and client cards. To ensure their proper use, they must be filled in accurately and in a timely manner.

Step 4: End this session by displaying **Transparency 3.3** Criteria for Assessing Data Collection Tools. Remind trainees that all data collection tools are for collecting "essential" data. If data is not needed, then get rid of it!

Session C. TYPES OF RECORDS IN INVENTORY MANAGEMENT
… 60 minutes

Definition: A record is a collection of related data items

Three types of records: Stock keeping records, transaction records and consumption records.

A. STOCK KEEPING RECORDS

These are used to record information about items in storage - receipts, issues, losses and adjustments and the balances at hand. They also record the results of physical count. They must contain the quantity of stock on hand and the quantity of losses and adjustments. When the stock keeping record is full, a new record is started using the ending balance from the previous record.
Some of the forms used for this record are:

1. **Bin Card:** This is an individual stock-keeping card that keeps information about a single brand of a given product. Bin cards are usually displayed at the bins or shelf where the lot of commodity is found.
2. **Inventory Control Card:** This is an individual stock keeping that keeps information about all lots of a product. One inventory control card should be kept for each product. The information contained in this card is with no regard to lot number or where the product is located in the warehouse. In situations where large amounts of a given commodity can be stored, (or different lots of a given commodity are supplied) it is desirable to maintain both inventory control card and bin cards. This ensures that each lot is managed properly.
3. **Stores Ledger:** Unlike an inventory control card a stores ledger is bound like a book. It is used instead of the individual card format. Although binding increases accountability, the ledger format is less desirable because it is easy to run out of space for an individual item. It is also hard to add new products.

Other information can be contained in stock keeping cards:

- Shipping information
- Various reference numbers
- Results of physical count
- Quantity and date of an order
- A column for the person entering the transaction
- Stock location information
- The standard re-order quantity amount

NOTE: Stock keeping records do not usually move. They stay where products are kept.

B. TRANSACTION RECORDS

These are used to record information about the movement of stocks from one storage facility to another. It is frequently desirable to include the current stock on hand, losses and adjustments and consumption data as well. The issuing facility may use this data to evaluate the reasonableness of the quantities requested or to ration the quantities to deliver if supplies are limited. Some transaction records have the products pre-printed while in others, the name has to be written by hand.

Some important information to note about the records:

- These records are filled by personnel at the ware houses and SDPs
- The records are initiated any time a facility requests or issues supplies
- Transactions are organized by date to act as ***ticklers*** as reminder that a request has been made but not received or an item has been issued but awaits confirmation of receipt.

Examples of forms used are:

1. Packing List (Slip): This has the list of name of the facility where the supplies are being sent and the names and quantities of each item to be shipped.

2. Issue Vouchers: This form is ideal in a pull system. It lists the items and quantity issued to a facility as well as in a separate column of those received. An issue voucher can be used instead of a packing list and receiving report thus reducing the number of forms to be completed and the chances of errors. The issue voucher should be completed in triplicate. The issuing facility retains the third copy (as a tickler) and sends the other two to the receiving facility. Upon verification of receipt, the receiving facility sends back the first copy to the issuing facility and retains the second copy for filing. The issuing facility can then destroy the tickler after receipt of the first copy.

3. Requisition and Issue Vouchers (RIV): This card is slightly different from the issue voucher in that it is used in a

pull system. In addition to indicating the amount actually supplied, it shows the quantity requested by a facility. It should be completed in quadruplicate (four copies). The requesting facility fills in the request and sends the top three copies to the issuing facility retaining the fourth copy, as a tickler. After completing the order, the issuing facility keeps the third copy as a tickler and sends back copies one and two back to the requesting facility along with the commodities. After verifying the quantity received, copy two is retained for filing thus allowing for destruction of copy four. Copy one is send back to the issuing facility allowing for disposal of copy three. At the end of the exercise each facility ends up with a completed copy of the Requisition and Issue Vouchers for its permanent file.

C. CONSUMPTION RECORDS

They record the quantity of each item dispensed to customers. The data contained in this report therefore is **user data** (i.e. quantity of each product received by a customer). Other data that can be included is service statistics e.g. new patients or continuing users. However the collection of this kind of data should be kept to the minimum to avoid compromising care to the client. This kind of data is considered to be non-essential for logistics. Service personnel at SDP's complete consumption records as supplies are dispensed to the customers. Consumption records generally do not move. They usually remain at the service delivery point.

Examples of forms used are:

1. Daily Activity Register (DAR): The records are usually bound in book form although they can also be in the form of printed over-size papers. They work best when generic names of drugs are pre-printed on the form. Hand written information is sometimes used, but this makes it difficult to tally the data for reporting. On the bottom of the DAR, totals are taken for each product for reporting. In a well functioning LMIS, the consumption figures recorded on the DAR should be close to the issue quantities recorded on the inventory control card.

2. Tick Sheet: This records the quantity of each product dispensed to users. A tick or mark (often an X) is made for each unit dispensed. In some cases, each box represents a client, and the number of each item dispensed is written in

the box. A tick sheet, unlike the DAR does not record this information by day or by client. Tick sheets work well at small SDPs that do not collect general patient data or community based distributors.

In conclusion, maintaining accurate records is crucial to good supply management. At any level of the system, managers should be able to report the stock on hand of any item quickly and easily.

Session D. Routine and Non-routine Data Collection

……30 minutes

Step 1: Start this session by reminding participants that they collect family planning service data on a routine basis. This type of data is referred to as routine data.

Ask participants to work in groups of three and to write down examples of routine data that they collect. Write their responses on the flip chart. The following examples should be mentioned:

- New acceptors
- Method mix
- Source of supply
- User characteristics
- Continuation rates
- Contraceptive prevalence rate
- Couple-year protection

Ask participants why it is especially important to collect this data and how managers use the data for decision-making. Point out that data are often quantitative and provide answers to questions such as how much, to what extent and how many.

Step 2: Ask participants to give sources of routine data. Some examples include:

- Immunization data
- Service statistics
- Financial reports
- Programme reports
- Client records
- Monitoring and Evaluation reports

Step 3: Ask participants what other data they collect and in what form. Record their answers. Explain that few management decisions can be based solely on the quantitative data that are collected routinely through an organisation's monitoring and evaluation system.

We therefore need to collect non-routine data, which is usually qualitative. Qualitative data is in the form of words, such as description of events, transcripts of

interviews, life stories, and written documents. It is not obtained on a regular basis.

Point out that routine and non-routine data complement and support one another.

Step 4: Ask participants to give examples of non-routine data. List these on the flip chart and add any of the following that they do not mention:

- Baseline surveys
- Field visits
- Exit interviews
- Census
- Demographic Health Survey
- Reproductive Health Survey
- Behaviour Sentinel Surveillance Survey

Step 5: Divide participants into three groups and assign one of the following qualitative data collection methods to each group. Ask them to answer the following questions about the method. Allow about 15 minutes for this activity and then ask them to share their responses in plenary.

Group 1. Focus group discussions
Group 2. Exit interviews
Group 3. Mapping

Each group should answer the following questions:

- What is the method and how is it used?
- What are the advantages and limitations of the method?
- What kind of data and information can be collected using this method?
- How can the manager use this data/information?

Step 6: End this session by reminding participants that that quantitative and qualitative data work in harmony to explain a trend. Each is dependent upon the other and neither can be ignored by managers at any level of an organisation.

Session E. Ensuring Data Quality……60 minutes

Step 1: Show the information cycle to the trainees and remind them that once collected, data needs to be processed. Merely collecting data is not enough. Before it can be turned into information, raw data needs to be processed to ensure quality, consistency, and accuracy. It then needs to be aggregated and tabulated in a form that aids future analysis so that it can be reported both vertically (sent up to higher levels) and horizontally (shared with all staff, other facilities or districts) and computerized for sharing at district and provincial and national levels.

Step 2: Ask trainees to split into pairs and discuss why they think there is no such thing as a perfect data set. Then point out that data need to be "cleaned" before they are useful to local managers or supervisors. The goal of cleaning data is to ensure that data errors are small enough so they do not bias decision-making.

Step 3: In the same groups, ask trainees to determine the characteristics of good-quality data. Ensure that participants learn that good data should be:

- Available on time and at all levels (old data are of historical value only; decisions must be made based on current information)
- Correct, complete, and consistent
- Reliable and accurate enough to support decisions; it is better to be roughly right, than exactly wrong!
- Represent all recorders of similar data
- Comparable, that is, using the same definitions of data items; if we do not measure by the same tool, we cannot compare our results with other's

Step 4: Ask trainees to complete the following table. Allow about 10 minutes for this activity and then share their responses in plenary. Remind trainees that these are common mistakes they should look for when looking at raw data.

Error	Example
Missing data	
Duplicate data	
Thumb suck	
Unlikely values for a variable	A man being pregnant
Contradictions between variables	100 births in a month when there are only 2,000 women of childbearing age
Calculation errors	
Typing error	
Capture in wrong box	

Step 5: Explain to trainees that the most effective way to ensure data quality is to look at the data. Look first across each line and then from top to bottom. It is important to look for missing data values, obvious fluctuations, inconsistencies between linked data elements, and mathematical errors.

Check data visually for:

- Correctness - are all the data within normal ranges? Are there any preferential end digits used?
- Completeness - have all units and facilities submitted all the data they should?
- Consistency - are data in the same range as this time last year? As other facilities?

Other important issues to look for include seasonal variations over time, variations outside of the set maximum/minimum ranges, and facility comparisons.

Step 6: Ask trainees to work in groups of three to decide what they do if they found errors? Responses should include:

- Find the cause - go back to the person who has collected the data, point out the problem, and reiterate the need for accuracy
- Correct the error - go back to the data source and get the correct number to put in the report. Always write an explanation in the comments space if there is one

- Prevent future errors - make sure the data collector understands the importance of the particular data item and remember to check it the next month to see that it is not a recurrent error

Step 7: Remind trainees that data entry should be physically checked by facility in-charges and supervisors to make sure that the data submitted for entry into the computer are as accurate as possible.

Session F. Indicators and Targets ……90 minutes

Step 1: Begin this session by reminding participants about the planning tools every manager needs at his/her disposal. Point out that planning tools help us decide where do we want to go, and then we set goals for what we wish to accomplish. To measure if we are making progress toward achieving our goals, we need to develop targets and indicators.

Step 2: Hang two cards on the wall: Targets and Indicators. Give participants two cards each and ask them to define each term. Ask them to put their definitions on the wall under the appropriate card and then discuss what they have written. Make the following points about targets and indicators:

> **Targets:** A target represents a goal to be achieved over a specified period of time. It is usually expressed as a number and it attached to a specific indicator.
>
> **Indicators:** An indicator is a unit of information measured over time that documents changes in a specific condition. Indicators are tools used to convert raw data into useful information and to enable comparisons between different programmes or facilities. Indicators:

- Convert raw data into useful information
- Are observable markers of progress towards defined targets
- Are used to describe the situation and to measurement changes over time
- Provide information about a broad range of conditions through a single measure
- Provide a yardstick whereby institutions or teams can compare themselves to others doing similar work

Ask participants to give examples of targets and indicators from their programmes. (See **Handout 3.2** on Current and Recommended Indicators Used by the Ministry of Health)

Step 3: Note that indicators are the tools that the DHIS uses to convert raw data into useful information and to enable comparisons between different facilities. While the information system collects data, these data have to be expressed in the form of indicators, which relate the data to standardized populations or sub-groups of items. Only when this analysis has been made can data from different-sized units be meaningfully compared.

Explain to participants that indicators expressed in percentages are easy to calculate.

$$\text{Indicator} = \frac{\text{Numerator}}{\text{Denominator}} \times 100 = \ldots\ldots\ldots\%$$

Some indicators are not expressed as a percentage but as a number, for example, the number of maternal deaths

Step 4: Divide trainees into two groups and ask them to complete the following sets of questions. One group should complete the questions on indicators and the other on targets. Allow about 15 minutes for this activity and then ask the participants share the responses in plenary.

Targets:

- What is a target?
- Why do we set targets?
- What should we consider when setting targets?
- How do we know if we have reached our targets?
- What do we do when we reach our targets?
- Give two characteristics of targets.

Indicators:

- What is an indicator?
- Why do we set indicators?
- How are indicators presented?
- What should we consider when setting indicators?
- How are indicators calculated?
- Give two characteristics of targets.

Step 5: Display the following table on a flip chart and note that there are four main types of indicators.

Type of indicator	Description	Example
Count indicator	Number of events without denominator	Number of new FP acceptors
Proportion indicator	Numerator is contained in the denominator	Proportion of FP facilities without electricity, for example, 35% of facilities do not have electricity
Rate indicator	Frequency of the event in a specified time in a given population	Incidence of new STI cases in a given population per year
Ratio indicator	Numerator is not included in the denominator	Ratio of service providers to the population Ratio of condom users to non-users For example, the proportion of users to non users is 3:1

Step 6: Explain to trainees that while it is easy to calculate indicators, their selection and construction is a complex and difficult process that takes great understanding, discipline, teamwork, and negotiation. The ideal indicator ***RAVES:***

Reliable: Gives the same results if used by different people in different places

Appropriate: Fits in with local needs, capacity and culture and the decisions to be made

Valid: Truly measures what is of interest

Easy: Can be simply calculated using routinely available data

Sensitive: Changes in the indicator immediately reflect changes in the actual situation under study

Step 7: Distribute **Handout 3.1,** divide participants into four groups and ask them to complete the table with examples of indicators from their programmes. Allow about 15 minutes for this activity and then have the groups share their findings in plenary.

Step 8: End this session by sharing the following table with trainees and reminding them that targets and indicators are important sources of data that help us to determine if we are progressing toward our goals.

GOAL: Providing all women access to modern family planning

Objectives	**Indicators**	**Outputs (for 1 year)**
45% couple year protection (CYP)	Couple (women) year protection rate	1,231 couple years of family planning (45% of 2376 fertile women)
Increase proportion of teenagers from 10% to 20% of total CYP	% CYP issued to teenagers	226 couple years issued to female teenagers (20%) of the 1,231 CYPs
Issue at least 50 condoms per fertile woman per year	Number of condoms per woman per year	136,800 condoms issued (2,376 x 50)

Session G. Numeric Representation of Data…….. 90 minutes

Step 1: Begin this session by reminding participants that merely collecting data is not enough. Before it can be turned into useful information, raw data needs to be processed to ensure quality, consistency, and accuracy. Data must then be aggregated and tabulated in a form that will help future analysis so results can be reported both vertically (sent up or down to higher or lower levels) and horizontally (shared with other staff, other facilities, or districts), and computerized and disseminated.

Step 2: Explain that having good data is only part of the process of using data effectively. Once the data have been collected, you must transform the data into usable information. Data are raw numbers or other findings which by themselves, are of limited value to decision-makers. Information, on the other hand, is the result of organizing, processing, and interpreting data, thus transforming the findings into facts that are useful to decision-makers. Data can be displayed in two ways:

- Numerically
- Pictorally

Step 3: Explain to trainees that the first step in organizing data is to describe them. Sometimes data can be easily separated into different categories, for example male and female. These data are referred to as *categorical*.

Categorical data can be presented in tables that give the numbers and percentages for each category. For example, knowing what percentage of your clients comes for family planning services, what percentage comes to your clinic for postnatal care and so on may help you to decide where to add additional staff positions or where to apply for additional funding. The following table shows a simple way to present data such as these.

Number and percentage of client visits by type of service received

Type of Service	Number of Client Visits per Year	Percentage of Total Client Visits per Year
Postnatal care	5,528	22.2%
EPI/immunization	5,104	20.5%
Family planning	8,244	33.1%
Prenatal care	3,912	15.7%
Delivery service	2,120	8.5%
Total	**24,908**	**100%**

Categorical data are also often presented in tables called *cross–tabulations*, which explore the relationship between two variables. In a cross-tabulation, two different groups are compared in reference to a particular characteristic – crossing two variables.

The following table illustrates a cross-tabulation in a baseline study of reproductive health and family planning in the Southern Nations, Nationalities and People's Regional State (SNNPR).

Percent distribution of respondents reporting desire for additional children

Want additional children?	Urban	Rural
Yes	62.8	80.6
Not decided	5.8	3.7
Infecund	10.3	5.2
No	21.1	10.6
Number of cases	**242**	**1,004**

(Source: Hailemariam, Welsh, et al, p. 61.)

Step 4: Now explain that data can be presented as *continuous* data, for example, ages or numbers of clients served. Continuous data can always be put into categories (for example, 0-1000 clients served). Ask participants to give other examples of continuous data from their own data.

Step 5: Tell participants that when they are preparing tables with data there are four key points they need to check. Put the following information on a flip chart and explain it.

(Maybe it's me, but I don't understand the difference between categorical and continuous data, based on these descriptions. I've attached some definitions that make more sense. It's your call.)

Correctness	Are all figures correct? The same as reported by you or the staff?
Completeness	Are the data in the table the same as the reports you have received/submitted? Are all the elements there?
Max/min range	Are the data within the maximum and minimum ranges you have set?
Consistency	Are the data each day/week/month approximately in the same range as the months before? How do the data compare with the same period last year?

Step 6: Ask participants to study **Handout 3.1** in groups of three, and ask them to check each data element for correctness, completeness, range, and consistency. Ask the trainees to answer the following questions:

- Correctness: Are all figures correct? The same as your paper report?
- Completeness: Are the data in the table the same as the reports you have submitted to the district?
- Are all elements there?
- Max/min range: Are the data within the maximum and minimum ranges you have set?
- Consistency: Are the data each month approximately in the same range as the months before? How do the data compare to the same period last year?

Allow about 20 minutes for this activity and ask the participants to share their responses in plenary.

Step 7: End this session by reminding participants about the importance of these elements and the ways of presenting data numerically.

Session H. Pictorial Representation of Data……. 60 minutes

Step 1: Start this session by reminding participants about the two ways of presenting data: numerically and pictorially. Ask them to identify different ways they have presented data pictorially. Write their responses on the flip chart. The following terms should be mentioned:

- Line graphs
- Cumulative coverage graphs
- Bar graphs
- Pie charts

Step 2: Explain to trainees that graphs help ensure that information is fully understood, as it is easier to get a point across visually than with a mass of figures. Graphs and charts should tell a story by themselves and are essential for:

- Summarising data
- Detecting trends over time
- Searching for patterns among large amounts of data
- Analysing the relationship between variables

Step 3: Ask participants to work in groups of three and talk about rules they follow when drawing or preparing graphs. Write their responses on the flip chart. Be sure to make the following points:

- Hand-drawn graphs by staff at the facility are the best, since they show that the team at the facility level understands and cares about the data
- Never put too much information on one graph; keep it clear and simple, usually one indicator on one graph
- Do not mix activities; stick to one group of people, for example, married women or adolescents

- Label your graph; always have a clear heading, easily-read labels on the axes, and a legend that explains each of the lines or bars

- Select scales that fill the entire graph on both axes

- Where possible, show a target line or reference point to show where you are aiming

Step 4: Divide participants into four groups and assign one type of graph to each group. Ask each group to:

- Draw a graph using their own data

- Describe the advantages and disadvantages of their graph

- Explain how this information will be useful at the facility level and for managers

Allow about 15 minutes for this exercise. Then ask the groups to share their presentations in plenary.

Step 5: End this session by reminding participants to encourage their service providers and CBDs to work together as a team to present their data by developing and drawing graphs and to ensure their accuracy.

Session I. Quality Assessment……30 minutes

Step 1: Ask participants what comes to mind first when they hear the term "quality assessment." Write their responses on the flip chart. The following points should also be made:

- Quality assessment refers to the quality of the services being offered
- Quality assessment is a tool that can be used to determine effectiveness and efficiency of the services being offered

Step 2: Ask participants why they think it is important to do a quality assessment. The following points should be made:

- To sustain family planning clients
- To attract potential clients
- To revise or modify targets and strategy

Step 3: Explain to participants that doing a quality assessment helps managers make strategic decisions about programmatic directions and goals. A quality assessment can also help managers to assess how the organisation's goals and achievements align with those of the region and country in which it is set.

By using quantitative and qualitative information and putting it into context at the local, regional, and national levels, the manager can make informed decisions. Doing so, he or she can improve the clinic's performance and eventually achieve an output target of increased return-acceptors and an outcome target of decreased fertility in its area.

Step 4: Ask participants to discuss in small groups, how they think a quality assessment should be done, who should do it, how often, and how they would present the data to their managers. Allow about 15 minutes for discussion and then have them share their views in plenary.

Step 5: End this session by asking participants if they have any questions on the entire unit.

Handout 3.1

Common Terminologies

Strategic Plan: Longer-term plans that allow an organisation to visualise where it wants to be in three to five years (even 10 years) and how it will get there. The process of creating a strategic plan is often very helpful for organisations that are new or are in changing environments. A good strategic plan requires staff members to take a step back and examine the overall strategy of the organization, and the plan will include a mission statement and long-term goals.

Mission Statement: Defines the impact that the organisation wants to have on its community or beneficiaries. It should be broad enough to enable the organisation to change in response to the needs of its community. For example: a mission statement for a regional reproductive health organisation might look like this:

> "The mission of Organisation A is to improve the reproductive health of men, women, and adolescents in Region Y by providing quality family planning services, sexual and reproductive health education, and detection and treatment services for sexually transmitted infections."

Goals: Goals in the strategic plan are longer-term, but provide direction for the specific ends the organisation wants to achieve. A goal identifies the specific situation to be changed, defines the direction and emphasis of change, and (where appropriate) sets priorities. Goals should also be measurable over time, but still general enough to allow for a creative response to the problem. For example (write on the flip chart):

> "To increase the contraceptive prevalence in Region Y within five years"
>
> "To increase access to and improve quality of comprehensive integrated RH/FP information and services"

This example details what needs to be changed (comprehensive integrated FP/RH information and services) and in what direction it should change (increased access and improved quality).

Objectives: A plan to achieve goals is broken down into objectives. Objectives are statements of direction that are measurable in terms of time and volume and generally cover a shorter period of time than a goal. For example, an objective pertaining to contraceptive prevalence might be (write on the flip chart):

> "To increase the prevalence of all modern contraceptive use in District X by 5% by end of year 2002"

Activity: Activities document exactly how the objective will be carried out during that time period.

Workplan: At a project or individual level, work plans document the objectives of individual units and the activities that must be performed to meet those objectives. They are generally for short periods – one year is standard – and are very detailed.

Indicator: An indicator is a numerical measure that provides information about a complex situation or event. When you want to know about a situation or event and cannot study each of the many factors that contribute to it, you can select indicators that best summarize the situation. By observing or measuring these indicators, you will get a good idea whether the situation or event is normal, above normal, or below normal.

However, sometimes it may not be possible to directly estimate the measure in your objective (perhaps you do not have funding to get a good measure of contraceptive prevalence in the district or your objective is too complex), and then the indicators are less direct. So, if an organisation could not measure contraceptive prevalence, it might set as its indicator the number of new acceptors of modern contraceptives recruited in that time period.

Target: While indicators measure the completion of goals and objectives, targets define the successful outcome of an activity. Targets are very specific, measurable, and achievable in a short period of time. Without targets, it is difficult to determine whether an activity was successful. For example, in the workplan, if the target for the new family planning clinic had not specified the date by which the clinic was opened, it would not be clear whether an opening data of November 30, 2002 was a "success" or not.

Setting targets can be done in several different ways. Some targets can be set by designating a number or deadline that seems logical (for example, the clinic opening date). Or, in some cases, a manager may specify what he/she wants accomplished over a

certain period of time. For example, an employee might be required to complete one IEC talk each week. Other ways to set targets might be by calculating percentage increases or decreases over time, as in the example for number of new acceptors above. Targets should always be achievable. Setting impossible targets for staff can serve as a disincentive (e.g., why work hard when you cannot meet your targets anyway?).

Current and Recommended RH Indicators Used by the Ministry of Health

Source: NATIONAL REPRODUCTIVE HEALTH MONITORING AND EVALUATION PLAN, February, 2007

Matrix of DRH M&E Indicators

Key: ID Codes for Indicators by level of assessment and core programs:

IA = Impact assessment, OA = Outcomes Assessment MO = Monitoring programme outputs SM = Safe Motherhood, FP = Family planning, AS = Adolescent sexual reproductive health programme, CM = Community program GD= Gender program, MC = Management & coordination, OR = Operational research

Indicators from Health Sector M&E Framework are: **(IA, OASM1, OASM2, OASM5, OAFP7, OAAS9, MOSM8, and MOSM14)**

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
Impact Assessment					
IA1	Maternal mortality ratio *(NME 3)*	Number of maternal deaths/100,000 live births	Household survey (DHS)	CBS Director	3 - 5 years
IA2	Neonatal mortality rate	Number of neonatal deaths /1,000 live births	Household survey (DHS)	CBS Director	3 - 5 years
Outcomes Assessment					

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
OASM1	Percentage of pregnant women having at least four antenatal visits during this pregnancy (NME4)	*Numerator:* Number of pregnant women making 4 ANC visit *Denominator:* Total number of pregnant women ***NB:*** *disaggregated by province and district*	*Numerator* a) ANC register *b) Facility HMIS form* *c) District HMIS summary form* *Denominator:* *d) population projections (multiplied by crude birth rate =expected*	a) ANC staff b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH d) CBS Director	a) Continuous c) Quarterly d) Annually
	Alternative: Percentage of pregnant women who attend at least once ANC (first visits)	N: # of pregnant women Making 1st ANC visit D: Total Expected number of pregnant women. (Total population in province or district, or country multiplied by crude birth rate)	Household survey (DHS)	e) CBS Director	3-5 years.

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
AOSM2	% of (expected) deliveries in the population, which were conducted by a skilled attendant	**Numerator:** number of deliveries conducted by a skilled attendant **Denominator:** total number of deliveries in the population (= crude birth rate x total population / 1000) -Expected pregnancies in the population	Maternity register + theatre register Reports from domiciliary midwives	a) Facility in charge b) DHRIO and DMOH	a) Continuous b) Monthly c) Quarterly
OASM3	HIV prevalence among 15-24 year old pregnant women *(NME 11)*	*Numerator*: Number of pregnant women (15-24)tested HIV+ *Denominator*: Total number of HIV tested pregnant women (15-24) in the population.	(1) Household survey (DHS) (2) ANC Sentinel Surveillance (3) *Numerator and Denominator* a) maternity registers *b) Facility HMIS form* *c) District HMIS summary form*	(1) CBS Director (2) NASCOP Director a) Maternity staff b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH and Facility in-	(1) 3 - 5 years (2) Annual a) Continuous b) Monthly c) Quarterly

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
				charge	
OASM4	Percentage of HIV+ pregnant women receiving ARV treatment for prevention of mother to child transmission of HIV (NME 13)	*Numerator*: Number of HIV+ pregnant women receiving ARV treatment for prevention of mother to child transmission of HIV *Denominator*: Total number of HIV+ pregnant women	*Numerator and Denominator* a) ANC (denominator) and maternity (numerator) registers *b) Facility HMIS form* *c) District HMIS summary form*	a) ANC and maternity staff b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH and Facility in-charge	a) Continuous b) Monthly c) Quarterly
OAFP5	Contraceptive Prevalence Rate (NME 19)	*Numerator*: Total number of women of reproductive age using any modern contraceptive method *Denominator*: Total number of women of reproductive age	Household survey (DHS)	CBS Director	3 - 5 years

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
OAFP6	Percentage of women of reproductive age receiving family planning services at facilities (NME 20)	*Numerator*: Total number of women using any modern contraceptive method *Denominator*: Estimated total number of women of reproductive age within catchment area	*Numerator* a) Family planning register *b) Facility HMIS form* *c) District HMIS summary form* Denominator d) Population projections	a) Family planning staff b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH and Facility in-charge d) CBS Director	a) continuous b) monthly c) quarterly d) *annual*
OAAS7	Proportion of adolescents/youths accessing youth friendly services	*Numerator*: Number of adolescents and youths (10-24 years) accessing youth friendly services *Denominator*: Estimated total number of youths in the population ***NB:*** *1. Services defines as per the Youth Friendly National guidelines*	*Numerator* a) Youth friendly service registers *b) Facility HMIS form* *c) District HMIS summary form* **Denominator** d) 36% of national estimates of total population	a) Youth friendly service staff b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH and Facility in-charge d) CBS Director	a) continuous b) monthly c) quarterly d) *annual*

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
		2. *Disaggregated by sex*			
Monitoring Programme Outputs					
MOSM1	Percentage of facilities conducting maternal death reviews (NME 7)	*Numerator*: Number of facilities with evidence that maternal death reviews are being conducted *Denominator*: Total number of eligible facilities (level 4-6)	Annual facility inventory	DHRIO/DMOH	Annually
MOSM2	% of women who attended post-natal care checkup between 1 and 2 weeks after delivery	**Numerator:** Number of PNC visits between 1-2 weeks after delivery **Denominator:** Total number of deliveries in population	Post-natal/ partum register	Facility in charge	Quarterly
MOSM3	Percent of health facilities offering PMTCT services	*Numerator*: Number of health facilities offering PMTCT	Annual facility inventory	DHRIO/DMOH	Annually

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
		services *Denominator*: Total number of health facilities **NB:** PMTCT services defined according to national guidelines			
MOSM4	Number of pregnant women who received HIV counseling and testing for PMTCT and received their test results	Total number of pregnant women who received HIV counseling and testing for PMTCT and receive their test results before leaving the facility/site	a) ANC register *b) Facility HMIS form* *c) District HMIS summary form*	a) ANC staff b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH and Facility in-charge	a) Continuous b) Monthly c) Quarterly
MOSM5	Number of health workers newly trained or retrained in the provision of PMTCT services.	Total number of workers newly trained or retrained in the provision of PMTCT services	Training report	DASCO	Bi-annual
MOSM6	% of (expected) deliveries in the	Numerator: Number of	Operation theatre book	I/C of theatre? Facility in Charge	) Continuous b) Monthly c) Quarterly

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
	population which were conducted by CS (should be 5 – 15 %)	Caesarean sections Denominator: Total number of deliveries in population			
MOSM7	Availability of Basic Emergency Obstetric Care (BEOC) (should be at least 4/500,000 population)	*N:* Number of fully functional BEOC facilities times 500,000 population D: Total population	1) Annual facility inventory 2) Periodic Survey (RAT Tool)	1) DHRIO/DHMT 2) NCAPD & MOH	1) Annually 2) 3 – 5 years
MOSM8	Availability of Comprehensive Emergency Obstetric Care (CEOC) (should be at least 1/500,000)	*N:* Number of fully functional CEOC facilities times 500,000 population D: Total population	1) Annual facility inventory 2) SPA 3) Periodic survey (RAT tool)	1) DHRIO/DHMT 2) NCAPD & MOH	1) Annually 2) 3 – 5 years
MOSM9	Case fatality rate of emergency obstetric complications treated in CEOC facilities	**Numerator:** Number of direct maternal deaths in CEOC facilities **Denominator:** Number of	Register Admission book of female or gynecology Ward	Facility in-charge	Quarterly

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
		emergency complications seen in CEOC facilities			
MOSM10	Met need for EOC (=% of emergency obstetric complications, which were treated in EOC facilities)	Numerator: Number of emergency complications treated in BEOC/CEOC facilities Denominator: 15% of number of deliveries *NB: What to include in "emergency complications" needs to be defined and case definition also needed.*	- Maternity Register - Admission book of female or gynecology ward	Facility in-charge	- Quarterly - Annually.
MOSM11	Number of community own resource persons (CORP) trained on RH using the orientation package	Number of CORP trained on RH using the orientation package	a) CORP training report b) District RH training report	a) Facility in charge b) DMOH	a) Continuous b) Quarterly

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
MOSM12	Percentage of verbal autopsies conducted at community level	*Numerator:* Number of verbal autopsies done X 100 *Denominator:* Total number of maternal deaths in the community	-Maternal Death Notification Report Form or verbal autopsy form - source of number of maternal deaths in the community - Maternal Death Notification Form	a) Provincial Administrators (Chief) b) RH Coordinator	Continuous autopsy reporting with quarterly notification to DRH
MOFP13	Proportion of health facilities providing comprehensive and integrated RTI/STI services.	*Numerator*: Number of health facilities offering integrated RTI/STI services *Denominator*: Total number of health facilities **NB:** integrated RTI/STI services needs to be defined	Annual facility inventory	DHRIO	Annually
MOFP14	Number of health service providers updated in FP	Number of health service providers updated in FP according to revised national FP guidelines **NB:** correlated with SPA indicator	a) FP training report b) District RH training report	a) RH Coordinator b) DMOH	a) Continuous b) Quarterly

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
MOFP15	Number of facilities with no contraceptive stockouts	Number of health facilities with over 3 months stock of at least 3 modern methods of contraceptives **NB:** correlated with SPA indicator	a) Consumption Data Report and Request Report (CDRR) b) *report from district RH coordinator to DRH*	a) District Supplies Officer b) *District* RH Coordinator	a) Monthly b) Quarterly
MOFP16	Proportion of health facilities offering infertility services	*Numerator*: Number of health facilities offering infertility services *Denominator*: Total number of eligible health facilities	Annual facility inventory	DHRIO	Annually
MOAS17	Percentage of health facilities offering cervical cancer screening	*Numerator*: Number of health facilities offering cervical cancer screening *Denominator*: Total number of eligible health facilities **NB:** correlated with SPA indicator	Annual facility inventory	DHRIO	Annually

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
MOAS18	Number of Youth Friendly Centers (YFC) established	Number of YFC established	Annual facility inventory	DHRIO	Annually
MOCM19	Number of RH IEC/BCC sessions held at the health facility and in the community	Number of RH IEC/BCC sessions held at the health facility and in the community	a) RH IEC/BCC log book *b) the form that is used to summarize the facility service information and sent to the district* *c) the form that is used to summarize the district's facility information and sent to the DRH or national HMIS*	a) Community Health Extension Worker (CHEW) b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH Facility in-charge	a) Continuous b) Monthly c) Quarterly
MOCM20	Number of CORPS trained on contraceptives distribution	Number of CORPS trained on contraceptives distribution at the community level	-Community register -CORPS log book	CHEW	-Quarterly
MOCM21	Number of IEC, BCC, songs, poems developed at community level	Number of functional groups producing IEC, BCC, folk songs, drama,	*Community group registers*	District Health Promotion Officer	Annually

Source: DRH M&E Plan '07

Level of Assessment / ID Code	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
		puppets on for example HIV & AIDS, ASRH, gender-based violence and sexual abuse. **NB:** disaggregated by district			
MOMC22	Proportion of MOH funds disbursed for RH programmes	*Numerator:* Amount of MOH funds disbursed to RH programmes *Denominator:* Total funds allocated to MOH	Printed estimates	PS MOH	Annually
MOGD23	Number of health facilities offering post-rape care	Number of health facilities offering post-rape care services ***NB:*** *Disaggregated by levels 1-6*	Annual facility inventory	DHRIO	Annually
MOGD24	Number of health service providers trained in gender mainstreaming	Number of health service providers trained in gender mainstreaming **NB:** disaggregated	a) Gender mainstreaming training report b) District RH training report	a) *who's ever in charge of training* b) DMOH	a) Continuous b) Quarterly

Source: DRH M&E Plan '07

nt	Indicator	Indicator Definition	Data Source	Responsibility	Frequency
		by level of provider			
MOGD25	Number of sensitization sessions on female genital mutilation (FGM) and inter-generational dialogue conducted at the community level	Number of sessions conducted on FGM and inter-generational dialogue at community level	a) RH IEC/BCC log book *b) the form that is used to summarize the facility service information and sent to the district* *c) the form that is used to summarize the district's facility information and sent to the DRH or national HMIS*	a) Community Health Extension Worker (CHEW) b) Facility HRIO/M&E officer and facility chief c) DHRIO and DMOH Facility in-charge	a) Continuous b) Monthly c) Quarterly
MOOR26	Number of RH operations research completed	Number of RH operations research studies completed as identified by RH programme stakeholders	RH research inventory	DRH M&E Officer	Continuous

Source: DRH M&E Plan '07

Draft National Indicators from the Monitoring Millennium Development Goals (MDG)

National Indicator	Current reliable data source (s)	Level	Possible Relevant RH tool if data are to be obtained from the system	RH component
Total fertility rate	DHS, censuses	Higher	None	Family planning unmet needs
Contraceptive prevalence rate	DHS	Second	None	Family planning unmet needs
Maternal mortality ratio	DHS	Higher	None	Safe motherhood and child survival
Antenatal care coverage	DHS	Second	ANC register	Safe motherhood and child survival
Births attended by skilled health personnel	DHS	Second	None	Safe motherhood and child survival
Availability of basic essential obstetric care	KSPA Number functioning per 500,000 pop	Third	Facility checklist	Safe motherhood and child survival
Availability of comprehensive essential obstetric care	KSPA Number functioning per 500,000 pop	Third level	Facility checklist	Safe motherhood and child survival
Perinatal mortality	DHS	Higher	Labour ward Register	Safe motherhood and child survival
Low birth weight prevalence	DHS (verbal autopsy not very accurate)	Higher	Clinic card and labour ward register, ANC register	Safe motherhood and child survival
Positive syphilis serology in pregnant women	Surveillance data Facility records	Higher	Monthly lab reports, outpatient register, new labour ward register, ANC register	Management of STIs/HIV/AIDS
Prevalence of anaemia in women	Hospital records	Higher	Outpatient register, clinic card, ANC register	Safe motherhood and child survival
Percentage of obstetric and gynaecological admissions owing to abortion	Hospital records	Higher	Labour ward register	Safe motherhood and child survival Family planning unmet need Management of infertility

National Indicator	Current reliable data source (s)	Level	Possible Relevant RH tool if data are to be obtained from the system	RH component
Reported prevalence of women with FGM	DHS	Higher	None	Gender issues and reproductive rights Safe motherhood Management of infertility
Prevalence of infertility in women	DHS		None	Management of infertility
Reported incidence of urethritis in men		Higher	Outpatient register, monthly lab reports	Management of infertility STI/AIDS
HIV prevalence in pregnant women	Sentinel Surveillance; Hospital records	Higher	ANC register	Management of STIs/HIV/AIDS
Knowledge of HIV-related prevention practises	DHS	Third	None	Management of STIs/HIV/AIDS

Indicators That Can be Obtained from Draft Expanded HMIS Tools

Current Tools and code	Type of indicator	Improved/proposed tool	Type indicators	Level of reporting
CHANIS				
District summary (704)	Number of children underweight by age Proportion underweight by age	Facility tally sheet (Code 704 A)	Proportion of under weight child by age and sex Proportion of malnourished children by age and sex	Facility
		Facility monthly summary (704B)	Same as above Number requiring follow up (Proportion) New children attending facility	Facility and district
OUTPATIENT MORBIDITY (BY AGE AND SEX)				
		Over 5 years (701A) (NOT A TOOL)		
Under 5 years (701B) NOT A TOOL – see heading	Leading causes of morbidity	IMCI (701C)	Leading causes of morbidity by sex Number of referrals by cause o Incidence of severity cases of Malaria, Measles, Diarrhoea, Pneumonia, Malnutrition/anaemia	
FACILITY MONTHLY SHEETS				
		Over 5 years 705A	Incidence of STIs, anaemia, abortion, sexual assault, of puerperium and childbirth (Proportion of new cases- incidence rates and prevalence rates) Average distance of the population to the facility	Monthly incidence rates can computed among those attending the facility and at district level, to be used for leading causes of morbidity and mortality

Source: DRH M&E Plan '07

MONTHLY FACILITY WORKLOAD	
Number of New attendances (CWC, ANC, PNC, FP) Number of re-attendances of the same Number of deliveries by type, Number of live births Incidences of direct causes of maternal morbidity and mortality Number of neonatal, perinatal and maternal deaths Frequency of stockouts for priority drugs Number of management meetings and supervisory visits	The monthly workload is an important tool that should be improved to include also number of personnel by area of specialty and training. It can be used as a review for the staffing and also as measure of extent of access to quality services

Reproductive Health Indicators That Can be Derived from the Expanded Draft HMIS Tools

	Reproductive health facility (NEW)	Number of FP methods available in facility Number of new and revisit clients by method choice Frequency of stockouts in test kits (HIV) Proportion of ANC clients HIV +VE Proportion of infants on nevirapine syrup Proportion of HIV clients on nevirapine tablets Percent HIV +VE Number attending with of RTIS Proportion of 15-24 who are HIV+VE stratified by sex Number of clients counselled by HIV status stratified by age, sex and marital status Number of personnel trained in STI management, VCT on site	
Inpatient morbidity and mortality - (hospital and health centre)		Number of inpatients with maternal child health conditions by age Number of deaths as a result of reproductive-health-related conditions by age and sex Average length of stay as a result of RH related condition (diagnosis)	
	Health Education facilities (NEW)	Number of outreach education activities on reproductive health matters Number of outreach activities on ASRH Number of outreach activities on male involvement in family planning	

Possible Indicators That Can be Derived from Expanded Draft RH Tools from DRH

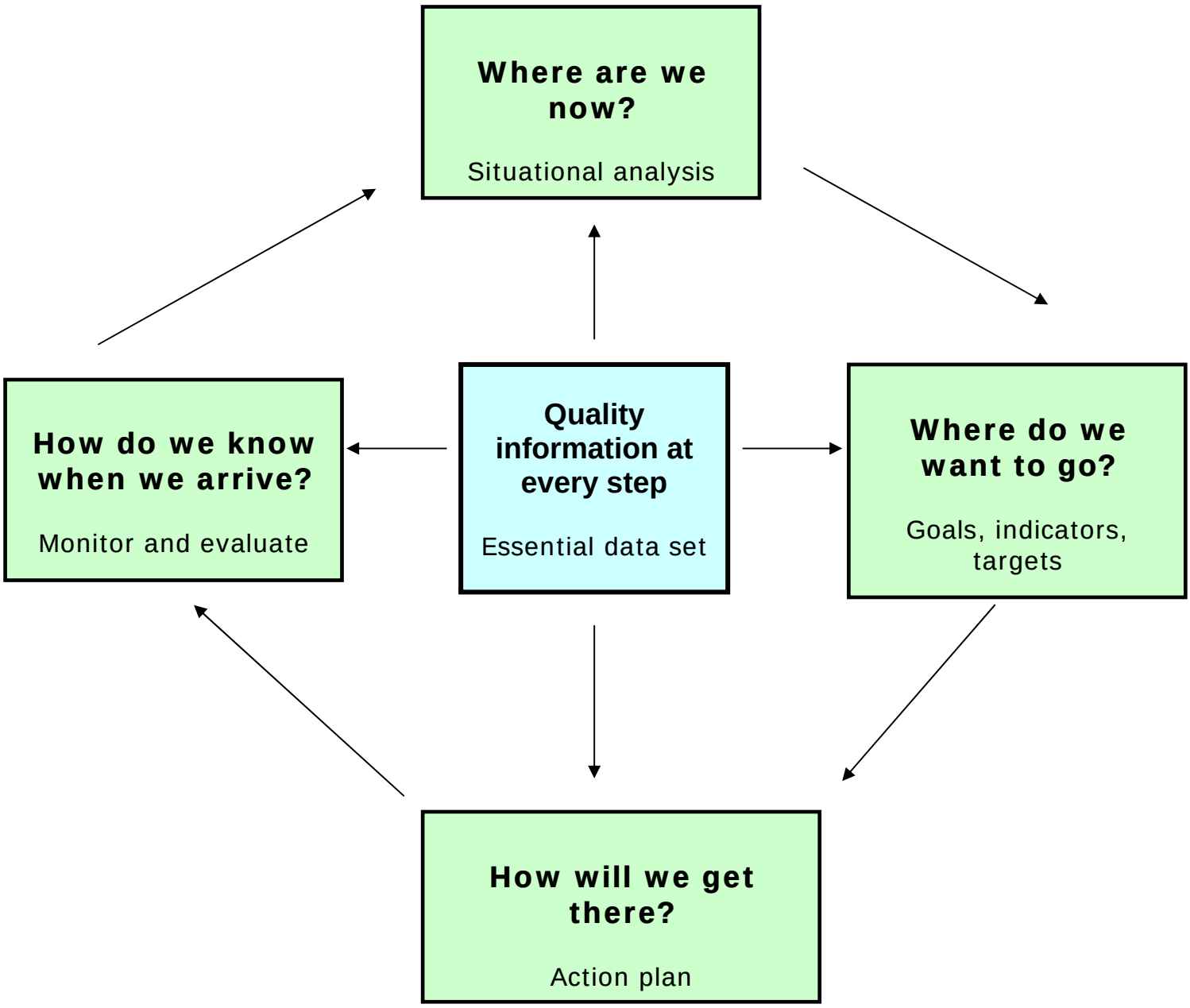
Tool	Type of indicator (simple)	Composite indicators (derived from the register)	
ANC Register	Number of first visits Number receiving mandatory 4 visits Number of pregnant mothers who are anaemic Number receiving mandatory 2 doses of IPT, TT Number using ITN Percent of home deliveries Percent HIV +VE Percent on ARV Percent with STI/RTI Percent counselled (PMCT) Number of referrals made	Percent of women attending facility with previous birth interval 24 months or less by age and martial status Percent with late ANC visits Percent (number) of mothers with high risk pregnancies (Birth interval less than 24 months, under 20 years, parity greater than 4) Level of mortality by age 2 (24 months) in the area served by the facility (derived from the use of preceding births that is number of women attending ANC whose preceding child died divided by total ANC attendance the facility in a year)	
Labour ward delivery register	Same as above but also: Number of deaths by age Number of neonatal deaths Number of still births Number on ARV syrup Number without birth notification Number of referrals	Same as above but also: Average duration of time (hrs) from onset of labour to arrival at facility (measure of access) Average duration of time (hrs) from prescription to operation of CS (indicator of quality of service) Proportion of deliveries that are CS Proportion of births with low AGPAR scores at 5 minutes (health status of newborn) Proportion of infants with low birth weights by sex (Note: this indicator may be divided into those with extreme low birth weights <1500g and those with <2500g (RH status and children requiring follow up)	

Source: DRH M&E Plan '07

Tool	Type of indicator (simple)	Composite indicators (derived from the register)	
Family planning register	Number of clients provided with contraceptives by age, parity, marital status, and type of method Number of methods available Number of referrals for BTL and vasectomy	Proportion of facilities with at least 3 modern methods (including emergency contraception) (Minimum range of services also UNFPA indicator) The most frequent method used by clients in the facility/district (determine stock levels by method) Proportion using inappropriate method (measure for unmet need)	
PAC register	Number of patients to the facility requiring PAC by age, parity and marital status Proportion counselled Proportion MVA done Number accepting contraceptive by age, marital status, parity and type of method	Number of admissions to the facility requiring PAC services (measure of unmet need for Family Planning). This should also be provided by age and marital status to capture indicators for adolescent health	

Transparency 3.1

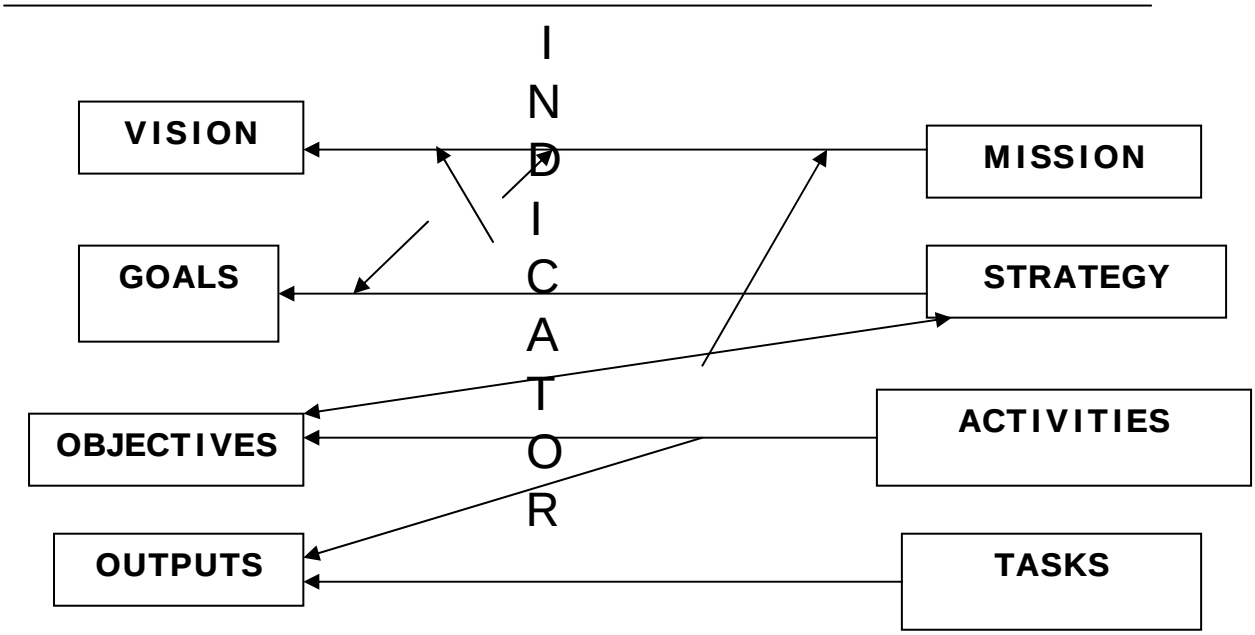
THE PLANNING CYCLE



Source: Using Information for Action: A Manual for Health Workers at Facility Level, The Equity Project, USAID, South Africa.

Transparency 3.2

Planning Questions



Source: DRH M&E Plan '07

Transparency 3.3

Criteria for Assessing Data Collection Tools

Type of Tool	Purpose	Layout	Relevance	Overlap
How many? Client card Register Tally sheet Report	*Effective decision making for:* Public Health Management Supervision/Support Monitoring/Evaluation	Simple Clear Easy to understand Priority actions No useless data Missing actions evident	*Useful for:* Incidence/Prevalence Coverage/Quality Expenditure Input/Process Output/Outcome	No over-lap with other forms What? When? How? Why?

Source: DRH M&E Plan '07

UNIT 4 **A BLUE PRINT FOR USING DATA FOR DECISION- MAKING**

OBJECTIVES By the end of this unit, participants should be able to:

- Describe the five steps of the framework to use data for decision-making
- Explain why data should be collected in a timely fashion
- Explain the importance of feedback at all levels

PURPOSE OF THE UNIT This unit stresses the importance of timeliness and feedback as the key to using data for decision-making. The unit also provides a five-stage framework for using data for decision-making.

TIME 1 hours

UNIT OVERVIEW

A. A Framework of Using Data for Decision-Making (60 minutes)

MATERIALS Paper, pens, flip chart, marker pens

HANDOUTS Handout 4.1 Framework for Using Data for Decision-Making

TRANSPARENCIES:

Transparency 4.1 Framework for Using Data for Decision-Making

ADVANCE PREPARATION

Session A. A Framework for Using Data for Decision-Making……60 minutes

Step 1: Present the objectives for the session. Then explain that information is the core of the planning cycle and should provide the answers to the planning questions.

However, just having information does not mean that managers will use it. Information use is made easier if the process is ritualized and routines are set up as part of the "information culture."

Emphasize that every decision made, every action taken, and every change made should be guided by information coming from the facility and influenced by the organisation's policies, norms, and regulations.

Step 2: Ask participants to copy the following matrix and list the different levels of their organisation from which data are collected and analysed for monitoring and evaluation. Allow about 10 minutes for this activity and then ask participants to share a few of their responses.

Which data are collected?	At what level?	Who analyses it?

Explain that data should be analysed at the level at which they are collected. Doing so allows managers at each level to identify immediate problems and find solutions quickly and efficiently.

Step 3: Show **Transparency 4.1** on the five steps of the framework for using data for decision-making. Explain each step as you present it:

1: Collect data in a timely fashion.

Explain the importance of setting deadlines for data collection and ensuring that deadlines are kept.

Ask the three participants to prepare this role-play and then perform it:

The service provider and Community Based Reproductive Health Agents are compiling their monthly report, but they can not find their registers and daily attendance sheets. Besides they never received feedback on the last two monthly reports they sent in, nobody gave them feedback on. Their supervisor in Nyeri calls to say that the report is already late by two days. Role play what happens next.

2: Put data into perspective.

Explain that we need to put data into perspective to determine its validity and accuracy. This enables us to compare it with other data to verify it.

Give the example of a CBD agent who reports that he/she served 40 new clients this month. Ask participants to brainstorm in groups of three questions they would ask about this data. Write their responses on the flip chart and add the following:

- Does the number reflect an acceptable or unacceptable state of affairs?
- Is it higher or lower than the previous month?
- Is it what was expected or unexpected?
- How does it compare to other projects?
- Does it meet your employee's targets?
- How does it compare with other staff member's on the project?
- Does it indicate that you are likely to meet your project or district-wide target?

- What does it say about the direction the project is going?

3: Find the story. What do the data tell us?

Explain that this is the most important step of transforming raw data into information through a process of analysis and interpretation. Numbers on their own do not tell the full story.

Explain that there are several ways you can find the story and determine what the data tell you. You can:

- Describe the event or (description)
- Find the causes of the event or phenomena (explanation or relationships)
- Explain how to control the phenomena

Now explain the importance of examining trends, and ask participants to think about the following questions:

- Have there been any significant differences over time?
- Has the context changed over the period of time during which the data were being collected?
- What were the expectations versus actual outputs/targets according to the workplan and/or other project documents?
- Was there new, unexpected information?
- What lessons were learned?

4: Develop explanations and take action.

After analysing the data, always ask why something happened. In other words, you need to interpret the data so that you can tell the story.

Explain that as a monitoring and evaluation officer or as the manager, it is the participants' responsibility to explain and interpret and then test whether the conclusions are true.

5: Report on analysis and actions.

Reports should be brief, but complete, and easily understood with simple language.

Step 4: Ask participants why they think it is important to give and receive feedback on the data that have been collected and analyzed. Write their responses on the flip chart and add the following points:

- Feedback is the communication of analysed information presented in an interesting way an interpreted in the light of local reality
- Feedback is the most important mechanism to inform the actions of current and potential users
- Feedback is a basic right of service providers and CBDs and other interested stakeholders.

Step 5: Ask participants in what form they think feedback should be given. Point out that there are different types of feedback that are suitable for different audiences. Display the following flip chart and explain it as you present it.

Type of Feedback	Example	Audience
Written feedback	Tables of monthly data	Staff/managers
	Short program reports	Staff/managers
	Comparisons by facility	Staff/managers/CBDs
	Graphs **	Staff/CBDs
	Quarterly/bi-annual/ annual reports	Staff/managers/NGOs/ community
	Standard reports	Staff/managers
	Special reports	Policy-makers/NGOs
Verbal feedback	Self assessments *	CBD/staff
	Staff appraisals *	CBD/staff community

Step 6: End this session by reminding participants about the importance of the framework for using data for decision-making.

Handout 4.1

Framework for Using Data for Decision-Making

Step 1: ***Collect data in a timely fashion.***

Data must be collected and submitted in time for rapid entry into the computer, and the production of immediate reports. These are critical for the manager to make effective programmatic decisions. The staff needs to understand the importance of timely reporting by setting deadlines, and that the deadline is firm and non-negotiable.

Step 2: ***Put data into perspective.***

Numbers, on their own, are too abstract. They must be put into perspective and converted into information. It is important to question numbers and find out what the numbers mean in the context of your program or project.

Step 3: ***Find the story. What do the data tell us?***
There are several questions to ask yourself when examining data to find what story they tell:

- Have there been any significant differences over time?
- How has the context changed over the period of time during which the data were being collected?
- What were the expectations versus actual outputs/targets according to the workplan and/or other project documents?

Step 4: ***Develop explanations and take action.***

It is your responsibility to explain and interpret data and then test whether your conclusions are accurate. It is possible to have more than one explanation for each story. The more explanations you generate and test, the more certain you can be that you understand what really happened. Sometimes you can use data from other

sources to help explain what you are seeing in your own data; for example, government data about effects of policy changes might illuminate trends you note in your data. Also look at internal factors like your staffing or procedural changes or even special campaigns that might influence trends.

Look at the characteristics of your clients to see if they have changed. Large variations from one month to the next should especially be looked at in great detail. However, a small change from one month to the next is normal and is to be expected. When you have an idea of why the numbers went up or down or why you met or did not meet the target, check what is happening.

Step 5: ***Report on analysis and actions.***

Reports should be brief, but complete and easily understood with simple language. They should contain a summary that clearly explains the activities of the project. Reports should be written as a historical document; write with a broader audience in mind one that might not be familiar with the details of the project.

FRAMEWORK for USING DATA for DECISION MAKING

Step 1: Collect data in a timely fashion

Step 2: Put data into perspective

Step 3: Find the story

Step 4: Develop explanations and take action

Step 5: Report on analysis and actions

UNIT 5 EXAMPLES OF USING DATA TO MAKE BETTER DECISIONS

OBJECTIVES By the end of this unit, trainees should be able to:

- Use data for informed decision making
- Explain the steps in establishing an MIS
- Describe how to maintain an MIS

PURPOSE OF THE UNIT This unit gives examples of using data to make better decisions at the local, district, and national levels. It also explores the steps in establishing and maintaining an MIS.

TIME 2 hours 30 minutes

UNIT OVERVIEW

A. Using Data for Decision Making (6O minutes)
B. Establishing an MIS (90 minutes)

MATERIALS Flip chart, markers, transparencies, pens, paper

HANDOUTS Handout 5.1 Establishing a Management Information System

Handout 5.2 The Information Cycle

TRANSPARENCIES

Transparency 5.1 Establishing a Management Information System

ADVANCED PREPARATION Prepare sufficient copies of handouts

Session A: Using Data for Decision-Making……..60 minutes

Step 1: Start this session by presenting the unit's objectives. Then explain that at each level of an organisation's management there are unique challenges and responsibilities.

Managers can use data in different ways and at different levels to guide their decisions and staff.

Step 2: Show the table for new clients per month, Table 1, New Clients per Month. Ask how the CBDs have performed. Then ask for reasons why some have not performed well. Point out that the manager has to find out what has happened and then explain the poor performance. The manager would then take action based on the story the data tell and explanation.

The manager should contact the supervisor and take steps to modify the situation.

Step 3: Discuss decisions are made at the district level. District-level managers do not deal with frontline managers. District-level managers are expected to ensure that the project achieves its objectives. They are also responsible for assessing how their district contributes to the organisation's goals and objectives.

The project is consistent with the organisation's direction. District level managers need to examine the capacity of different project staff and then determine what they are capable of accomplishing working with staff.

Step 4: Divide participants into groups and ask them to work on the following example: A manager of District Z is asked to re-set targets for recruiting new FP clients in three of the district's clinics next year.

The following table shows average monthly FP clients by clinic in District Z.

	Clinic J	Clinic K	Clinic L	Total
New FP clients	24	56	72	152
Revisit FP clients	365	432	687	1,534
Total FP clients	389	538	759	1,686
Catchment area pop.	9,031	13,306	16,511	36,906

Allow about 10 minutes for this exercise. Ask the groups to share their responses in plenary. The following activities should be suggested:

- Conduct a survey to identify the population of potential users and performance of the three clinics
- Put the data into perspective; analyze the monthly FP clients by clinic
- Look for the story, the manager should develop an explanation and find out more about the staff, the logistics, and the reasons why clients are not attending a particular site

Step 5: Show the following table on setting Clinic J targets for new clients.

Information Needed	Source of Information/Assumption	Calculation	Number
Catchment area for Clinic J	Baseline assessment		9,031
Number of women in catchment area	Assume 50% of population is female	9,031 x 0.5	4,516
Number of women who are of reproductive age (15-49)	Assume 50% of population are between 15-49 years	4,516 x 0.5	2,258
Ideal number of women who would be using contraception	National goal is 44% contraceptive prevalence	2,258 x 0.44	994

Information Needed	Source of Information/Assumption	Calculation	Number
Current number of women using contraception	Assume that monthly number of FP clients served is approximate to no. of women using contraception		389
Number of women still available to be recruited to FP		994-389	605
Monthly new target for new clients	Split number of women to be reached over 12 month period	605/12	50

Point out the fact that assumptions may result in unrealistic results and should therefore be modified. The manager should check every month and change targets accordingly.

Step 6: Explain that national-level managers are responsible for

- Facilitating strategic thinking in the organisation
- Setting priorities
- Representing the organisation to the government and donors

Therefore, senior managers need data to see where their organisation stands at the current moment. They need chronological (time series) data on client demands and data that show the organisation's strengths and accomplishments in a compelling manner.

Ask participants to think about how they use the data to make their case to the donors. The following points should be made:

- Make a proposal
- Prepare an advocacy presentation
- Disseminate data to a wide variety of audiences
- Network to determine who is interested in what your organisation is doing

- Show the data in a convincing and persuading manner with a history of steady growth and success

Step 7: Explain that donors want to see what impact your organisation has had on the community you are serving. Ask participants what type of information they could present on impact. Some examples include:

- Service statistics data
- Smaller data collection efforts their organisation has made
- Periodic evaluations that look at changes in behaviours and health indicators
- Calculate the average percentage of the new clients at the clinic who return for re-supply. The percentage shows clients satisfaction.

End this session by asking participants if they have any questions about this topic.

Session B. Managing the Information System…….90 minutes

Step 1: Start this session by defining an information system. Point out that an information system is the way your organisation decides what data to collect, how it collects and analyses that data, and how it supports staff in data-collection efforts. Then explain that a health information system needs to be managed just like any other program in your organisation and at the facilities level. To make it effective and worthwhile, there needs to be a plan, resources allocated, and time spent to make it efficient and worthwhile.

Step 2: Show **Transparency 5.1** with the six steps to establishing a management information system. Point out that although referred to as steps, they are not necessarily sequential; they are cyclical and may happen in parallel. Distribute **Handout 5.1.**

Step 3: Write the following information on a flip chart, and explain that these are 10 requirements of a quality information system.

1. A dataset that is small, focused and relevant
2. Definitions of all data items agreed upon by all stakeholders
3. Simple tools, minimum overlap, useful, relevant, clearly laid out and effective
4. Indicators that are relevant, agreed upon, valid, easy, sensitive, and specific
5. Analysis done locally by data gatherers themselves
6. Presentation of graphs at meetings, in-service training, and workshops
7. Feedback is regular, focused, and relevant.
8. Supervision is information-focused and supportive
9. Teamwork is encouraged at all levels
10. Training in information use is on-going and part of an overall information culture

Then distribute **Handout 5.2** and discuss it.

Step 4: End this session by pointing out that the entire information system and cycle is designed to identify and promote actions at local level to improve the health and well being of clients in reproductive health and family planning programs. In order to do this, high quality, reliable, and timely data are required at all levels of the system to make informed decisions.

ESTABLISHING A MANAGEMENT INFORMATION SYSTEM

Step 1: Form information teams at the facility level and within other levels of the organisation

Step 2: Conduct an information audit

Step 3: Set objectives, indicators, and targets to define a data set

Step 4: Strengthen local information systems and structures

Step 5: Develop staff skills and understanding on the importance of data for decision-making

Step 6: Create an information culture

Handout 5.1

Establishing a Management Information System

Step 1: Form information teams at the facility level and within other levels of the organisation

Should include everyone collecting and/or managing data.

A facility information coordinator should be nominated to manage the facility's information.

The job of the facility coordinator is to:

- Ensure that all staff are aware of the importance of information and are collecting it accurately
- Collect data from all staff and collate it into a monthly report for the facility
- Enter the data into the computer (where possible) and print the feedback report
- Take the monthly feedback report back to the facility and discuss with other staff members
- Ensure that graphs are drawn and displayed for all to see
- Form area teams in which supervisors play a key role in sharing information among facilities, and encourage analysis, presentation, and interpretation of locally gathered information
- Conduct a needs assessment to determine available human resources, skills, and equipment

Step 2: Conduct an information audit

The first thing the information team should do is conduct an information audit to find out exactly what data are being collected and for what purposes. This process will get the staff to think about:

- Who collects data and for whom is it collected?
- What data do they collect? On what forms? Is it locally useful?
- When is data collected? How often is data reported on and acted upon?
- Where does data come from? Is it easy to collect?
- Where is data sent? Is it collated at a central point and analysed by the district before being sent to higher levels?
- Why is data collected? Is it for the collector or for the managers?
- How is data collected, collated, then transformed into useful information for local action?

Step 3: Set objectives, indicators, and targets to define a data set

Step 4: Strengthen local information systems and structures

Routines and structures for collecting, analyzing, reporting and using information should be modified to become facility and program- oriented. Programs should report a minimum amount of data, using minimum standards.
Implement standard operating procedures.

Step 5: Develop staff skills and understanding

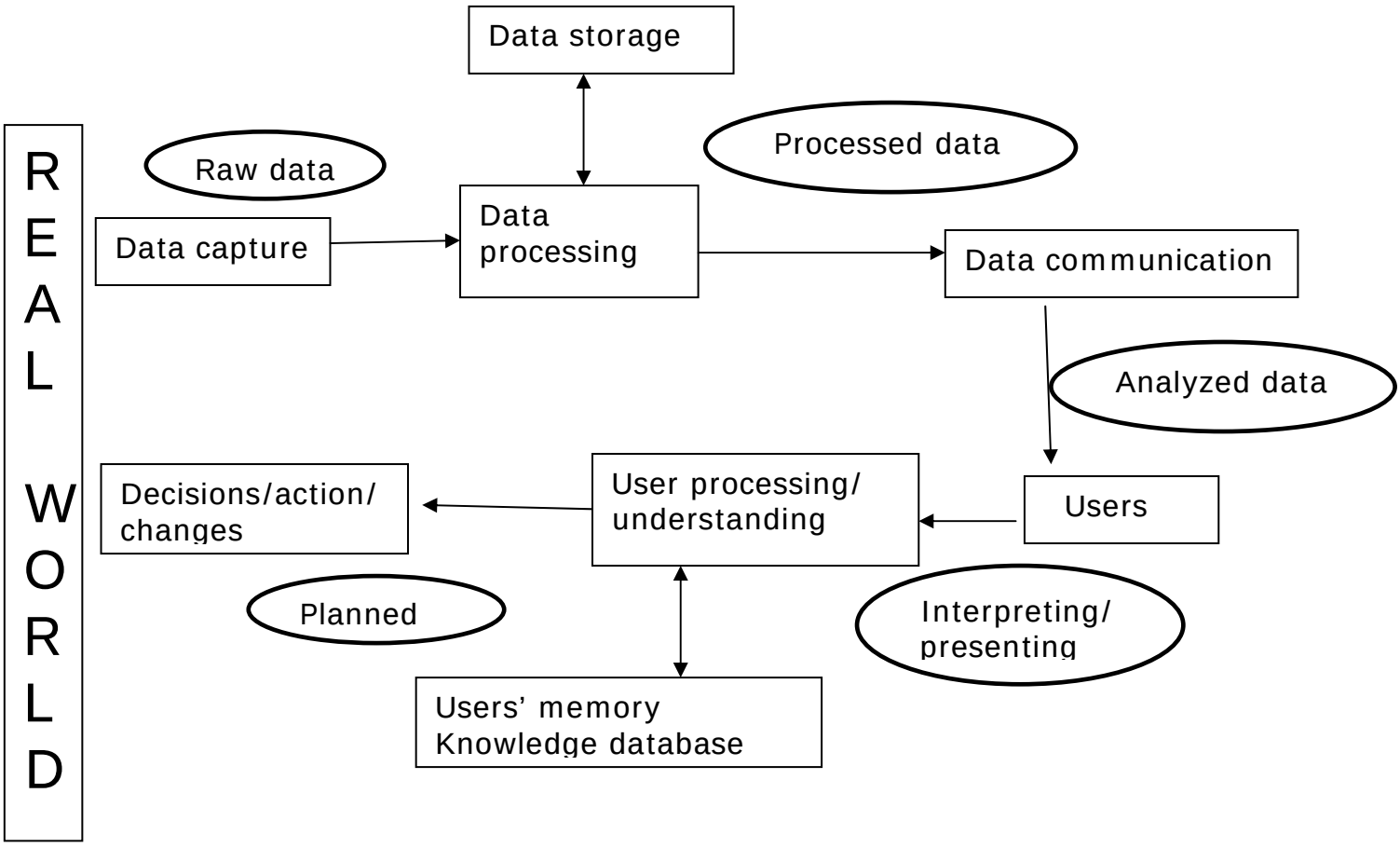
This can be done through in-service training.
Meetings

Step 6: Create an information culture

An information culture is created when everyone in an organisation values hard data and clear indicators and uses data to plan, take action, or propose activities.

Handout 5.2

The Information Cycle



APPENDICES

DAILY EVALUATION

Date _____

Please answer the following questions to help us evaluate this curriculum. If you wish to comment on a particular session or exercise, please do so where it says `Please explain.'

1. What did you learn from today's session:

_____

_____

_____

2. What actions do you plan to take with the new knowledge/skill/information that you learned today?

_____

_____

_____

3. How much did you personally benefit from today's sessions?

____ Not Very Much ____ Much ____ Very Much

Please explain:

_____

_____

4. How clear was today's presentation?

____ Not Very Clear ____ Clear ____ Very Clear

Please explain:

_____

_____

5. How well did the facilitator(s) help you to understand the concepts and skills presented today?

____ Not very well ____ Well ____ Very well

Please explain:

_____

_____

6. What activity (session) did you find the most:

Interesting _____

_____

_____

Difficult _____

_____

_____

7. I would feel more comfortable if we could review the following:

_____

_____

8. Other comments or suggestions?

_____

EVALUATION OF THE DATA FOR DECISION MAKING TRAINING WORKSHOP

1. Pre Workshop Information/Preparation

1.1 Did you receive a letter of invitation to this workshop? **Yes** ___ **No** ___

1.2 Did you receive it in a timely manner? **Yes** _____ **No** _____

1.3 What did you do to prepare for this workshop? (Please specify)

_____

_____

_____

2. Workshop Facilities and Services

How you would rate the following facilities and services? (Please use check marks)

	Excellent	Good	Fair	Poor
Accommodations				
Session room				
Facilities for group work				
Facilitators				
Resource persons				
Workshop resources				
Support Services				

Comments:

_____

_____

3. Time

What is your feeling about the time given for the following tasks?

	Not Enough	Just Right	More Than Enough
Total time for workshop			
Session inputs			
Group work			
Reporting back sessions			

Comments:

_____

_____

_____

4. Workshop Procedures

4.1 What is your opinion of these workshop procedures?

	Very Good	Good	Poor	Very Poor
Inputs				
Group work				
Plenary				

Comments:

_____

_____

_____

4.2 In your opinion, to what extent did workshop procedures encourage active participation in learning? (Please check one)

Completely	
To a great extent	
Somewhat	
Not at all	

Comments:

_____

_____

_____

5. All in All

	Very Well	Well	Somewhat	Not at All
How well did the workshop improve your skills as a trainer?				
How well did the workshop improve your knowledge and skills in data for decision making?				
How well do you think you are now prepared to train others?				

Comments:

_____

_____

_____

6. Any other comments:

_____

_____

_____

_____

_____

THANK YOU!!!

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