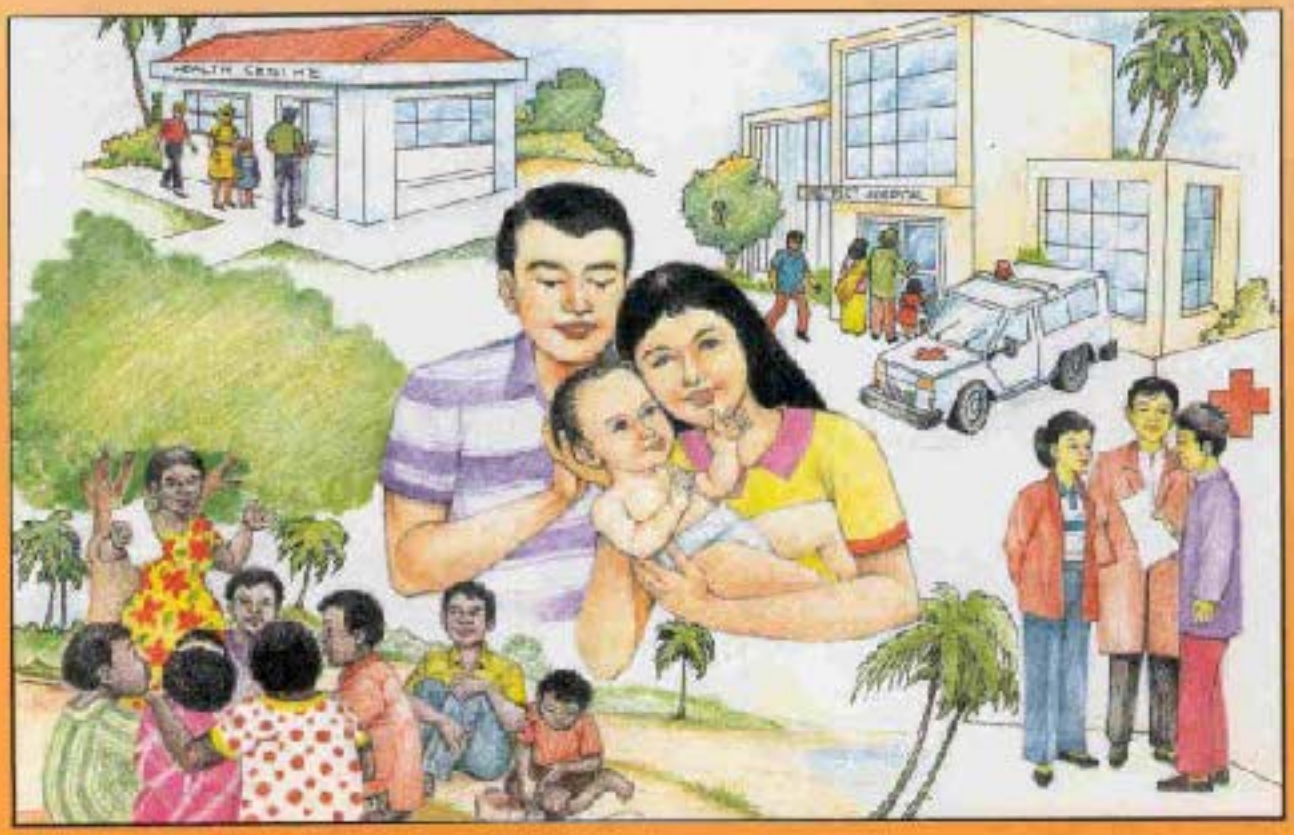
Western Pacific Education in Action, Series no. 10

Managing Maternal and Child Health Programmes:
a practical guide



World Health Organization
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CONTENTS

This manual was written to help health officers, particularly at the district level, better manage maternal and child health programmes.

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FOREWORD

Programmes to improve the health of mothers and children have been implemented for a long time in all countries of the world.

Fifty years of WHO cooperation with countries in this field have produced remarkable results. However, work should continue in order to sustain the gains made and to deal with new challenges to the health of mothers and children.

In many developed countries there has been such progress that very few mothers or babies die during the delivery process, unless there are pathological events beyond medical control, such as congenital malformations or rare unpredictable complications. However, in many developing countries, progress has not been so impressive. Many women and babies die during the delivery process often as a result of preventable or curable complications.

This publication is intended to help managers of health services to ensure that good quality Maternal and Child Health/Family Planning (MCH/FP) care is provided to all in need of such care.

Unwanted or mis-timed pregnancies continue to claim the lives of far too many mothers and infants. There is frequently a lack of self-determination and freedom of reproductive choices due to cultural reasons, and difficult access to services.

Expansion of health services and provision of easy access to appropriate quality care are essential ingredients to improve the health of mothers and children and to achieve a better reproductive health outcome.

The establishment and implementation of any health programme must be accompanied by proper accountability procedures and by evidence that funds spent on the programme produce the expected results. This is particularly required during times of dwindling resources and financial constraints.

However, in order to be accountable, programme managers have to define the objectives of their programme clearly and to determine the best strategies to achieve the expected results. Managers need to define the measuring tools and the evaluation processes within a certain time-frame. They have to assign responsibilities, delegate authority, define tasks and spell out expected outcomes.

After identifying the major health problems, the programme managers have to plan for the most effective and cost-efficient interventions to overcome those problems.

Programme managers also need to become good teachers and good communicators in advocacy work. They have to show leadership and indicate clear directions for their programmes.

The "Managing maternal and child health programmes: a practical guide" is far from being comprehensive in covering all the above areas. However, it gives practical ideas on how better to plan, implement, and evaluate MCH/FP programmes; how to establish objectives, strategies and evaluation procedures, and how to measure results, to further improve the planning process.

The details of these guidelines may not be immediately applicable to each country. Countries are therefore invited to adapt them to local conditions and to develop guidelines relevant to their own settings and cultural diversities. However, the basic principles are universally valid and it is increasingly recognized that improved MCH/FP programme management is an essential ingredient in achieving better reproductive health outcome.

Improving the reproductive health outcome will help to reduce the morbidity and mortality of thousands of women and children and achieve a better balance between the population and its economic resources.

Self determination and freedom of reproductive choice will also help to reduce excessive population growth, to improve the delicate ecological equilibrium and preserve the environment.

We are confident that the application of the management principles, promoted by these guidelines, will go a long way to prepare future generations for a better life.

S.T. Han, MD, Ph.D.
Regional Director

INTRODUCTION

The plight of mothers and children

Around 10 million infants and children die each year, mostly from the combined effects of infectious diseases and malnutrition. Pneumonia and diarrhoea account for half of the deaths. Other causes include neonatal tetanus, measles, pertussis, poliomyelitis and diphtheria. A large number of children who escape death from these diseases suffer blindness, crippling, or mental retardation.

Pregnancy and childbirth complications cause the death of more than half a million women every year. Malnutrition, particularly anaemia, renders women prone to haemorrhage and infections. Around a third of those pregnancies are unwanted.

Apart from poor nutritional status, the risk of maternal and child death is increased by lack of access to good quality health care, lack of education of mothers, and unhealthy living conditions. Women who survive the complications of pregnancy and childbirth may suffer painful and/or embarrassing disabilities.

The following tables illustrate the main causes, numbers and proportion of maternal and neonatal deaths. Most of the causes are preventable.

Estimated global mortality from the major obstetric complications, 1993

Obstetric complication	Number of deaths	Proportion of all maternal deaths (%)
Haemorrhage	127 000	25
Sepsis	76 000	15
Unsafe abortion	67 000	13
Eclampsia	43 000	8
Obstructed labour	38 000	7
Hypertensive disorders of pregnancy	22 000	4
Other direct causes	39 000	8
Indirect causes	100 000	20
Total	**512 000**	**100**

Causes of deaths in newborn infants in developing countries, 1993

Cause of death	Number of newborn deaths	Proportion of all newborn deaths (%)
Birth asphyxia	840 000	21.1
Pneumonia	755 000	19.0
Neonatal tetanus	560 000	14.1
Congenital anomalies	440 000	11.1
Prematurity	410 000	10.3
Birth injuries	420 000	10.6
Sepsis	290 000	7.2
Diarrhoea	60 000	1.5
Others	205 000	5.1
Total	**3 980 000**	**100.0**

Source: Mother-baby package: Implementing safe motherhood in countries, World Health Organization, Geneva, 1994.

Why are mothers and children dying?

Although the trends for maternal and child mortality rates are declining, the rates are still unacceptably high. Unacceptable because most of those deaths, disabilities, and suffering should have been prevented.

> Mothers and children are the most vulnerable members of the population. Adverse social and economic conditions cause greater suffering to this group than to any other members of the community.

Children are vulnerable primarily because they depend on a nurturing adult, particularly their mothers, to survive and because their immune system cannot yet give them enough protection. This is especially true among children from birth to five years of age.

Mothers are vulnerable because of the risk of illness and death associated with pregnancy and childbirth. Diseases such as malaria, anaemia, hepatitis, tuberculosis and heart disease may be aggravated by pregnancy and increase the mother's chance of dying.

These factors are compounded by some sociocultural realities of motherhood and child-rearing which have negative effects, such as; where food is scarce, mothers will deprive themselves so that other members of the family can eat, health facilities are meant for people who are sick, pregnancy and childbirth are not illnesses, therefore women who are pregnant or going to give birth do not need the health facilities, colostrum is discarded and not given to the newborn because it is believed to be dirty. In some societies, women are discriminated against and are deprived of better education, food and other opportunities. Such discrimination takes its toll on their health.

The reproductive behaviour of families has a great bearing on maternal and child morbidity and mortality. Pregnancy and childbirth risks are increased when a woman becomes pregnant at below 18 years of age or above 35 years of age, during the first and after the fourth childbirth, when birth spacing is less than two years or when pregnancy is unwanted.

Access to quality care remains a problem for most families. Most women and children do not get the health care they need. Health facilities are usually far from where they live, services are inadequate or inappropriate, or the cost of care is unaffordable.

The odds against mother's and children's health are high. If there is no concerted effort to even the odds, mothers and children will continue to suffer and many lives will be wasted.

The maternal and child health programme

While it is true that health services should be made available to the entire population, there is a distinct advantage in providing special services to mothers and children or making them the primary focus of health services, especially when health resources are very limited.

The benefits of preventing diseases and premature deaths among mothers and children extend to the entire population. Healthy mothers are more likely to bear and raise healthy children. Healthy children are more likely to become healthy adults.

Maternal and child health is attainable. Most complications of pregnancy and diseases in children have the same causes and can be prevented and effectively managed by simple and affordable interventions.

Improving maternal and child health will reduce the number of medical consultations and hospital admissions due to complications of pregnancy and childbirth and diseases among children. This will subsequently reduce the cost of medical care, disability and death, and the associated loss of productivity of women and children who suffer disabilities or die.

The most valuable benefit that could be derived from improving maternal and child health is to alleviate the grief and suffering of countless families. If this is achieved, then it can be truly claimed that quality of life has been improved.

Goals

The maternal and child health programme embraces the following goals for the year 2000, which were agreed to by almost all nations at the 1990 World Summit for Children:

- A one-third reduction of the 1990 under-five death rates or to 70 per 1000 live births, whichever is less.
- A halving of the 1990 maternal mortality rates.

- A halving of the 1990 rates of malnutrition among the world's under-fives, to include the elimination of micronutrient deficiencies, support for breast-feeding by all maternity units, and a reduction in the incidence of low birth weight to less than ten per cent.
- The achievement of 90 per cent immunization among children below one year old, the eradication of polio, the elimination of neonatal tetanus, a 90 per cent reduction in measles cases and a 95 per cent reduction in measles deaths (compared to pre-immunization days).
- A halving of the 1990 child deaths caused by diarrhoeal diseases.
- A one-third reduction of the 1990 child deaths from acute respiratory infections.
- Basic education for all children and completion of primary education by at least 80 per cent - girls as well as boys.
- Clean water and safe sanitation for all communities.
- Acceptance in all countries of the Convention of the Rights of the Child, including improved protection for children in especially difficult circumstances.
- Universal access to high-quality family planning information and services.

Scope

The Maternal and Child Health (MCH) programme is primarily directed at women who are pregnant, in labour or postpartum, and at the newborn, infants, and children.

Improvement in the health status of women and children, however, will be better achieved if a broader view of reproductive health is adopted. This view departs from the emphasis on antenatal, labour and delivery, postnatal, newborn and infant care to include interpregnancy, care of older children and adolescents, and family planning integrated with other maternal and child health activities.

In places where adverse health conditions prevail, such as loss of food security, unsafe water, high prevalence of communicable diseases or an unsanitary environment, the MCH programme should focus on maternal and child survival. The programme focus can be slowly expanded once the survival strategies are in place and working.

The pace of moving from survival strategies to more comprehensive packages of care should be determined by careful evaluation of the efficiency and effectiveness of the programme.

When the focus is diverted, maintenance and strengthening of the already-established effective mechanisms should be ensured.

Structure

In most countries, the maternal and child health programme is part of the general health services provided by the government. The programme structure follows the government set-up in each specific country.

Generally, the government health institution has a central body in charge of development and enforcement of policies

and guidelines. Government and/or private health facilities, which are often concentrated in cities and big towns, implement these policies and guidelines.

Aside from the formal institutions, there are indigenous providers of health care. Traditional healers and birth attendants have been in existence since long before formal health institutions were founded and organized.

In facility-based health systems, all services for women and children are provided in health centres and hospitals. The type of care though may vary according to the capability of the health worker or the facility. Normal deliveries and emergency management of obstetrical complications may be provided by a midwife in health systems where she is the baseline provider of care. Health care for obstetrical complications and gynaecological problems may be provided in hospitals where essential obstetrical services are available.

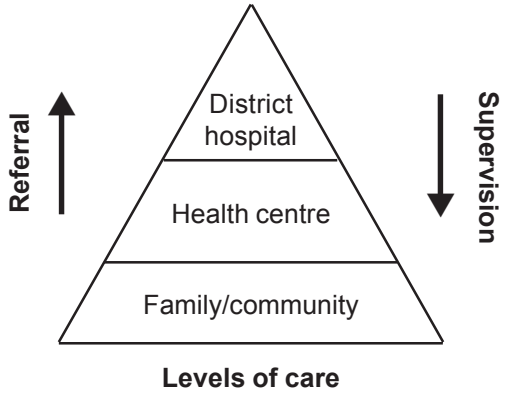
In health systems where community-based services are also rendered aside from the usual facility-based services, the maternal and child health programme extends to assisting home deliveries, training traditional birth attendants or conducting home visits.

Community-based services require peoples' participation in health care and encourage multi-sectoral collaboration to solve health problems.

The most cost-effective health system for delivering maternal and child health services is the district health system. In the district health system, most maternal and child health activities take place as close as possible to where most of the people live. The health centre provides basic services and the link to higher levels of care. The referral hospital provides services for emergencies and complications.

For the district health system to be able to fully respond to maternal and child health care needs, levels of care should be integrated. The flow of referral from one level to another should be smooth, and supervision should permeate from the referral hospital down to the lowest level of care.

The district health system structure



Source: Mother-baby package: Implementing safe motherhood in countries, World Health Organization, Geneva, 1994.

Routine maternal and child health services

Routine MCH/FP services are globally accepted interventions proven to be effective measures to improve maternal and child health.

These are part of the basic services that should be made available to women and children. They include the following:

Before and during pregnancy:

- information and services for family planning;
- antenatal care;
- tetanus toxoid immunization;
- advice regarding proper nutrition, breast-feeding, easing discomforts of pregnancy, and place of delivery;
- early detection and management of problems such as eclampsia/pre-eclampsia, bleeding, miscarriage;
- detection and treatment of existing diseases such as anaemia, malaria, sexually transmitted diseases, hookworm infestation, cardio-vascular disease; and
- sexually transmitted diseases and AIDS awareness.

During delivery

- clean and safe delivery; and
- recognition, early detection and management of complications such as haemorrhage, eclampsia, prolonged/obstructed labour.

After delivery, for the mother:

- promotion, early initiation and support for breast-feeding;
- advice regarding proper nutrition and hygiene;
- management of breast problems;
- recognition and management of postpartum complications such as haemorrhage, sepsis, eclampsia; and
- information and services for family planning.

After delivery, for the new-born:

- immediate new-born care including basic resuscitation and thermal regulation;
- early and exclusive breast-feeding; and
- prevention and management of infections including opthalmia neonatorum and cord infections.

Child care:

- immunization;
- breast-feeding support;
- advice regarding child care and nutrition;
- monitoring of growth and development; and
- management of acute respiratory infections, diarrhoeal diseases and other common diseases among children.

Problem-based maternal and child health interventions

Problem-based interventions are directed to address specific problems or conditions that are present in particular areas, such as endemic diseases, poor access to care, lack of skills among health providers, etc.

Examples of problem-based maternal and child health interventions include:

- iron/folic supplementation for pregnant and postpartum women;
- vitamin A supplementation for children and postpartum women;
- iodine supplementation for women 15 - 40 years old;
- dietary supplementation for pregnant or breast-feeding women or malnourished children;
- malaria prophylaxis;
- establishment of birthing centres and maternal waiting homes;
- training of traditional birth attendants;
- training of midwives on how to conduct home deliveries;
- skills training for nurses and midwives on essential obstetric functions; and
- outreach maternal and child health activities.

Management

Management is working with and through individuals and groups to accomplish the goals of the maternal and child health programme.

It sets targets for what should be done and the manner of doing things.

It initiates activities and follows up their implementation.

It measures achievements and how well resources were used. It also looks into reasons for success or failure of the programme and makes use of the findings to redirect objectives and resources.

It enables individuals and groups to accomplish maternal and child health goals by coordinating efforts and different activities so that people and activities complement instead of competing or clashing with each other. It also provides an atmosphere where people can work harmoniously in the best possible conditions.

It involves different departments or groupings and different categories of staff in the health organization. It may have different levels depending on how big an organization is and how diverse the activities are.

Why do maternal and child health programmes need good management?

Maternal and child health programmes and/or activities need good management because:

- people need the best possible health services;
- health services should be within the reach of everybody in the community, especially those who need them most, at the time when they need health care;
- maternal and child health problems are enormous and numerous;
- scientific achievements need to be translated into programmes and activities; and
- resources are limited, budgets are often small, manpower is scarce or needs development and technology has to be updated.

> The goals and objectives for maternal and child health will only be achieved if programme management is good.

The outcome of a well-managed maternal and child health programme is health care of good quality. This implies that services are accessible, available, technically sound, affordable, and delivered by competent health providers, and that the use of resources within communities is optimized.

Quality health care is the key to attaining maternal and child health.

Who is responsible for managing maternal and child health programmes?

Within a health organization's hierarchy are key positions created to ensure that the goals and objectives of the maternal and child health programmes are achieved.

The hierarchy of health organizations differs from one country to another. The titles, levels, and scope of responsibility may vary, but the roles and goals of people in key positions are the same. Persons assigned to these positions have a larger scope of work than regular staff and have to deal with a number of people in the health unit where they work.

In a provincial health office, the managers include the provincial health officer, administrative officer, chief of clinics, chief nurse, medical and nurse supervisors and maternal and child health programme coordinators.

In a district health office the managers include the district health officer, administrative officer, chief of clinics, chief nurse, medical and nurse supervisors and maternal and child health programme coordinators.

In a community health centre, the health centre officer is the manager.

The team approach to management

Activities in maternal and child health programmes are many and complex, and the team approach to management is the best way to operate the programme.

The team approach maximizes the contributions of each key manager in the programme. This requires group participation in every management activity, including planning, supervision, evaluation and problem solving.

> Basic to team management is the sharing of ideas, holding discussions and reaching consensus among key managers.

A steering committee in team management may be needed. This is a group of two or three key managers who will ensure that all activities are being carried out as planned and take measures should urgent or minor problems occur during implementation.

PLANNING MATERNAL AND CHILD HEALTH ACTIVITIES

Planning is a basic programme management function. It determines the programme's framework for action.

Planning is a process which helps decide in advance:

- the problems in maternal and child health and the objectives of the maternal and child health programme;
- the activities that should be done to achieve the programme objectives;
- the methods or approaches that should be followed when performing the activities;
- the time-frame within which the activities should be accomplished;
- the persons who will perform or be responsible for the activities; and
- the milestones or indicators that should be used to monitor and evaluate the maternal and child heath programme.

Why plan?

Planning focuses activities on the desired goals and objectives.

Good planning dictates the effectiveness and efficiency of activities because it minimizes changes or uncertainties that may occur during the implementation of the programme.

Good planning enables managers to monitor and evaluate programmes based on set indicators, and allows for necessary decisions or actions when needed.

District health planning

Planning in the district should arise from the different health centres and other units within its jurisdiction. This is important so that strategies adopted by each unit reflect their situation.

To ensure that the planning focus of different units is the same, it is important to follow a framework for planning based on the health policies and goals of the province.

When all the units have come up with their plans, the district health office should put them together. This will need intensive discussion and consultation with the units concerned, especially in prioritizing problems and adopting measures to maximize results not only for the specific health unit but for the whole district.

Planning follows three main steps, analysing the situation, formulating solutions and developing workplans.

Analysing the situation

Analysing the situation finds out what the problems are and their causes, and what resources are available through a systematic process of examining health and health-related information.

Reviewing the general health situation

Study of the general health situation provides a more comprehensive view of maternal and child health and a better understanding of maternal and child health problems.

The review requires collecting and analysing data on population, its health status, health resources and the socioeconomic factors affecting health.

Data sources include office records on health services and resources, programme evaluation results, national health office, demographic and health surveys and reports of other institutions which collect health-related information, such as the civil registry, records of nongovernmental health organizations, etc.

Other information may be obtained through discussions with local government and community leaders, interviewing clients or attending meetings of sectoral organizations working in the community or conducting surveys.

It is important to ensure that information for review is accurate and up to date.

Below is a summary of information that is needed for maternal and child health planning:

Population

- size and dynamics
- age and sex structure
- size of target groups
- geographical distribution

Health status

- number, causes, and patterns of illnesses

Health resources

- national health policies and programmes
- available health facilities
- available health services and coverage
- population with and without access to health facilities
- available technology
- available drugs and sources
- information system
- organizational structure and staff complement
- staff competence
- infrastructure, supplies and equipment
- income generated from services
- budget allocation from the government
- funding from donors and other sources

Socioeconomic factors affecting health

- political structure
- family size and authority structure
- social ethics and religious affiliations
- income level and sources
- educational level and facilities
- means of communication and transport
- water supply and excreta disposal
- health practices and food habits
- food availability and consumption patterns
- attitudes and customs related to health
- quality of health services provided to people

Reviewing this information should provide a good background to identifying maternal and child health problems.

Setting expectations/forecasting

Maternal and child health managers should know what to expect based on past and current population and the health situation.

Setting expectations allows preparation of enough resources beforehand, thus preventing problems during implementation. It also helps determine measures early, before a problem arises.

Example of setting expectations:

If the number of under-five clinic consultations increases by an average of 15 per year and if last year's total number of under-five clinic consultations was 975, then the expected number of consultations this year is 990.

Identifying problems

Problem identification should start with an analysis of maternal and child illnesses and deaths.

Maternal and child illnesses and deaths are the main concerns of maternal and child health programmes. Their numbers, causes and trends should be ascertained.

If the problem is high maternal mortality due to postpartum haemorrhage, the causes should be identified, whether they are a result of placental retention, uterine atony, birth canal lacerations or others. Other elements may have also contributed. It is necessary to know who assisted the deliveries, if the women were referred to a higher level of care, if the women had antenatal care, etc.

Apart from the underlying and contributing factors, it is also very important to identify areas where high numbers are occurring and to find out what makes the women and children in these areas more vulnerable. This is significant in establishing priorities and developing strategies.

In most countries, there are marginalized sectors of the population where most of the diseases and deaths occur. Usually these people are the poorest, those living in difficult areas not accessible to means of transportation or where there is war, or those belonging to cultural minorities. Only special strategies will reach these population groups.

In areas with smaller populations, the numbers of maternal and child deaths and illnesses may be deceiving. It is important that rates and ratios are used to analyze them.

Maternal and child health services should be assessed.

Setting up effective and efficient maternal and child health services will answer most problems in maternal and child health. Effective and efficient services though will have many requirements.

In terms of health services

- Are services technically sound?
- Are services technically appropriate?
- Are there guidelines and measures to ensure quality control?
- Are services cost-effective?
- Do communities actively participate in health care activities?
- Do services help in solving the identified problems?

In terms of resources

- Are health providers competent ?
- Are facilities and equipment appropriate, adequate and in good condition?
- Are supplies and materials adequate and used efficiently?

In terms of delivery

- Are services geographically accessible to the population?
- Are services reaching the population needing them most?
- Are services acceptable?

Opportunites and limitations should be identified.

There are factors which may pose as opportunities or limitations in carrying out strategies and activities.

A high level of community participation can be considered an opportunity because it facilitates mobilization and conduct of health promotion activities. However, harmful traditional practices may cause considerable limitations in promoting safe deliveries.

A good turnout during child immunization days is an opportunity to give women tetanus immunization. Where tetanus immunization is only given during antenatal visits, poor antenatal care coverage is a limitation to increasing tetanus immunization coverage.

Programme opportunities and limitations should be closely looked into, as they facilitate the formulation of sound strategies and activities.

When determining programme opportunities and limitations, the following criteria may be considered:

- factors in the organizational structure that facilitate or hinder implementation of activities;
- degree of participation of staff and the community in programme planning and evaluation processes;
- availability of qualified staff to handle assigned roles and responsibilities;
- level of expertise of staff contributing to increased efficiency;
- assessment of workload of staff, whether under-utilized or overworked;
- system of supervision, feedback mechanism, and other means of support and assistance to personnel;
- training opportunities and staff development;
- presence of a reliable information system to monitor and evaluate performance and guide decision-making;
- presence of an organized logistic system;
- capacity to provide services, training and education activities;
- capacity for expanding services through increased efficiency;
- level of client satisfaction and community participation;
- programme strengths and weaknesses;
- level of financing; and
- level of community support such as volunteers, fund-raising activities and donations of materials and supplies.

Maternal and child health problems should be listed.

To ensure that problems and underlying causes stay in focus for planning effective programme support and to have common terms of reference, they should be written down.

Sample list of problems indicating possible causes:

PROBLEM	POSSIBLE CAUSES
High incidence of maternal deaths due to postpartum haemorrhage and infections	• most pregnant women do not use available prenatal, delivery and postnatal health services • in instances where women use the services, midwives fail to refer pregnant and postpartum women with complications on time • most district hospitals cannot manage obstetric complications • clean and safe delivery coverage is low
Main cause of child deaths is dehydration due to diarrhoea	• lack of safe water source • oral rehydration solution is often not available in health facilities • need for community awareness on diarrhoea and preventive measures • most households do not have a latrine • health workers lack clinical competence in management of severe dehydration due to diarrhoea
Tetanus remains the main cause of neonatal deaths	• low tetanus immunization coverage among pregnant women • unsafe birthing practices of traditional birth attendants • use of powders or ashes as cord applications

Prioritizing problems

Problems in maternal and child health are numerous and it may not be possible to address all of them at the same time. In case of severe limitations in resources, problems of lesser priority may be excluded from the programme. Prioritizing problems, though, should not automatically result in the exclusion of problems with lesser rank.

Managers prioritize problems to set targets and allocate resources for each problem.

Prioritizing problems entails ranking the identified problems according to pre-determined criteria.

The selection of criteria depends upon what the management team considers important factors for prioritization. The following criteria may be considered:

- Magnitude - in case of health status, this refers to how many deaths and cases are caused by the problem.
- Seriousness - refers to the severity of the effects of the problem.
- Scope - this refers to the proportion of the population who will benefit if the problem is considered a priority.
- Feasibility - refers to the probability of the problem being solved with existing technology which can be applied in the locality, available resources, etc.
- Social concern - this refers to the significance attached by the community to the problem.
- International commitment - this refers to the existence of a global mandate for action and support.

To facilitate decision-making about which problems deserve most attention, a scoring system may be used.

Developing a scoring system starts with setting criteria for ranking and assigning a weight for each criterion. This becomes the basis for scoring problems. The problem with the highest points is ranked as priority #1, the second highest as #2, and so on.

Example of how to prioritize a problem:

HIV infection, neonatal tetanus and measles were identified as the main problems in one province.

In order to find out which problem should be attacked more forcefully, three criteria were selected; seriousness, magnitude, and feasibility. Each criterion was then assigned a weight in order to assess its contribution to the problem. Therefore, seriousness would contribute 30 per cent, magnitude 30 per cent, and the feasibility of introducing changes to the problem, 40 per cent. Under each category, each disease would receive a rank. Finally, the rank attached to each disease was multiplied by the weight attached to each criterion for evaluation to give a final score. In this case, measles emerged as the highest priority problem.

The scoring table below shows how the problems were prioritized.

Problem (Weight)	Seriousness (30%)	Magnitude (30%)	Feasibility (40%	Score
HIV infection	3	1	1	3(.3)+1(.3)+1(.4) = 1.6
Neonatal tetanus	2	2	2	2(.3)+2(.3)+2(.4) = 2.0
Measles	1	3	3	1(.3)+3(.3)+3(.4) = 2.4

Formulating solutions

Solutions should be directed at correcting identified problems and/or their causes.

Using globally accepted strategies or interventions

Formulating solutions to specific health problems is one of the most difficult skills to learn. For new health managers, this will be more difficult because of inexperience. However, there are globally accepted strategies or interventions on maternal and child health that health managers can adopt.

Testing of these strategies need not be extensive and in some instances may be done away with.

Examples of interventions/strategies that health managers can use:

- adoption of the case management protocols for control of diarrhoeal disease and acute respiratory infection;
- provision of basic maternity care;
- the risk approach in antenatal care;
- use of partograph during labour;
- use of Home Based Mother's Record (HBMR); and
- use of growth charts for children.

Choosing and sequencing interventions

If several interventions have been identified to solve a problem, the most effective and efficient measures should be chosen to ensure that only activities with the best results at reasonable cost are carried out. This will also prevent the programme from embarking on too many activities which may become more difficult to implement, will require more material and human resources, and which may compromise results.

Once the interventions are selected, activities should be sequenced step by step.

Example of choosing and sequencing interventions:

To encourage women to use the health facility for maternity care, the district management team proposed the following activities:

1. improving the capability of midwives and nurses through training;
2. training traditional birth attendants to identify women at risk during pregnancy and encourage them to refer pregnant women at risk to the health centre;
3. providing the necessary supplies and materials; and
4. conducting outreach activities.

A more thorough study and discussion revealed the following:

- Although there was a need to train nurses and midwives on obstetric emergencies, they were already capable of providing care for normal pregnancy, labour and delivery, and during the postpartum period.
- Most women preferred the services of traditional birth attendants, and, if trained, the traditional birth attendants would be in the best position to identify and refer pregnant women at risk to higher levels of care, but training resources were very limited.
- Most of the time, the health centre did not have the basic supplies and materials needed to perform maternity care.
- Outreach activities would reach women and help to inform them of available maternity services at the health centre.

The management team decided that the most immediate and pressing need was to have supplies and materials available to the health centre so that nurses and midwives would be able to deliver the maternity services they were capable of, and to conduct outreach services to encourage women to use the maternity services. The training of nurses and midwives was suggested to be done in the next planning year when more women were using the services. The training of traditional birth attendants on identification and referral of pregnant women at risk was deferred not only because of resource constraints but also because midwives and nurses would not be able to respond well to referrals until they had been trained.

The management decided to put into the plan remedies and activities outlined under points 3, 4 and 1 and suggested that they should be accomplished in that order.

Learning from the experiences of neighbouring communities

A problem is often not totally new. Neighbouring communities may have encountered the same problem.

Sharing experiences among neighbouring communities provides an opportunity for health managers to consult and learn from each other, thus arriving at better strategies to solve problems.

Creative thinking and innovative strategies

Thorough and in-depth analysis of every problem are keys to finding innovative solutions to maternal and child health problems.

Simple and practical strategies are much more likely to succeed.

Example of a simple and practical strategy:

In places where most women suffer from iron deficiency and laboratory facilities are scarce, haemoglobin determination may be done away with except among those with severe anaemia, all pregnant women may be given iron supplementation and a more intensive nutrition campaign may be used to encourage pregnant women to eat iron-rich foods. The funds for the haemoglobin examinations may be used to purchase iron supplies. If the iron supply is insufficient, priority should be given to women with pallor.

Some problems may be answered by new technology and management concepts.

Example of a new technology which may answer problems in data collection and analysis:

Simple and standardized reporting forms and computerization will facilitate collection and interpretation of health information.

Selective coverage

This is done to achieve greater effectiveness at the least cost. Specific strategies and activities are directed to the vulnerable population.

The characteristics of the vulnerable population should be identified. Susceptible individuals are often differentiated from the rest of the population by location, age, biological attributes, surrounding social conditions, cultural and religious practices, etc.

Example of when selective coverage may be applied:

A supplemental feeding programme is an accepted strategy for malnourished infants and children. When faced with scarce resources, a good option is to limit this service to a district with the highest malnutrition rate or to the population segment with the lowest socio-economic status.

Steps in formulating solutions

There should be an **objective** for every prioritized problem that has been identified.

For an objective to be useful it should be:

- specific - it should state exactly the result that is desired;
- measurable - results to be achieved should be observable;
- appropriate - it should relate to the problem being solved and should not be contrary to the health policy of the country;
- realistic - it can be achieved given the constraints and with available resources; and
- time bound - it should state when the desired results should be achieved.

Examples of maternal and child health programme objectives:

To reduce the maternal mortality ratio to half of 1990 levels by the year 2000.

To reduce the neonatal mortality rate by 40 per cent from 1990 levels by the year 2000.

To reduce the infant mortality rate from 130 per 1000 livebirths in 1996 to 70 per 1000 live births by the year 2000.

To reduce nutritional anaemia by 50 per cent from 1996 levels by the year 2000.

To increase prenatal coverage (at least four visits per woman) from 40 per cent in 1996 to 80 per cent by the year 2000.

Operational targets based on the objectives should be identified.

An operational target identifies how an objective could be achieved and should indicate the following:

- specific measures to effect the desired change;
- priority population group; and
- target dates.

Strategies should be determined.

Strategies are approaches or techniques to facilitate accomplishment of set objectives and targets.

One strategy may apply to one or several objectives, or sometimes to the whole programme. Multiple strategies may be applied to one objective.

Health problems have many factors. If strategies focus on only one factor that contributes to the problem, no matter how effective the strategies are, they will not solve the entire problem. In the same manner, a single strategy may be used to help solve more than one problem.

Examples of using multiple strategies to solve one problem and a single strategy to solve several problems:

Training health workers on emergency management of obstetrical problems may not lower maternal deaths if no referral system is in place.

The strategy of following up women who do not come back to the clinic for their scheduled antenatal care visits will find out not only why they failed to return but also give the health worker the chance to assess the family situation, and to show their concern for the woman and her family.

Involving volunteer health workers as health promoters may not only encourage pregnant women to attend antenatal clinics but may also motivate other women to seek family planning and other services.

Consideration of programme opportunities and limitations will dictate sound strategies.

Strategies should take advantage of opportunities and address limitations in the programme. Health education campaigns in schools will gain support from school officials and the faculty and will also reach teenagers who do not avail of the services in the clinic.

Strategies should take advantage of the strengths and offset the weaknesses of the programme. A strong immunization programme, for example, can be used as a venue for other health services such as provision of micronutrients for children or tetanus toxoid immunization for women.

Examples of objectives and corresponding operational targets:

Objective	Operational targets
To reduce the maternal mortality ratio to half of 1990 levels by the year 2000.	• To identify 50 per cent of pregnant women at risk by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by the year 2000. • To enable the district hospital to perform operative delivery by 1998. • To develop a standard referral procedure by 1997.
To reduce the neonatal mortality rate by 40 per cent from 1990 levels by the year 2000.	• To give tetanus immunization to all pregnant women who come for prenatal care. • To give proper cord care to 50 per cent of newborn infants by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by the year 2000. • To identify 50 per cent of pregnant women at risk by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by the year 2000.
To reduce nutritional anaemia by 50 per cent from 1996 levels by the year 2000.	• To enable ten health centres, at two health centres per year, to perform haemoglobin determination by the year 2000. • To give iron supplementation to 50 per cent of pregnant women with anaemia by 1997, 60 per cent by 1998, 70 per cent by 1999, and 80 per cent by 2000. • To develop a nutritional guide for pregnant women by 1998.

Strategies outlined by the Mother-baby package on family planning include:

- A comprehensive information and education campaign should be developed, focusing on birth spacing and birth timing as important measures for mother and child. Informing and orienting the media about contraception should be an integral part of the effort. The campaign should target the community level and should involve men.
- Training of health care providers should include not only the technical and managerial aspects of contraception but also appropriate interpersonal communication and counselling skills.
- An optimal range of contraceptives should be made available to meet the needs of the widest possible range of users, following the principle of "free choice". Family planning information as well as post-abortion counselling should be offered at all service points.
- Availability of contraceptives should be increased by offering them at immunization sessions, all health facilities and community based outlets, and by providing counselling services.
- The protection offered by use of condoms against AIDS and other sexually transmitted diseases should be highlighted.
- Peer counselling through youth and womens' organizations to educate adolescent boys and girls on issues related to reproduction, human sexuality and the risks of early marriage and pregnancy should be encouraged.

Activities should be defined.

Activities are specific and concrete steps and actions to accomplish the set objectives and operational targets.

For the operational target to train 50 per cent of midwives on management of obstetrical complications, activities may include the following:

- organizing a training committee;
- assessing training needs and evaluating the present training programme;
- developing a training programme based on identified training needs;
- developing training materials and preparing for training;
- conducting training; and
- evaluating the training programme.

National health organizations may already have established maternal and child health programmes and policies for implementation. If this is the case, national objectives, strategies and activities should be translated into provincial, district or community health unit levels with special considerations for specific issues and concerns at the different levels.

Whenever objectives, strategies and activities are proposed for a problem, their limitations and opportunities should always be reviewed.

Developing workplans

A workplan is a list of all planned activities, specifying the dates when the activities will be accomplished, how they should be accomplished, the required resources, and the persons or institution responsible for carrying out the activities.

A workplan is essential for effective and efficient programme implementation because:

- it gives clear direction to the health team;
- it is a means of communicating to the staff the range of activities to be carried out;
- it fosters teamwork and cooperation; and
- it serves as a basis for monitoring and evaluating performance.

Steps in developing a work plan:

- List the activities to be implemented.
- Determine in what sequence the activities should be carried out.
- Determine the time-frame for each activity.
- Assign personnel who have the skills and time to carry out the activity effectively.
- Determine the cost and other resources to carry out activities.

Developing a workplan requires patience and time. There should be extensive discussions on what the priority activities are, how the activities will be carried out, who will be responsible for the activities and how much of the available resources should be spent on each activity.

A general maternal and child health workplan may be developed to ensure that all problems and activities will be carried out. It may be stated in broader terms, provided specific workplans are developed for specific strategies or operational targets.

Long-term programme workplans of five to ten years may be needed for forecasting long-term budget allocation.

Short-term workplans are important for programme operation. An annual workplan provides members of the health staff with direction for the whole year. Monthly or weekly workplans may also be developed by people in charge of specific activities.

Activities should match with budget and other resources. If the budget is not sufficient for the activities, cost-cutting or foregoing other activities which are of lower priority may be needed. If there are a lot of activities which the staff are unable to do, alternatives include hiring a temporary person to augment the workforce or channelling the rest of the activities to private health organizations who are willing and able to do the activities.

Summarizing and tabulating workplans make them easier to follow.

Sample workplan:

Activities	Person responsible	Schedule	Resource requirements
Organizing a training committee	District health officer	First week of January	• meeting room • invitation letters
Assessment of training needs	Midwife supervisor Training Committee	January-March	• training committee • assessment questionnaires • per diem and transport expenses for field visits
Development of a training programme (including guides and other materials) based on identified training needs	Midwife supervisor Nurse trainer	April-May	• training committee • reference materials • working room • artist illustrator • supplies
Preparation for training	Nurse trainer	One month before every training course	• training committee • training venue • practice site • resource persons' and participants' accommodation
Conduct of training	Midwife supervisor	Two training courses (1) July-Aug (2) Sept-Oct	• training venue • training aids • practice site • resource persons' and participants' accommodation • transportation cost
Evaluation of training programme	Training Committee	December	• training committee • assessment questionnaires • per diem and transport expenses for field visits

The budget requirement details may be included in the summary of activities, but this may be confusing for the people who allocate money. Each activity may have similar budgetary requirements, which may be better presented when summarized.

A budget requirement chart for the example above may look like this:

Budget details for training activity

Budget item	# of units (A)	Days attendance (B)	Rate ($) (C)	Cost ($) (A)(B)(C)
Per diem for participants, 2 training courses, 30 part./course	60 participants	16	10.00	9 600
Per diem for training committee and 2 drivers for field visits	8 persons	30	10.00	2 400
Transport cost for participants, average of $7 per participant	60 participants		7.00	420
Transport cost for training committee, gasoline at $15/ day/car	2 cars	30	15.00	900
Hiring of artist illustrator	1 person	30	20.00	600
Printing of training materials	75 copies	100 pages	0.10	750
Supplies	75		10.00	750
Miscellaneous			500.00	500
Total				**15 920**

PUTTING PLANS INTO ACTION

Organizing

> Organizing is the process of defining tasks, identifying and assigning people to do those tasks and giving them the necessary authority to carry them out.

It integrates and coordinates people and efforts so that maternal and child health services, a complex activity requiring different people with different expertise, are delivered in the best possible manner.

Why organize?

Organizing eases competition and conflict and fosters communication and learning between people working together for the programme.

It reduces or eliminates duplication of activities and gaps in the programme.

It clarifies the roles and responsibilities of staff members and organizational relationships.

> A well-organized MCH programme makes the most efficient and effective use of resources and reaches and influences more people, therefore it has more impact.

How to organize

Goals, objectives, and functions of the organization as well as the activities of all its units should be determined and key persons in each unit should be identified. Every unit should be made aware of what the tasks of each unit are and what each one is doing.

Every activity should be planned. When planning, every unit of the organization should be represented and heard. There should be consultation and discussion with the people concerned before a task is assigned.

The tasks and activities of the staff and how much effort is required for them should be determined. The capability of each staff member should also be ascertained to help determine what tasks to assign or delegate to whom.

Multiple but related tasks may be assigned to one person to optimize output, but careful assessment should be made to ensure that that person is not overloaded with work.

Big tasks may be divided into smaller activities and distributed to different people so that the burden is not placed on one or a few individuals.

Activities of the staff should be arranged into groupings to facilitate implementation. Groupings may be according to area of assignment, type of tasks being performed or services being rendered.

A system for making logistics and supplies available when needed should be developed. This system should include procurement, storage, distribution and utilization.

A regular system for communication should be established. Routing slips, circulars and memos may be useful for matters where active exchange of information is not required, while conferences and meetings are useful when discussions and exchange of ideas are necessary. Communication flow should originate not only from the top level of the organization, but also from any other level.

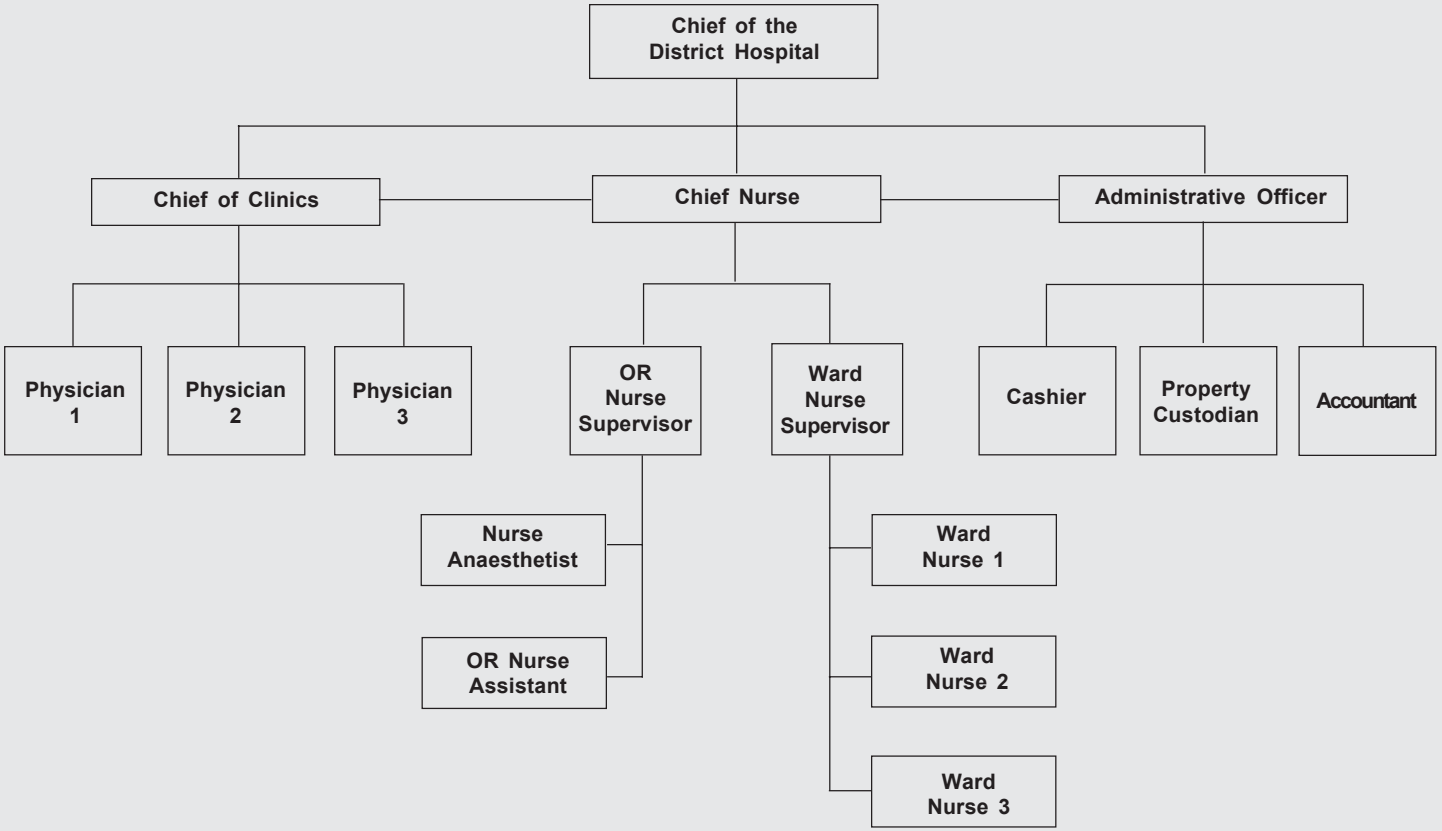
Monthly or quarterly activities of the different units can be organized with the use of a functional chart. The chart should be displayed in a place where everybody can see it and a person should be assigned to look into areas where coordination can apply.

Tools for organizing

Organizational chart

An organizational chart is a diagram showing formal organizational relationships. It indicates who supervises whom and shows lines of communication, command and accountability.

Example of an organizational chart of a district hospital:



Job description

A job description defines the duties and responsibilities of a staff member. It also indicates who is the supervisor as well as who is supervised.

Staff members should know what their job descriptions are.

Example of a job description:

Job Description

Job title: Supervising Public Health Nurse

Organization:	Department of Health	**Designation:**	Nurse V
Station:	Provincial Health Office	**Salary Grade:**	18
Per cent working time:	100 per cent	**Authorized Salary:**	$ 280 per month
Reports to:	Provincial Health Officer	**Other Compensations:**	Daily subsistence and hazard pay

Job summary: Assists the chief nurse in the management of community health nursing services within the province.

Job responsibilities:

- Plans, organizes and directs implementation of community nursing health services and health programmes.
- Monitors, supervises and evaluates programme implementation.
- Collects, consolidates, analyzes, and interprets health records and reports and makes recommendations as needed.
- Assesses training needs and plans for development programmes for nursing and midwifery staff.
- Assists in the formulation of policies and guidelines.
- Attends meetings, seminars, workshops, conferences and updates on nursing and related fields.
- Collaborates with other health and related agencies in the province.
- Performs other tasks as may be assigned by the supervisor.

Qualifications:

- Graduate in Bachelor of Science in Nursing
- Registered Nurse
- Master's Degree in Nursing or in Public Health
- At least five years experience as a Public Health Nurse.

Written organizational guidelines

Organizational guidelines are statements that reflect the organization's mandate and purpose.

They define policies and spell out the rules and regulations of the organization. They outline how specific procedures or activities should be performed.

Guidelines may be embodied in operational manuals, official memos or circulars. Whatever form they are in, they should be clear and leave no room for misinterpretation.

Stock cards, requisition and consumption forms and ledgers.

These tools help ensure that supplies, materials and equipment are available at the health facility when needed. They guide the health worker on what to requisition and ensure efficient use of resources.

Example of a stock card of disposable gloves showing monthly entries:

Date	From or to	Number received	Number issued	Balance
December 15				58 pairs
January 15	Provincial health officer	500 pairs		558
	Health nongovernmental organizations	500		1058
	Health Centre A		50 pairs	1008
	Health Centre B		50 pairs	958
	Health Centre C		50 pairs	908
	District Hospital		200 pairs	708
February 15	Health Centre A		50	658
	Health Centre B		50	608
	Health Centre C		50	558
	District Hospital		200	358
March 15	Provincial health officer	750 pairs		1108
	Health Centre A		50	1058
	Health Centre B		50	1008
	Health Centre C		50	958
	District Hospital		200	758

Workplans

A workplan should reflect the direction of the organization and the strategies to be employed to move in that direction. It should show all the activities that should be performed, who is responsible for carrying them out and the timetable.

An example of a workplan is found on p.25.

Monitoring

Monitoring keeps track of the programme activities.

> Well-planned and systematic monitoring can provide good information on whether the activities are moving in the right direction and are within the target time-frame.

Monitoring looks at whether work standards are maintained.

It looks at whether resources are being used effectively and efficiently.

It also finds out the reasons if work standards are not maintained or if resources are not used effectively and efficiently.

Regular monitoring identifies problems early so that solutions can be instituted early, before any damage is done.

What to monitor

There are two levels of information that should be monitored.

The first is at the level of the activity. Basic information at this level is:

- when the activity was started;
- when the activity was finished;
- who conducted the activity;
- how many people were involved;
- what was the output of the activity; and
- how much the activity cost.

Examples include antenatal consultation, immunization, counselling, payment or a meeting.

The second level is summary information of data gathered.

Examples of summary information include total monthly prenatal consultations, total annual fully immunized infants, leading causes of infant mortality and morbidity, and average cost of community health promotion activities.

Summary information comes in the form of totals, averages, percentages, counts, rates and ratios.

In monitoring, remember to gather only the data needed. Every data item collected requires resources in the form of time, effort and money. Unnecessary data can also confuse the analysis of information.

> Monitoring outputs are useful tools for supervising personnel and evaluating the programme.

Monitoring methods

Reviewing records and reports

Records are written information kept at the health facility. These include information on clients, services, administrative matters and area coverage profile.

Reports are written information communicated by the health facility to other levels of services. Reports are usually taken from records.

Good records and reports reveal what is taking place in the health facility.

> Good records and reports should be factual, available when needed and relevant.

Records and reports can be standardized with the use of forms. Standard records and reports are easier to follow, consolidate and analyze.

Visits

Visiting a health facility is probably the best way of monitoring activities and performance. It reinforces the importance of the health staff's work and their achievements.

A visit provides the opportunity to verify records and reports and discuss problems and achievements that are not reflected in records and reports.

A visit also provides an opportunity to make actual observations of staff performance and/or the facility set-up.

> A good monitoring visit should be well planned, have a definite purpose, not be hurried and give the staff immediate feedback. It should make things better and not only find out how things are.

Check-lists

Check-lists are guides for looking at elements in the programme activities that are crucial to the attainment of objectives and targets.

Check-lists help ensure that monitoring is carried out objectively and productively. They ensure uniformity of information and facilitate faster recording and evaluation.

> Check-lists should be simple and relevant.

Example of a monitoring check-list:

MCH monitoring check-list

Health station or staff : _____ Date of visit : _____

Monitoring criteria	Rating Grid				Score
	1	2	3	4	
Upkeep of clinic	poor	fair	good	very good	
Prenatal coverage (%)	0-25	26-50	51-75	76-100	
Tetanus immunization coverage (%)	0-25	26-50	51-75	76-100	
Birth attendance (%)	0-25	26-50	51-75	76-100	
Full child immunization coverage (%)	0-25	26-50	51-75	76-100	
New FP acceptor (%)	0-25	26-50	51-75	76-100	
Under-five care follow-up (%)	0-25	26-50	51-75	76-100	
Status of drugs and supplies	not available	insufficient	sufficient for 1-2 mos.	sufficient for 2-3 mos.	
Completes tasks promptly	never	rarely	often	always	
Performs tasks correctly	never	rarely	often	always	
Obtains relevant client information and records it correctly	never	rarely	often	always	
Relates well to clients	never	rarely	often	always	
Infection control measures	poor	fair	good	very good	
Total					
Average					

To fill up the score write the equivalent numerical rating per criteria in the last column.

Percentages on the rating grid refer to set targets.

Performance Rating based on average score **(1) Poor** **(2) Fair** **(3) Good** **(4) Very good**

Remarks:

Supervisor's signature : _____

Staff meetings

A meeting provides an opportunity to report and discuss problems and solutions, give instructions and updates and share experiences among the members of the health staff. However, it may not be the best time for shy people to talk about their problems and experiences.

> A good staff meeting should have a clear agenda, should be well moderated and should achieve the purpose of conducting it.

Supervising

Supervision is an overall range of measures to ensure that personnel carry out activities effectively and become more competent in their work.

> The objective of supervision is to help, support and provide direction to the health staff to attain the best performance possible.

Supervision entails personal contact. Providing staff with procedural manuals, having them undergo training or giving written instructions will not ensure that a task will be done well.

Important points to consider

The staff member

- Know the staff member's qualification and job function.
- Establish rapport.
- Provide a relaxing and comfortable environment.
- Encourage staff to ask questions and make suggestions.
- Respect feelings, ideas, and suggestions.
- Listen and understand.
- Involve staff in planning activities and schedules.
- Resolve conflicts.

The work environment

- Provide a comfortable workplace.
- Ensure that resources needed to accomplish work are available.
- Provide clear instructions and procedures to follow.
- Ensure a reasonable workload.
- Know the health and related profile of the area the supervisee is serving.
- Enhance cooperation, communication and open exchange of ideas in the working environment.

The supervisory system

- A plan for supervision should be developed.
- Regular supervisory visits and meetings should be organized and set.
- Supervisory guidelines and protocols should be set and observed.
- Programme objectives, strategies, operational targets, workplans, monitoring and evaluation reports should be regularly reviewed and correlated with supervision.

- Supervision should be selective and appropriate indicators for monitoring and evaluation should be used. Staff performance may have many indicators. Only indicators that are critical in attainment of programme goals and which can be managed at one time should be chosen.
- Tools for supervision should be developed and used.

Planning and preparation

- Planning and scheduling of supervisory visits and meetings should be done with the staff concerned.
- MCH reports and related documents, especially on areas of supervisory interest, should be reviewed.
- Queries and problems that were not addressed during a previous supervisory visit should be addressed during the next visit.

The supervision

- Supervisory encounters should not be done in a hurry. Enough time should be allotted to discuss concerns with staff.
- If there are problems, staff should be helped to find ways to resolve them. The focus should be on what can be done and not on finding blame.
- On-the-job training should be done if needed.

Records and/or reports

The following information should be contained in the report:

- the contact person;
- the purpose of the visit;
- findings and observations;
- actions done;
- unresolved problems requiring higher level intervention;
- recommendations; and
- date of next visit.

Keeping a monitoring and supervisory logbook is important. It will serve as a basis for staff development. To overcome a work deficiency, a health worker needs help and support that is especially responsive to his or her requirements. If the same work deficiencies are observed among most of the health staff, a general measure may be opted.

Steps in supervision

Set individual performance targets

Performance targets will serve as a guide to the staff member on what is supposed to be done. They are more specific than the job description and emphasize programme strategies and activities that need to be strengthened.

Performance targets also serve as a guide to the supervisor. They help to identify what kind of support is to be extended to the staff member, and clarify what to look for when monitoring performance.

> Performance targets should be set with the staff member concerned.

Based on the job description and discussion with the staff member, the tasks and deadlines for completing the tasks should be outlined. Ensure that the list adequately covers the main job functions and responsibilities.

Example of performance targets of a health centre midwife:

- Identify pregnant women in the community who do not use health centre services, visit two women each week at home and encourage them to seek prenatal care services.
- Every Tuesday afternoon, visit two pregnant women who did not return for their scheduled prenatal visit.
- Every Thursday afternoon, visit two couples who failed to come back to the health centre for their scheduled family planning follow-up.
- Keep accurate records of daily activities including referrals.
- Update inventory of drugs and supplies at the end of each month.
- Submit the monthly activity report to the MCH supervisor during the first week of each month.

Monitor performance

Monitoring will reveal if the performance targets are being accomplished well and on time.

Always discuss with the staff member his or her performance.

Poor or lack of performance indicates problems. Problems can still occur even if performance is good. Try to find out if there were difficulties encountered while performing the tasks.

If there is a problem find out the following:

- What exactly makes up the problem?
- When did it start?
- Who is involved?
- What is the cause?

Solve problems and ease difficulties

> Understanding the nature of a problem is crucial if it is to be solved.

Assess the conditions that may have affected performance.

- Does the staff member fully understand what is expected to be done?
- Did the staff member receive adequate guidance on how to perform the tasks?
- Is the workload too much?
- Are resources not enough?
- Is the staff member comfortable in the workplace?
- Does the staff member have the necessary knowledge, skills and attitude to perform the tasks?
- Does the staff member have personal problems that are affecting their work?

Discuss with the staff member problems and difficulties and how to overcome them. Work out solutions. Provide support as appropriate.

Example of how to solve a problem:

Monitoring revealed that the midwife at Malibago health centre was achieving the performance target of visiting two women every week at home to encourage them to seek prenatal care. Records showed, however, that only a few of the women visited actually went to the health centre for prenatal care.

The women were interviewed and it was found that the midwife was very encouraging when she visited them at home. What discouraged them from going was that they thought iron tablets were to be given at no cost, but instead they were asked to pay for them.

A look at the health centre drug inventory showed that the health centre did not get regular iron supplies from the district hospital. The midwife, to ensure regular iron supply, would ask her husband who worked in the town and who came home every weekend, to purchase them. She then asked women to pay so that supplies could be replenished, not knowing that they were available at the district hospital.

Further checking on why iron tablet supply was not regular and adequate in Malibago health centre revealed that it was often missed out because it was far away and the road was dangerous, especially when it rained. The district health office supply van could not always get through.

Discussion between the supervisor and the midwife clarified the problem. A meeting between the women, the supervisor and the midwife was held. The midwife, with the help of the supervisor, explained the circumstances behind the problem. One woman volunteered to pick up the iron tablets as well as the other health centre supplies every month. The other women in turn suggested contributing a little amount each month towards the cost of transportation.

The supervisor also started to check the availability of supplies and materials regularly both at the district hospital and at the health centres.

During the following months, more women came to the clinic for prenatal care.

TRAINING FOR BETTER SERVICES

Training

Training is a way of helping health workers acquire the necessary knowledge, skills, and attitude to perform a job or an assigned task. It empowers them to achieve what they are capable of doing. It helps improve the way things are done and facilitates accomplishment of tasks.

Health workers need training when there is a deficiency in knowledge, skills or attitude that prevents them from doing their job well. Deficiencies are usually due to:

- continuous evolution of maternal and child health technology;
- gaps in scholastic preparation;
- the maternal and child health workforce being augmented by persons with no formal training; or
- a specific category of health workers being given expanded roles that they have not been prepared for.

Training should be done as a part of a comprehensive maternal and child health plan, it should be directed to helping solve priority maternal and child health problems and should be based on national policy and staff job descriptions.

Maternal and child health training should always be directed to tasks that cannot be performed well as a result of gaps in knowledge, skills or attitude of health workers.

Knowledge, skills and attitudes that have to be learned to perform the identified task should be kept to what is essential.

Because the objective of training is performance of a task, practising skills necessary to accomplish the task should be integral to the training course.

The training scenario should be as close as possible to the work environment of the trainees.

Approaches to training

Formal training sessions with prepared curriculum are best done when introducing new skills, concepts or ideas.

Supervised on-the-job training is very useful for teaching skills that are already being practised.

Providing modules for self study is applicable for acquiring knowledge that does not require practical skills.

Conducting training activities

Needs Assessment

Training needs assessment is the process of identifying what health workers need to learn.

It also helps trainers design appropriate training programmes for health workers.

The needs assessment should be done by persons who know the roles and functions of the health worker to be assessed.

Needs assessment entails the following:

Analysis of job description

The job description should be checked for completeness and accuracy.

New tasks which are required for the job but which are not in the job description should be added.

Task analysis

A task analysis shows the knowledge, skills, and attitudes necessary for completing a task. It gives the trainers a set of objectives for the course, determines the content of the course and helps the trainer choose teaching approaches and testing methods for evaluation.

The knowledge, skills and attitudes needed for each task should be determined and written down. Technical correctness should be ensured by basing the knowledge, skills and attitudes required to do the task on standards, written protocols and discussion with experts.

Knowledge, skills and attitudes including cultural, social and personal biases which participants have and those they need to learn should be identified. To do this, a chart outlining the knowledge, skills and attitudes necessary for a particular task may be used.

The result of the needs assessment is a list of knowledge, skills and attitudes that trainees must learn in order to do their jobs better.

Example of a task analysis chart for counselling a family planning client:

Category of worker: Nurse/Midwife			
Task: Counselling a family planning client			
TASKS	**KNOWLEDGE**	**SKILLS**	**ATTITUDES**
1. Greet the client	Local language	Ability to establish a relationship	Warm
2. Take a sexual and reproductive health history. Determine client's family planning needs.	Implications of specific health and sexual behaviour on family planning needs and contraceptive method choice	Listening, probing, clarifying	Accepting
3. Tell the client about available contraceptive choice.	Contraceptive methods which are locally available, how they work and how they are used	Ability to speak in clear and simple language	Neutral
4. Help the client decide whether to choose a contraceptive method, and, if client wants a contraceptive, which method to choose.	Contraindications for contraceptives. Client's culture, lifestyle, and other non-medical factors that will influence contraceptive choices.	Listening, questioning, and providing information	Supportive

From the chart, determine knowledge, skills and attitudes that trainees already have. Use any combination of the methods listed below:

- survey of proposed trainees;
- observation;
- giving pre-tests;
- asking participants to identify problems at his or her workplace; and
- survey of clients.

Delete the knowledge, skills and attitudes that participants already have from your chart.

Setting goals and objectives

A goal is a broad statement of purpose that provides a unified direction for all levels of persons involved in the training: planners, teachers, evaluators and participants.

To set the training goal, decide on the overall purpose of the training. The stated goal should describe how the training will contribute to achieving programme goals. It should be discussed with programme managers and other trainers.

Examples of training goals:

- Health workers will provide effective counselling on family planning methods.
- MCH programme managers will provide participatory training workshops for health care personnel in their districts.

An objective on the other hand is a specific statement of what a participant must be able to do to show that he or she has acquired the knowledge, skills and attitudes necessary to complete a task.

Objectives serve the following purposes:

- they relate the content of the training to the knowledge, skills and attitudes identified in task analysis, which is based on the desired job performance of the participants;
- they make planning and implementation of training focused, effective and efficient; and
- they are the standards used to evaluate the training.

Each objective must:

- state exactly what the trainee will achieve;
- be observable and measurable;
- be attainable during the workshop period;
- relate to what is needed in the field; and
- state how long the achievement of the objective will take.

To set objectives, tasks identified for training by the task analysis should be listed. Each task is then stated in an action-oriented manner, with the qualities listed above.

Objectives should relate to what the trainees need to learn.

Examples of training objectives:

- By the end of the training, each participant will have demonstrated ten successful intrauterine device insertions and five intrauterine device removals, according to protocol, under the supervision of a skilled physician.
- At the end of the training, each participant will be able to list five health benefits of oral contraceptives.
- By the end of the training, each participant will have correctly filled out data charts for ten clients at the village family planning clinic.

Developing lesson plans

Lesson plans are written instructions for training. They describe in detail how the training will be conducted and are based on the tasks that the participants need to learn.

Lesson plans help the trainer plan and organize the workshop. They guide the trainer on how to conduct and evaluate the lessons.

Write a lesson plan to accomplish each objective. The lesson plan should include:

- lesson objective;
- time required to teach objective;
- topic contents under each objective;
- teaching methods;
- materials needed; and
- evaluation techniques.

Example of a lesson plan:

Management of diarrhoea

Objectives

At the end of the session, the Rural Health Midwife should be able to:

- identify signs of diarrhoea and dehydration;
- determine the appropriate treatment plan for cases of diarrhoea; and
- enumerate five ways of preventing diarrhoea.

Time allotment

- 1 hour and 40 minutes

Contents

- The diarrhoea problem
- Diarrhoea and dehydration and its causes
- Clinical management of diarrhoea and dehydration
- Prevention of diarrhoea

Teaching methods and techniques:

Time (min.)	Activity	Activity guide
10	Discussion	Introduce the topic. Ask participants what diarrhoea is and its causes. Show the diarrhoea prevalence chart. Ask participants to interpret the chart. Ask participants what the dangers of diarrhoea and dehydration are. Elaborate on the answers.

Teaching methods and techniques (continued):

Time (min.)	Activity	Activity guide
30	Brainstroming	Ask participants to enumerate the signs and symptoms of dehydration, classify degree of dehydration, and treatment suggestions. List answers on the board. Display on the board a big replica of the diarrhoea management chart. Compare the participants' answers to what is in the diarrhoea management chart. Explain discrepancies.
15	Case study	Divide participants into small groups. Give each group two diarrhoea case story clips, ask them to discuss and write down the management.
15	Presentation and discussion	Ask each group to give a two minute presentation of their management and the rationale behind it. After every presentation ask the other participants to give their comments, clarify if there are disagreements.
5	Lecture	Discuss diarrhoea prevention.

Teaching methods and techniques (continued):

Time (min.)	Activity	Activity guide
10	Case study	Divide participants into small groups. Using the same story clips from the previous activity, ask the groups to enumerate and write down at least five ways by which diarrhoea could have been prevented.
10	Presentation and discussion	Ask each group to present their anwers. Elaborate answers if necessary.
5	Summary	Give the highlights of the session and summarize important learning points.

Materials needed

- diarrhoea management chart
- short story clips of diarrhoea cases
- chalkboard, pens, newsprint

Evaluation:

Case studies will ask participants to:

- identify signs of diarrhoea;
- determine the appropriate treatment plan for hypothetical cases; and
- enumerate five ways of preventing diarrhoea.

Answers will be checked against the diarrhoea management chart.

Training methods

When choosing training methods for a particular lesson, the trainer should consider the following questions:

- Is the method suitable for the objective?
- Does it require more background knowledge or skills than the participants need?
- How much time does it take to prepare? To use? Is that time available?
- How much space does it take? Is that space available?
- Is it appropriate for the size of the learning group? The knowledge and skills levels of the participants?
- What kind of teaching materials does it require? Are they available and affordable?
- Does it require special skills to use? Does the trainer possess these skills?

Teaching knowledge

Teach only those facts which the participants need to know.

Get the participants' attention, explaining why they need to know the topic or telling a story that shows why it is important.

Give a summary. Explain the main themes to be covered.

Present facts and information.

Use handouts to reinforce the lecture. Participants learn more by listening and actively participating than by taking detailed written notes.

Ask participants to tell stories about how the facts will be used.

Use audiovisual aids.

Give exercises for participants to use the knowledge they have learned.

Examples of exercises for teaching knowledge:

Ask individuals or small groups of participants What would you do if.....? or How would you .....? Then let them present their conclusions to the rest of the class.

If the lesson is about body parts, ask individual participants to name and explain the function of relevant body parts with the aid of an illustration chart.

Have participants fill out data charts correctly for ten clients at the village family planning clinic.

Teaching skills

Describe the skill, why it is important, when to use it and the steps involved to perform it.

Demonstrate the skill. Simulate the work environments of the participants and explain what is being demonstrated.

Arrange practice sessions and give feedback on how each participant performed. This is the most important part of teaching skills.

Practice methods for skills training include role-play, case-studies and practical experience.

Role-play

Role-play is often used when teaching communication skills. In this method, the participants take different roles as if they were in a play. The trainer provides an outline of a situation which they must act out.

Other participants observe the role-play and note the things that the health worker does well and any mistakes he or she may make. It should be emphasized before the role-play that the purpose of feedback is to use other people's observations to improve techniques and skills.

When the role-play is over the trainer facilitates a discussion with all the participants. What happened? How did the health worker feel? How did the client feel? Were body language and eye contact important? What could have made the interaction more effective?

It is important that a safe and supportive atmosphere is created during the discussion. Focus should be on what the participant did right. Concrete suggestions should be given to improve what might have been done better.

Examples of role-play scenarios:

Ask participant A to be a counsellor and to provide family planning counselling to participant B. Ask B to be a mother with five children who wants to use a contraceptive, but may want to have more children in the future. Participant A should guide Participant B in choosing a method.

Ask participant A to be a health worker who is conducting a sexually transmitted disease check on participant B. Ask participant B to be a young, married man who lives in a rural area but goes to the city frequently for work. Participant A should prepare Participant B for laboratory results that may indicate infection.

Case-studies

Case-studies are useful when teaching problem-solving and decision-making skills. Case-studies describe a situation in words and participants write down or say what they would do. The situations may relate to diagnosis or treatment of patients or to managerial or organizational problems.

Example of a case-study:

The trainer tells students about a family planning client with the following history:

- female, 20 years of age;
- has two children, one and two years of age;
- lives in a rural area;
- has come in for a pregnancy test;
- test results are negative; and
- client is disappointed, wants another child.

How would the participant counsel the client about child-spacing and contraceptive methods? Which methods would be most appropriate? How can the health worker explain to the mother that it may be best to wait before having more children?

Job experience

The trainer demonstrates how a skill is performed correctly.

The participant practices a skill at the workplace under the supervision of a skilled practitioner.

Gradually, the skilled practitioner asks participants to do more and more of the work independently.

Teaching attitudes

The trainer can present **information** about the importance of the correct attitude towards accomplishing a particular task.

Example of providing information:

Telling the participants that a caring, empathetic attitude is important when counselling clients about family planning methods.

Skilled senior health personnel and the trainer are very powerful **models** for participants.

Example of trainer modelling:

If the trainer is considerate to other people, demonstrates active learning techniques and handles training equipment carefully, participants are likely to behave in similar ways.

Direct **experience** has a more powerful impact on participants than reading about the effects of poor maternal and child health.

Example of providing experience:

Allowing participants to see an infant recover after receiving oral rehydration therapy can be a powerful incentive for participants to promote the use of oral rehydration therapy.

Participants' attitudes can change when they **discuss** their opinions with others. Groupings should be small enough to give every participant a chance to speak.

Examples of topics that can be discussed in small groups:

Topics for small group discussion could include the importance of accurate record keeping; how to take a sexual history and talk about sexually transmitted diseases prevention and religious barriers to family planning.

Role-playing gives participants experience of what it is like to be a client and is the best way to teach attitude.

Example of a role play:

Participant A is a health care worker explaining the benefits of child-spacing. Participant B is a mother with two young daughters who is being pressured by her family to have a son.

Training materials

When planning which training materials to use, the trainer should consider the following questions:

- What materials are available?
- If materials are not available, is there enough time and resources to produce them?
- What is the training background of the participants?

- What can the training facility accommodate?
- Will the material facilitate active learning?
- Does the trainer know how to use the material?
- Can the participants learn how to use the material?

Types of training materials

Written materials are useful when teaching knowledge. They may already be available at the appropriate learning level, or the trainer may have to develop new materials.

Examples of written materials:

- Equipment instructions
- Check-lists for decision-making skills
- Examples of blank charts for record-keeping
- Lists of contraindications for contraceptives

Consider the following when developing and using written materials:

- They should only contain the facts that participants need to know.
- They should be clear.
- Layout and other aspects of design are very important. Keep pages looking 'clean' and uncluttered.
- Use language and diagrams appropriate to participants. For example, graphs should only be used if participants can read a graph.
- There may be training materials and/or programmes available and tested that will fit the health worker's needs, they may be used or adapted as appropriate.

Audiovisual teaching materials are useful for teaching knowledge and skills.

Examples of audiovisual materials:

- overheads
- charts and diagrams
- slides
- photographs
- videos
- flip charts
- models
- writing board

Things to consider when choosing audiovisual materials:

- Is the material appropriate to the knowledge level of the participants?
- Is the material available for the training?
- Are the facilities appropriate for use of the material?
- Will it require the use of electricity and is electricity available?

- Does the material require any supplemental materials? Are they available? (To show a film you need a screen or white blank wall, to use a flip chart you may want to use different coloured markers.)
- Will all the participants be able to see and hear the material?
- How will the trainer use the material? How can it enhance active learning?

Preparing for training activities

For training to proceed smoothly, certain preparations are important. This includes:

- issuing formal office orders to relieve the trainees from their clinic or office work;
- informing participants early enough so that they can prepare for the training;
- ensuring that all materials needed are available and ready for use;
- ensuring that resource persons are available on the dates of training and are ready for the sessions; and
- ensuring that the place for training is comfortable and ready to accommodate the participants and resource persons.

To ensure that all essentials are taken care of, a check-list may be devised.

Example of a training check-list:

Preparation for a training activity

- Determine training needs and resources
- Develop training curriculum
- Set schedule
- Recruit participants
- Select training venue
- Prepare facilities

  Consider the following:

  1. classroom

chairs	ventilation	chalkboard
tables	flip chart	chalk
lighting	flip chart rack	eraser

  2. vehicle to transport participants to practice sites
  3. generator in case of power failure
  4. dormitory
- Select resource persons
- Prepare practice sites
- Prepare modules, handouts, registration and attendance sheets

Implementing training/lesson plans

Make learning clear.

Speak clearly and write legibly.

Use simple and easily understood language, if possible local language should be used.

Use visual aids, e.g., slides, overhead transparencies, films.

Give examples or tell stories to illustrate ideas.

Make learning active and participatory.

Encourage trainees to explore, discover, ask questions, make decisions and solve problems.

Use opportunities for sharing of ideas and experiences.

Provide opportunities for applying and practising what participants have learned in theory.

Use a variety of training methods.

Make learning meaningful.

Relate topics to trainees' needs and to improvement of job performance.

Simulate real life situations and problems.

Concentrate on what needs to be learned.

Use lesson plans throughout the sessions.

Prepare lessons well to avoid deviations.

Ensure mastery and competency.

Check if students understand each point by asking questions.

Provide time to clarify issues.

Evaluate learning, using tests and observations.

Give particular attention to every trainee.

Allow trainees to work at different rates.

Encourage trainees to learn in their own way.

Show respect for and understanding of differences.

Talk to trainees individually.

Provide time for individual study and review.

Give feedback.

Tell trainees how well they are doing.

Point out errors or faults.

Suggest how trainees could do better.

Show interest in trainees' learning.

Get to know each trainee.

Be friendly, treat trainees as equals.

Prepare thoroughly for training, knowing the subject adequately.

Practise and evaluate teaching style.

Show honesty and openness, accept criticisms.

Evaluating training

Evaluation activities are conducted to improve the quality of the training and to determine whether the participants have acquired the knowledge, skills and attitudes necessary to do their jobs.

Assessment of daily training activities

This is done to determine whether any immediate changes can be made to improve the quality of the workshop by getting feedback from participants and ending each day with a reflection session.

Examples of questions for feedback:

- What individual or group problems were encountered?
- In what ways may these problems be resolved?
- What insights were gained?
- Was time used efficiently?
- Were the participants comfortable with the training aids, methodologies and environment?
- Were the topics covered in the training relevant to their work?
- Were there topics that were missed but that should have been included?

Examples for questions at the end of a day's training:

- What happened today?
- How did it happen? What techniques were used?
- What did we learn?
- How can we apply what we learned to our work?

Process evaluation

Process evaluation is conducted at the end of the training and focuses on the implementation of the workshop. This can be done by:

Comparing the training plan with what actually happened. The following questions may be asked:

- How many participants were trained? More or less than planned?
- What were the training topics? Were new topics added or deleted during the course of the workshop?
- How many sessions were held? Was this the right number of sessions?
- Was audiovisual equipment available? Did the equipment work properly?
- Was the training site the right size? Were participants able to get to the training on time?
- Were the arrangements for the workshop modified? Were the modifications successful?
- Were participants comfortable with the sessions and the training arrangements?
- How could the workshop arrangements be improved for future training sessions?

Assessing whether workshop participants actively participated in the training through observations during training or asking them to fill up questionnaires.

Output evaluation

Output evaluation is conducted at the end of the training and measures whether the training objectives were met. This can be done by:

Testing

Tests are often used to evaluate whether participants have acquired new knowledge.

Final tests are given once, at the end of the training.

The trainer may also use pre-tests and post-tests. With this type of testing, the trainer administers the same test before and after the training. This shows the trainer which topics need the most emphasis during lectures. By comparing the results of the pre-tests and post-tests, the trainer will have an idea of what knowledge the participants have learned during the training.

Tests can be written or given verbally.

They can be multiple-choice, true/false, short answer or essay tests.

Another kind of test is a patient-management problem. This type of test presents a case-study and then asks participants to answer questions about the case. It is often well-suited to training workshops.

Examples of objectives which involve new knowledge and evaluation testing methods:

Objective:

Participants will be able to list three teaching methods for skills at the end of the workshop.

Evaluation:

Pre-test and post-test will ask clients to list three teaching methods for skills. Responses will be checked against a list of acceptable answers.

Objective:

Participants will be able to counsel clients about contraindications for contraceptive methods and help clients to choose an appropriate method.

Evaluation:

A case-study is presented to participants describing a client who comes to the clinic for family planning. The participants list what questions they would ask the client to determine what types of contraceptives are appropriate for the client to choose from. Participants take part in a role-play and show how they would guide the client in choosing a method.

Observation

Skills are often evaluated by observing the participants practice the skill.

Check-lists are useful tools when evaluating skills and attitudes through observation.

Examples of objectives which involve new skills and methods of observation:

Objective:

By the end of the training each participant will have demonstrated ten successful intrauterine device insertions and five intrauterine device removals, according to written protocols, under the supervision of a skilled physician.

Evaluation:

The trainer will arrange for each participant to work in a clinic and perform ten successful intrauterine device insertions and five intrauterine device removals under the supervision of a skilled physician. The physician will verify on a written chart that the participant has successfully completed the required tasks according to written protocols.

Objective:

By the end of the training, each participant will have correctly filled out data charts for ten family planning clients.

Evaluation:

During a role-play at the workshop, the trainer will ask participants to complete ten data charts on family planning clients who come in for contraceptive refills. The participants' data charts are checked against correctly completed charts.

Outcome evaluation

Outcome evaluation is done some time after the training is completed. It looks at whether the participants have applied what they learned in the training to their work.

This can be done by following up the trainees at their workplace and assessing their performance. It is important to note local conditions that may hinder improvement of performance after training as this may affect the evaluation results.

Impact evaluation

Impact evaluation determines if the training contributed to the improvement of maternal and child health status.

This kind of evaluation will need expertise in research processes and methods because improvement in maternal and child health services is multifactorial and quantifying every intervention is very difficult, and in some instances may not be possible.

The results of evaluation should always dictate the future of the training programme, whether it should be improved, continue as it is, changed or discontinued.

EVALUATING THE EFFECTS OF INTERVENTIONS

Evaluation is the systematic process of determining the effectiveness and efficiency of interventions in relation to maternal and child health programmes' goals and objectives.

Evaluation measures accomplishments.

It determines what the programme has achieved, how fast objectives were attained, and whether the activities and strategies are the best ways to achieve the goals.

Evaluation also looks at failures.

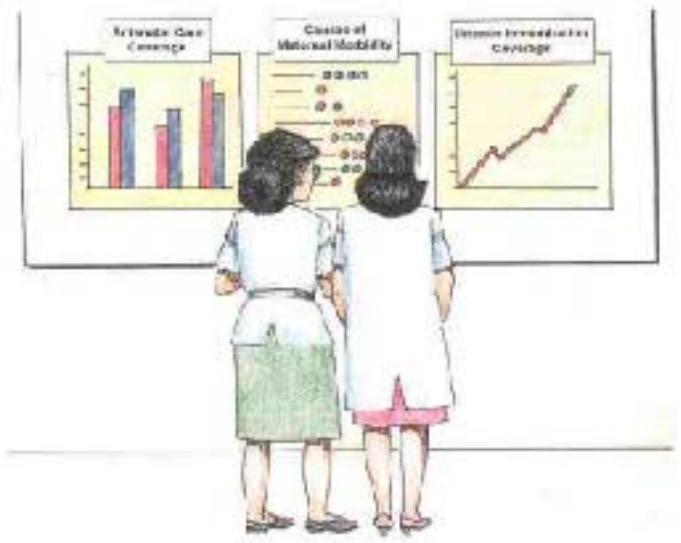
It ascertains why goals and objectives were not achieved and assesses the strengths and weaknesses of interventions so that they can be improved.

Evaluation may be carried out for the general MCH programme, for specific levels of services such as a community health centre or hospital, or for specific components of the programme such as immunization, home delivery, etc.

Why evaluate?

Maternal and child health programmes need to be evaluated:

- to find out if the interventions are helping to solve the problems;
- to improve interventions and adapt them to changing conditions; and
- to provide a good basis for planning succeeding programme activities.



When to evaluate?

The timing of evaluation should depend on the time-frame of the objectives.

Evaluating programme impact may not be possible in less than three years, but may be possible to evaluate short-term activites within a year or even less.

Evaluating the effects of campaigns to improve women's awareness of the danger signs in pregnancy may take some time. Evaluating the conduct of a training course in obstetric emergencies can be done right after the training course.

Evaluation methods

The method of data collection depends on the objective of the evaluation.

Physical measurement

This is often used in measuring effects on people.

Example:

To evaluate the effect of providing iron supplementation to pregnant women, a clinical evaluation is done before and after the treatment regimen.

Surveys and field research

When information for what needs to be evaluated is not available in records and reports, surveys and field research may provide the answers. These may be carried out through interviews, focus group discussions, questionnaires or observations.

Example:

When family planning services coverage is low, a survey on social acceptability of the services may be necessary.

Analysis of existing information

This is very useful when evaluating effectiveness and efficiency.

Example:

The percentage of women attending antenatal care and the number of iron tablets dispensed are part of routine records and reports.

Important points to consider

Every evaluation activity should be planned. The following should be determined:

- what is to be evaluated;
- how the evaluation will be carried out; and
- what resources are needed.

The accuracy and reliability of the evaluation should be ensured. Inaccurate and unreliable results will not help improve the MCH programme.

Evaluation results should be shared with all the members of the health team and with concerned organizations.

The evaluation process should also be evaluated to control biases that may affect results.

Steps in evaluating

Decide what to evaluate

Usually, during the planning stage, objectives, operational targets, strategies and activities are already identified with corresponding indicators. If these were not identified beforehand, it is worthwhile doing so before proceeding with evaluation.

Based on the programme objectives, operational targets or strategies, select critical points for evaluation.

Example:

Operational target:

To train 50% of midwives on management of obstetrical complications by the end of the year.

Evaluation points include:

- number of midwives trained;
- whether the trained midwives are now able to manage obstetrical complications;
- number, causes, and proportion of maternal deaths before and after training; and
- number of women with obstetrical complications managed by the trained midwife, and the outcome of management.

Identify appropriate indicators

Indicators are parameters that have to be measured during evaluation.

Indicators are very important in evaluation because they allow expected results to be compared with actual accomplishments.

Indicators are often expressed in the following ways:

Rate - the occurrence of an event in a given population.

Example:

The infant mortality rate if there are 600 infant deaths and 10 000 live births in an area.

$$\text{Infant mortality rate} = \frac{600}{10\,000} \times 1000$$

$$= 60 \text{ per } 1000 \text{ live births}$$

Ratio - a comparison between two events.

Example:

The ratio of midwives to the number of households if there are five midwives in a community of 15 000 households.

$$\text{Midwife/household} = 15\,000 \div 5$$

$$= 1{:}3000$$

Average - the total of all numbers divided by the number of cases.

Example:

The average number of antenatal visits per woman prior to delivery if woman A had four, woman B three, woman C five, woman D one, and woman E two visits.

$$\text{Average number of antenatal visits} = \frac{4+3+5+1+2}{5}$$

$$= 3 \text{ visits per woman}$$

Percentage - a part of a whole, the whole is taken to be 100.

Example:

The percentage of infants who are exclusively breast-fed from 0-6 months if the total number of infants is 500 and 100 infants are exclusively breast-fed from 0-6 months.

$$\text{Percentage of infants exclusively breast-fed from 0-6 months} = \frac{100}{500}$$

$$= 0.20 \text{ or } 20\%$$

Impact

A change in a health condition brought about by several interventions over a period of time is an indicator of impact.

Impact	Indicator
Reduction in maternal mortality	Maternal mortality ratio = $\frac{\text{total deaths due to causes related to or aggravated by pregnancy within a time interval}}{\text{total live births during the same time interval}}$ x 100 000
Reduction in cause-specific maternal deaths	Cause-specific maternal mortality ratio = $\frac{\text{cause-specific maternal death within a time interval}}{\text{total live births during the same time interval}}$ x 100 000
Reduction in infant mortality	Infant mortality rate = $\frac{\text{infant deaths within a time interval}}{\text{total live births during the same time interval}}$ x 1000

Impact	Indicator
Reduction in cause-specific infant deaths	Cause-specific infant mortality rate = $\frac{\text{cause-specific infant deaths within a time interval}}{\text{total live births during the same time interval}}$ x 1000
Reduction in births	Birth rate = $\frac{\text{live births within a time interval}}{\text{mid-interval population}}$ x 1000
Reduction in fertility	Fertility rate = $\frac{\text{total live births within a time interval}}{\text{number of women aged 15-49 years at mid-interval}}$ x 1000

Effectiveness

The direct outcome of an intervention or a strategy is an indicator of effectiveness.

Intervention	Indicator
Traditional Birth Attendant training programme	Traditional Birth Attendant referral rate = $\frac{\text{number of Traditional Birth Attendant referrals}}{\text{total Traditional Birth Attendant deliveries}}$ x 1000
Screening of high risk pregnancies (HRP)	Crude rate of HRP hospital deliveries = $\frac{\text{number of HRP hospital deliveries}}{\text{total live births}}$ x 1000
Family planning services	Contraceptive prevalence rate = $\frac{\text{number of acceptors}}{\text{number of women in age group 15-49 years}}$ x 1000
Iron supplementation to reduce anaemia among pregnant women	Iron supplementation rate among pregnant women = $\frac{\text{number of pregnant women receiving iron supplementation}}{\text{total number of pregnant women}}$ x 100%

Efficiency

A parameter that shows whether manpower, material, time and other resources were used in the best possible manner to achieve the objectives is an indicator of efficiency.

Parameter	Indicator
Work efficiency	Target accomplishment rate = $\frac{\text{actual output}}{\text{target output}}$ x 100%
Budget efficiency	Budget utilization rate = $\frac{\text{actual budget expenditure}}{\text{budget allocated}}$ x 100%
Economic efficiency	Cost effectiveness = $\frac{\text{cost of services provided}}{\text{volume of service output}}$ x 100%

Gather and analyse data

Quantitative data collected are either numerical or categorical.

Examples of numerical data are the weights of children, scores in evaluation examinations or the number of households with a latrine.

In collecting numerical data, the units of the variable have to be emphasized. For example, kg., pcs., years of age, per dozen, etc. should be written beside the number. This will facilitate processing of information.

Categorical data are objects or attributes of objects. Sex (male or female), educational attainment (elementary, high school, vocational, collegiate, graduate), occupation (self-employed, trader, professional, skilled labourer, etc.) and perceptions (poor, good, better, best) are examples of categorical data.

If the objective of the evaluation is to get insights, explain phenomena and identify real-life situations and practices, then the data needed are qualitative in nature and the method of collection becomes qualitative.

Qualitative methods often used are interviews and focus group discussions. These methods give information relatively quickly. Their drawback is that their insights may not be deep enough to fully explain observations.

In evaluating MCH services, quantitative and qualitative methods of data collection may have to be designed. Quantitative methods will be able to identify problems, issues and concerns. Qualitative methods will explain how and why these problems, issues and concerns evolved.

Example:

In evaluating a Traditional Birth Attendant training programme, quantitative methods will identify the extent and scope of Traditional Birth Attendant training outcomes such as Traditional Birth Attendant referral to hospitals for complicated deliveries, the change in maternal mortality rates experienced by trained Traditional Birth Attendants and the change in perinatal mortality rates for cases delivered by trained Traditional Birth Attendants.

Qualitative methods will enrich this information by identifying factors that influenced these changes, including the delivery practices of Traditional Birth Attendants. Qualitative methods can assess the social acceptability of these outcomes and how they have affected the lives of the people in the community.

Information to be collected should be kept to the essential minimum and should always relate to what is being evaluated.

The amount of data collected should be just enough to be able to make an analysis. Too many data will require more time and effort.

The information should come from records and reports, monitoring visits, discussions with key persons, observations, audits, and surveys. This information should be collated and analysed for it to be meaningful.

Example:

In the case of frequency of maternal deaths, the numbers should be translated into a maternal mortality ratio.

Planned objectives and targets should be compared with the accomplishments

Determine the degree of achievement or failure. When making comparisons make sure that the units of measurements are the same.

Example:

If the stated objective is to lower the incidence of sexually transmitted diseases by 20% from the 1995 rate, which is 10 000 per 100 000 population, the accomplishment should also be stated in incidence per 100 000 population.

Degree of achievement or failure can be expressed in percentages.

Example:

If the operational target is to fully immunize all children below one year of age and evaluation showed that out of 10 000 children below one year of age only 9000 were fully immunized then the degree of achievement is only 90%. This is 10% less than what was expected.

The reasons behind success or failure should be determined.

This is the most important part of the evaluation. It is only when the factors behind success and failure are known that measures for improvement can be identified correctly.

Example:

After training midwives to identify pregnant women at risk and manage obstetrical emergencies, the referral rate of pregnant women at risk improved but maternal deaths due to obstetrical complications among women with no identifiable risk factor during pregnancy remained the same.

A closer look at the data revealed that, even if the midwives were able to give emergency management to pregnant women with obstetrical complications, pregnant women were not referred to the hospital on time because of lack of transportation.

Using evaluation findings to improve Maternal and Child Health programmes

Most managers are aware of the importance of evaluation, but it is a common observation that evaluation findings are not used to improve maternal and child health programmes.

The trend of using globally accepted strategies and activities may have contributed to the neglect of evaluation.

In the case of globally accepted strategies and activities, evaluation is still very important so that they are fully adapted to local needs and acceptable to the recipients of services.

A report should always be written after every evaluation. A good report:

- should be direct, clear and concise;
- should specify the purpose of the evaluation, what was to be evaluated, methods employed in the evaluation, results and recommendations; and
- should use charts, graphs or tables to facilitate analysis of data and presentation of results.

The evaluation results should be disseminated. Circulars or newsletters may be used to disseminate results, but general meetings provide more opportunities for interaction.

Evaluation findings are best applied during the planning of succeeding programme activities and during staff supervision. People who take part in evaluation should also be involved in planning.