



MATERNAL AND CHILD HEALTH

PARTICIPANT'S GUIDE

FIRST EDITION

## ABBREVIATIONS

C	ANTENATAL CARE
ARV	ANTI-RETROVIRAL
ASM	AGENT DE SANTÉ MATERNELLE
AVT	ANTE-VACCINE TETANUS
CHW	COMMUNITY HEALTH WORKERS
DHS	DEMOGRAPHIC AND HEALTH SURVEY
FP	FAMILY PLANNING
HBMNC	HOME-BASED MATERNAL AND NEONATAL CARE
HC	HEALTH CENTER
HF	HEALTH FACILITY
ICCM	INTEGRATED COMMUNITY CARE MANAGEMENT
IST	INFECTION SEXUALLY TRANSMITTED
LAM	LACTATIONAL AMENORRHEA METHOD
MDG	MILLENNIUM DEVELOPMENT GOAL
MMR	MATERNAL MORTALITY RATE/RATIO
MOH	MINISTRY OF HEALTH
NNMR	NEONATAL MORTALITY RATE/RATIO
PMTCT	PREVENTION MOTHER –TO- CHILD TRANSMISSION
PNMR	POST NEONATAL MORTALITY RATE
PCV	PNEUMONIA CONTROL VACCINE
PPH	POST PARTUM HEMORRHAGE
VAR	VACCIN ANTI-ROUGEOLEUX
VIH	VIRUS IMMUNO-DEFICIENCE HUMAINE
WHO	WORLD HEALTH ORGANIZATION

## PREFACE

Different health surveys conducted in show that the maternal and child mortality is a big challenge for countries despite the international progress that has been made. Even though the trend is downward, still many lives are lost from the preventable causes attributable to maternity or aggravated by the pregnancy or delivery. Among the leading causes are: hemorrhage post partum, prolonged obstructed labor, eclampsia, unsafe abortion, malaria and other infections.

Beside those causes, there are the contributing factors including the delay to visit the health care clinic, home delivery, lack of care in case of home delivery, use of traditional medicines for prevention against diseases/congenital abnormalities and acceleration of labor and lack of knowledge about danger signs during pregnancy and in past partum period.

The families and country suffer from the related socio economic including, widowhood, orphanage and, poverty. In order to improving the situation various governments are implementing countrywide programs.

This training deals with “Maternal and Child health. This tool is a handbook for participants.

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# UNIT 1: MATERNAL HEALTH

## MATERNAL HEALTH

### MALE AND FEMALE REPRODUCTIVE HEALTH

Reproductive health is state of complete physical mental and social well-being and not merely the absence of diseases or infirmity, in all matters relating to the reproductive health system and to its function and processes.

### DEVELOPMENT AND CHANGES IN THE BODY

During the puberty stage a state of changes take place into the body. For the girls the puberty takes place at age of 12 or 13 years old and 15 years old for the boys

- Changes to girls: Physical, psychological and behavioral changes take place such as:
  - Development of breasts
  - Pubic and arm pit hair
  - Enlargement of hips
  - Menstruation
  - Change of voice
  - Developing attraction for opposite sex
  - Timidity and cleanliness
- Change to boys: Physical, psychological and behavioral changes take place such as:
  - The same characters except breasts, menstruation and timidity

### MAKING A BABY

A girl starts her period around 13 years old but it varies from person to person. She loses some blood once a month usually every 26 to 30 days. The bleeding lasts 3 to 5 days. The periods stop when the woman is between 40 and 50 years (menopause)

Inside of belly a girl/woman has two ovaries, one on each side. About 14 days before her period, one of the ovaries releases a very tiny egg. This egg travels along a tube to the uterus where the baby grows. The pregnancy lasts 42 weeks. When the egg does not meet any spermatozoid, the bleeding starts. The bleeding duration is not the same to all girls/women

## MATERNAL MORTALITY

Maternal death is a death of woman who dies during pregnancy or within 42 days after delivery. From any cause related to or aggravated by pregnancy or its management but not from accident without considering the duration or site of pregnancy. Maternal deaths are calculated per 100 000 live births.

### CAUSES AND CONTRIBUTING FACTORS

The maternal mortality is due to various causes. There are direct causes and indirect causes. The direct causes are from pregnant issues or aggravated by it, such as post partum hemorrhage or ante partum hemorrhage. The infections are among the indirect causes. Most common maternal consequences are:

- |                           |                               |
|---------------------------|-------------------------------|
| • Post partum hemorrhage  | • Other infections            |
| • Septicemia              | • Ante post partum hemorrhage |
| • Intra partum hemorrhage | • Abortion                    |
| • Eclampsia               | • Malaria                     |

Contributing factor related to child deaths are preventable causes and contributing risk factors. The major contributing factors identified are among others:

- Some women still give birth at home
- Home births estimated at 2% without visiting HF for ANC,
- Delay to visit the HC for ANC
- Use of traditional medicine for activating the labor
- Low coverage of postnatal care
- Lack of adequate information including danger signs to women before, during pregnancy and after delivery in their community
- Delay to make decision about place where to give birth
- Lack of appropriate home-based care after delivery

## HEALTH SERVICES FOR PREGNANT WOMEN

### BASIC SIGNS OF PREGNANCY

The increase of maternal deaths is due to lack of adequate information or knowledge about the signs of being pregnant. This challenge contributes the delay for visiting the ANC.

This training will provide you the related information so that you may share with others in terms of reducing the MMR by visiting the HC early for ANC. The basic signs of pregnancy are:

- Missing period for 6 weeks or more
- Morning sickness
- Bigger belly and breasts with dark areas around nipples, belly and face
- Frequent urination

### ADVANTAGES OF ANC PROGRAM

It is a type of preventive care given to pregnant women in terms of follow up the maternal and child health.

### NORMS

- Determine the prenatal care consists of 4 visits during pregnancy until delivery (42 weeks).
- The first visit is recommended within first quarter of pregnancy (the initial antenatal care visit)

### ADVANTAGES

- Diagnosing pregnancy (uncommon)
- Detect infections: Heart diseases, diabetes, STI, HIV, kidney diseases, anemia, etc.
- Detecting physical abnormalities
- Monitoring the fetal growth
- Check for multiple fetuses
- Receiving medical information: nutrition and hygiene
- Folic acid, vitamins supplement
- Promotion of healthy lifestyles that benefit both mother and child
- Assess possible risks to the mother (e.g., miscarriage, blighted ovum, ectopic pregnancy)
- Preparation for delivery
- Immunization against TTN

### DISADVANTAGES WHEN NOT GOING TO ANC

- Lack of information about maternal and baby health
- Infections related to pregnancy or aggravated by it
- Lack of information about basic/relevant advises necessary for pregnant women
- Lack of information about birth period

## COMPLICATIONS DURING THE PREGNANCY

### BEFORE DELIVERY

- Excessive vaginal bleeding
- Eclampsia
- Abdominal presentation: transverse lie, brow or face presentation
- Intrauterine death

### DURING LABOR

- Delay in first stage of labor
- Delay in second stage of labor
- Retained placenta with or without bleeding
- Excessive vaginal bleeding
- Eclampsia
- Third degree tears
- Fistula

### AFTER DELIVERY

- Vaginal bleeding
- Puerperal fever
- Fistula

## DANGER SIGNS DURING PREGNANCY

The inadequate access to the information about danger signs during the pregnancy is one of the leading causes of MM. If the women were aware of the danger signs, they would visit the HF without delay when they experience any alarming sign. This session will be very interesting for the participants because they will have all information about danger signs for pregnant women.

The table bellow summarizes the major danger signs or alarming signs for pregnant women and related advices

<b>Danger Signs</b>	<b>Advice</b>
Swollen feet: if she has no other complaints	To rest as much as possible with her feet up on pillow or stool Not to add salt to her food Visit the HC for treatment
If her feet are still swollen after 1 week	Visit the HC for treatment
If the swelling has spread to the hands and face, and /or if she has headache, vomiting trouble with vision or belly pains	Visit the HC for treatment
Weakness and tiredness	Visit the HC for treatment
Lower eyelid (conjunctivitis) are very pale	Visit the HC for treatment
Swollen ankles, hands and face	Visit the HC for treatment
Bad persistent headache	Visit the HC for treatment

Fever	Visit the HC for treatment
Vomiting in the 3 last months	Visit the HC for treatment
Vaginal or discharge bleeding	Visit the HC for treatment

#### IMMUNIZATION AGAINST TETANUS

Tetanus leads to many deaths of newborns. It is necessary to vaccinate all pregnant women in order to protect their babies. Two injections are enough to protect a baby for the first pregnancy. For being protected forever, a woman has to get 5 injections according to the current immunization\ schedule of the country. Go to the health care center for more information.

#### AVT SURVEILLANCE

The AVT is included in list of childhood diseases under surveillance because they are the most killers among the children. The diseases are the following: Polio, Measles, Gastro-enteritis, Pediatric meningitis and AVT. Immunization should continue in terms of control and making sure that all eligible children are immunized.

#### ROLE OF FAMILY AND COMMUNITY

- To remind the woman to visit the ANC with first three months
- To follow up the visits and appointments given on ANC card

### NUTRITION FOR PREGNANT WOMAN

The pregnant women have to eat the healthy and balanced food for her health and for baby. They should eat more food than usual because they are eating for themselves and the baby. They need to make themselves strong and the baby, they need to eat more so that they can make more breast milk. They have to eat the locally available food.

#### FOODS FOR PREGNANT WOMEN

Type of food	Sources
Protective foods	Green leafy vegetables such as: Spinach, palm, oil, tomatoes, mangoes, plum, passion fruits, leak and other fruits.
Super energy foods	These foods give more energy and make the mother fat faster than any other type of food:  These food are the fats and oils, nuts, groundnuts and sesame, fat from fish and milk,
Main staple foods	Such as wheat, sorghum and vegetables

### HYGIENE FOR PREGNANT WOMEN

The pregnant woman is more vulnerable than never because the changes occur in the body in terms of physiology and immune. In order to maintain her good health, she has to prevent herself from sicknesses. For that, she has to respect hygiene measures in all aspects so that she can prepare her future state of mother and educator.



## PERSONAL HYGIENE FOR PREGNANT WOMAN

### SKIN CARE

- The glands of the skin may be more active during pregnancy and the patient may tend to perspire more. Frequent baths or showers are recommended.
- Baths can be therapeutic--relaxes tensed and tired muscles, helps counter insomnia, and makes the patient feel fresh and sweet smelling.
- Baths may pose a physical maneuverability problem which increases the chance of falling late in the pregnancy, showers are recommended, bat with caution when getting in and out moving around in the shower
- The possibility of infecting the vaginal tract as a result of tub baths is considered highly
- Tub baths are contraindicated after rupture of the membranes.

### HAIR CARE

- The hair tends to become oily more frequently during pregnancy due to over activity of oil glands of the scalp and may require shampooing more frequently. The hair may grow faster during pregnancy and may require cutting more often.

### BREAST CARE

It is important to begin preparing the breast for breastfeeding during the prenatal period.

- A well-fitting support bra cups should be worn at all times. This will provide good support for the enlarging breasts. As the breasts enlarge, an increase in bra and cup size should be worn
- Pads may be worn inside the bra cups to absorb possible colostrum leakage from the nipples. The pads should be changed if they become wet from leakage.
- Prolonged moisture against the nipples may lead to tenderness and cracking once the newborn infant begins nursing.
- The breasts should be washed daily (without soap) to remove dried colostrum and to prevent irritation to the nipples. Lanolin may be applied to the nipples to prevent evaporation of perspiration, thereby softening the skin.

### DENTAL CARE

The patient must maintain normal, daily dental care. There is no documentation that supports increased dental cavities during pregnancy.

- Minor dental work, such as fillings and simple extractions, may be done during pregnancy. However, patients are advised to avoid anesthetics.
- Major dental work, to include all dental surgery, should be postponed until after the pregnancy because of the need to use anesthetics because it can affect the fetus.

## BREASTFEEDING

According to the health surveys and different research, the vulnerability among the children under 5 is found more often among the children insufficiently breastfed, especially the children who did not benefited the breast milk during first 6 months. For that reason, the nutritional counsel for the newborns is exclusive breastfeeding during the first 6 months of life

### HEALTH BENEFITS FROM BREASTFEEDING

The advantages of breastfeeding are among others:

- Provides the best nutrition for the child: It contains all nutritive elements: Vitamins, proteins, lipids, glucoses, and mineral salts water etc.
- Protects the baby from life threatening diarrhea caused by contaminated foods or water
- Passes the mother's immunity to the child, which helps protect the baby from life-threatening infections, such as measles
- Helps develop a close relationship between mother and child
- May help protect the mother against breast cancer
- Helps delay another pregnancy if it is sufficiently practiced during the 6 first months of life (LAM). It means breastfeed a child without giving any substantial food
- Helps the mothers to recovery the energy and the physical resistance
- The milk is always available and to be consumed
- Prevents from postpartum hemorrhage (helping to evacuate the remainders from uterus)
- Less costs

It is recommended to breastfeed newborn with the 1 hour after delivery for encouraging the increase of breast milk. Furthermore, within the first days after delivery, the breast milk is full of colostrum needed for a newborn because it contains all nutritive elements including antibodies from mothers.

#### CONTRIBUTING FACTORS TO THE BREAST MILK

Even though the mother can best be giving breast feed, not all who have the breast milk. Some of them have low quantity while others have enough. But there are contributing factors for increase, decrease or not having any.

#### IMPORTANCE OF BREAST MILK

Breast milk is still valuable food even the second year of life. Furthermore, frequent sucking also helps to space births by delaying the return of periods. Mother should stop breastfeeding gradually after the child is able to eat 3 good meals a day and has no illness.

#### ROLE OF THE FAMILY MEMBERS:

- To help mothers to breastfeed during first hour after birth
- To provide the balanced food and enough drinks for increasing the breast milk
- To ensure food security
- To protect the breastfeeding mothers from GBV
- To avoid all kind of conflicts (domestic or community)
- To help her find /access to health facility if there is any issue related to breastfeeding

#### PMTCT

The HIV is known as IST but it can be transmitted from mother to child. In order to prevent HIV from mother to the baby many governments introduced PMTCT programs in ANC services. When a pregnant woman visits the health facility for ANC, she is automatically tested. If the result is positive, they determine her treatment during and after pregnancy

#### HOW BABIES GET HIV

A mother can give HIV to her baby during pregnancy, during labor and delivery, and by breastfeeding. A baby can also get HIV if an HIV-positive mother puts her breast milk in the baby's eyes. Putting breast milk in the baby's eyes does not help the baby's eyes when they are red, swollen, and itching. To prevent transmission the following actions can be taken, but always consult a health care center.

- To prevent HIV from mother to the baby, the mother must take ARVs and deliver the baby at the health center.
- The baby must take antiretroviral syrup.
- The baby also has to take antibiotics (such as Bactrim).
- All pregnant women should go to the health center for prenatal consultations including an HIV test, and have a CD4 count to determine her treatment during and after pregnancy.
- All pregnant women should be encouraged to go to the health center for an HIV test. If a woman is HIV-positive, she will be enrolled in PMTCT

#### PRENATAL CARE IN PMTCT

Prenatal care is very important to making sure that the mother and the baby are healthy.

- At the prenatal visit, the doctor or nurse will check the mother's blood pressure, check the mother for anemia, give the mother vitamins, give vaccines to the mother to keep her and the baby safe, check for infections that might hurt the mother or baby, test for HIV, get a CD4 count if she is HIV-positive, and note the mother's blood type in case she needs a blood transfusion later.
- All women who are in the early stages of HIV should be watched for side effects of the ARVs, such as pale skin, dizziness, and fatigue. If this occurs, the mother should go to the health center.

#### THE IMPORTANCE OF DELIVERY IN A HEALTH FACILITY

HIV-positive women should deliver their babies at the health center. This decreases the chance that the mother will pass HIV to the baby, because the doctor or nurse will make sure labor is not prolonged, will give the mother additional ARVs and will give the baby ARVs. Additionally, routine newborn care will be provided.

#### AFTER DELIVERY

The CHW should make sure that:

- The mother has ART syrup for the baby and herself and learns how to give it to the baby.
- A follow-up appointment at the health center has been set for the mother and baby.
- A follow-up appointment at the health center has been made for the baby at 6 weeks old. Babies will have monthly visits until they are 18 months old for growth monitoring, vaccinations and general health.

#### ROLE OF HUSBAND

- To visit the HC for test
- To support his wife in adherence and follow up visits
- Collaborate with his wife in preparation for baby's nutrition

#### ROLE OF FAMILY MEMBERS

- Encouraging the mother for adherence and regular test
- Help the mother to carry out the daily duties

## UNIT 2: CHILD HEALTH

### CHILD HEALTH

The child health is hindered by a set of health problems including diseases, lower education of mothers, poverty, family's size, nutritional issues, maternal health issues, etc. Related to child health are the following definitions:

- Neonatal mortality (NNM): the probability of dying within the first month of life
- Post-neonatal mortality (PNM): the probability of dying between the first month of life and first birthday (computed as the difference between infant and neonatal mortality)
- Infant mortality: the probability of dying between birth and the first birthday
- Child mortality: the probability of dying between the first and fifth birthday
- Under-5 mortality: the probability of dying between birth and the fifth birthday

#### MAIN LEADING CAUSES

- Status of mothers before and during pregnancy
- Status of mother within the labor and after delivery
- Lack of emergency care after birth
- Neonatal and post neonatal infections
- Diarrhea diseases
- Respiratory infection
- Malaria

#### STRATEGIES FOR CHILD HEALTH IMPROVEMENT

- There are many strategies planned and being implement for improvement. Some of them are bellow listed:
- ANC program
- Growth monitoring
- Medical insurance
- Promotion of giving birth at HF
- Integration of CCM implemented by CHWs
- Immunization against childhood illnesses
- Childhood diseases surveillance
- MCH bimanual organized
- Vitamin A supplement
- De-worming
- Folic acid distributed to pregnant women
- Improvement of communication through Rapid SMS program implemented by ASMs

#### IMMUNIZATION PROGRAM

In the process of improving the child health and reducing the mortality all HCs conduct the immunization activities. The table bellow shows the child illnesses concerned and the immunization schedule:

Age	Sickness/Vaccines
After birth	TB + Polio
1 ½ week	Polio, diphtheria, whoop cough, tetanus, Hep B, Pneumonia (PCV 13), gastro-enteritis
2 ½ weeks	Polio, diphtheria, whoop cough, tetanus, Hep B, Pneumonia (PCV 13), gastro-enteritis
3 ½	Polio, diphtheria, whoop cough, tetanus, Hep B, Pneumonia (PCV 13), gastro-enteritis
9 months	Measles + Rubella
15 months	Measles
12 years	Cervical cancer

## GROWTH MONITORING

There is a nutritional program called “ Growth monitoring”. The purpose of this program is to monitor growth of a child since the birth up to five years old. A child is monthly weighed at community level by CHWs and HC. The regular weight shows if a child is healthy when he/she gets heavier month-by-month and unhealthy when she/he loses weight.

### STRATEGIC INTERVENTION

- Monthly growth monitoring
- Screening
- Kitchen garden strategy
- Rehabilitation for severe malnutrition
- Community -Based Nutrition Program
- Vitamin a supplement
- De-worming

## RECOGNIZING LIMITATIONS IN CHILD HEALTH

The following table shows the related diseases handled by CHWs and the related danger signs on which the CHWs base their decision for giving treatment or referring to HCs when the case presents the alarming signs:

- Fever/Malaria
- Pneumonia
- Diarrhea diseases
- Malnutrition
- Runny noses and cough

### DANGER SIGNS AMONG CHILDREN UNDER 5 ABOUT SOME DISEASES

If a parent or caretaker brings a sick child to the CHW, he/she examines the patient. When the child presents the alarming signs, the CHW fills out the form/card and refers to HC

The table below reflects some diseases and alarming signs:

### MALNUTRITION

- Very thin
- No fat, unusually quiet
- Miserable and crying all the time
- Legs swollen
- Edema in feet and ankles
- Round puffy face
- Looks like an old person in the face
- Reddish thin hair
- Hair falls out
- Loosing weight
- Gaining weight

#### DIARRHOEA

Symptoms for a child (a four month old) with severe dehydration:

- |                        |   |
|------------------------|---|
| • Watery stools        | • Skin elasticity   |
| • Dry lips and mouth   | • Respiration issue: Increases 40 to 60 deep breaths per minute |
| • Dry and tenting skin | • Pulse: Increased over 140 beats per minute and weak           |
| • Sunken eyes          | • Urine output: Decreased or absent                             |
| • Sunken fontanel      |   |
| • Sunken fontanel      |   |

#### MEASLES

- |              |  |
|--------------|--|
| • High fever | • General tiredness (day 1)                                    |
| • Runny nose | • Small whit spots on cheeks (day 2)                           |
| • Red eyes   | • Reddish rash on faces and entire body (day 3)                |
| • Cough      | • Fever an rash begin to fade followed by peeling skin (day 7) |
| • Rash       |  |
| • Headache   |  |

#### PROBLEMS OF NEONATAL TETANUS

- |   |                                |
|---|--------------------------------|
| • Inability to suck                               | • Fever                        |
| • Jaw spasms                                      | • Trouble breathing            |
| • Rigid posture                                   | • Crying and irritability      |
| • Redness or foul odor around the umbilical stump | • Weakness                     |
| • Jaundice  | • Red, pussy eyes              |
| • Vomiting  | • Mucous membrane of the mouth |