

# Resource Manual for Mentoring of ANMs on Quality VHND Services



## National Health Mission

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Deptt of Health & Family Welfare

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# Resource Manual for Mentoring of ANMS on Quality VHND Services-2014



Prepared with technical assistance from DFID  
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# Preface



Ms Roopa Mishra, IAS  
Mission Director, NHM

*National and international evidences indicate that reduction of maternal and neonatal mortality and morbidity can be accelerated if women are provided quality antenatal care during pregnancy and child birth. Ensuring quality of maternal and child health services through improved skills of frontline workers is one of the key interventions for reducing maternal and child mortality and morbidity.*

*The Government of Odisha has initiated processes to increase the availability of health workers and is focusing on quality of pre-service nursing and midwifery education in 2013-14. While this will improve nursing and midwifery education, there is a strong need to focus on skill building of existing ANMs. Although trainings of frontline workers (FLW), including ANM, ASHA and AWW, have been undertaken at different points in time, there is wide variation in skills of the workers.*

*In this context, NHM Odisha has conceptualized to build up the cadre of FLWs especially ANMs to offer quality ANC and PNC services and also build up a plan of mentoring of the field activities by development of this mentoring module.*

*I hope the present endeavour will go a long way in delivering Quality care services to the Mothers & childrens of the State.*



[MS. ROOPA MISHRA, IAS]



# Acknowledgement



The Resource Manual for Mentoring of ANMs on Quality VHND Services has emerged out of wide based consultation. Preparation of the module would not have been possible without the valuable contributions of Maternal and Child Health Divisions of the Directorate of Health and Family Welfare and domain experts.

Principal Secretary to Govt., Health & Family Welfare Dept, Govt. Of Odisha, **Shri Pradipta Kumar Mahapatra, IAS** envisioned the concept for a stronger field level workforce and initiated the mentoring process.

I also take great pleasure in thanking **Dr Pramod Kumar Meherda, IAS**, RDC Northern Zone for having nurtured the ANM mentoring concept during the initial days in his role as the then, MD NRHM. Mission Director, NHM **Ms. Roopa Mishra, IAS**, 's constant encouragement was our inspiration and her strategic guidance shaped the resource manual.

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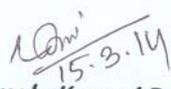
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I wish all success to the noble initiative in enabling quality of services through skilled health workers in the State.

  
**Dr. Nirmala Kumari Dei, MD**  
**Director, Family Welfare**  
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## Abbreviations

ANM	:	Auxillary Nurse Midwife
DPMU	:	District Program Management Unit
EDD	:	Expected Date of Delivery
ENBC	:	Essential New Born Care Unit
FH	:	Fundal Height
FHR	:	Foetal Heart Rate
FHS	:	Foetal Heart Sound
FRU	:	First Referral Unit
GoI	:	Government of India
Hb	:	Haemoglobin
HCl	:	Hydrochloric Acid
HIV	:	Human Immunodeficiency Virus
HLD	:	High Level Disinfection
IFA	:	Iron Folic Acid
INJ	:	Injection
IUCD	:	Intrauterine Contraceptive Device
JSY	:	Janani Suraksha Yojana
LAM	:	Lactational Amenorrhea Method
LHV	:	Lady Health Visitor
LLIN	:	Long-Lasting Insecticidal Net
LMP	:	Last Menstrual Period
LR	:	Labour Room
MCH	:	Mother and Child Health
MO	:	Medical Officer
MoHFW	:	Ministry of Health and Family Welfare
MoWCD	:	Ministry of Women and Child Development
NRHM	:	National Rural Health Mission

NVBDCP	:	National Vector-Borne Disease Control Programme
OJT	:	On Job Training
OT	:	Operation Theatre
P/V	:	Per Vaginum
PHC	:	Primary Health Centre
PIH	:	Pregnancy-Induced Hypertension
POC	:	Products of Conception
PPH	:	Post-Partum Haemorrhage
PROM	:	Premature Rupture of Membranes
RCH	:	Reproductive and Child Health
RDK	:	Rapid Diagnostic Kit
RPR	:	Rapid Plasma Reagin
RR	:	Respiratory Rate
RTI	:	Reproductive Tract Infection
SBA	:	Skilled Birth Attendant
SC	:	Sub-Centre
SN	:	Staff Nurse
STI	:	Sexually Transmitted Infection
TT	:	Tetanus Toxoid
UTI	:	Urinary Tract Infection
VDRL	:	Venereal Disease Research Laboratory

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# Introduction

Maternal mortality is a strong indicator for measuring the attention paid to the health care of the women. The burden of maternal mortality is quite high in India at 178 deaths per 100,000 live births as per the data of Sample Registration System (SRS) for the period 2010-12. However, India is committed to meet the MDG 5 target of less than 100 deaths per 100,000 live births by the year 2015. Closer to home according to CNAA 2006-07 report, Odisha has reported nearly 46.29% of institutional deliveries and NFHS 3 reports 61% of women here have received atleast 3 antenatal visits and only 38% having received any postnatal care. The MMR in Odisha too stands at 237 deaths per one lakh live births (SRS 2010-12).

Govt's strategy for maternal mortality reduction focuses on building a well functioning Primary Health Care System, which can provide essential obstetric care services with a backbone of skilled birth attendant for every birth, whether it takes place in the facility or at home, which is linked to a well developed referral system with an access to emergency obstetric care for all women who experience complications. This holds very relevant for state of Odisha given the indicators cited above.

The current mentoring module is developed based on the revised SAB guidelines and is meant for orientation and training of our staff nurses(SNs), Auxiliary nurse midwife(ANMs), and Lady Health Visitor(LHVs) who are important service providers at the primary level of health care in Odisha. The basis of a successful delivery and the subsequent survival of the mother and child especially in the underserved and rural areas are essential antenatal and postnatal care. The ground level health workers and the workers at the supervisory level still have a long way to go in ensuring full coverage of these simple, feasible and non-interventional health services.

Yet another novel initiative under National Rural Health Mission (NRHM) implements Village Health and Nutrition Day (VHND), "Mamata Diwas", a concept for interdepartmental convergence having desirable health outcomes of Pregnant Women and children below five years and was introduced in the State of Orissa by the Department of Health and Family Welfare in 2010. Under the programme, the primary clients are pregnant women, lactating mothers, children below three years of age. Basic components of primary healthcare services, including early registration, deworming, counseling on early breastfeeding, identification and referral of high risk cases of children and pregnant women, as well as basic ANC and PNC care will be provided at community level in order to address the essential requirements of pregnancy, delivery, referral, childhood illnesses and

malnutrition.

The programme is organized once a month in every Anganwadi Centre on a fixed day basis (either Tuesday or Friday) with the joint efforts of ANM, AWW and ASHA. On an average, there are six to eight AWCs under the operational jurisdiction of one Sub Centre and thus there would be about eight fixed days in a month per Sub Centre. There should be advanced fixed day planning with all AWCs for the entire month, so that the service providers and the community are aware of it much in advance.

This convergence programme also would provide an excellent platform to train the front line health providers like ASHA, ANM & AWW to impart trainings on concepts that address Maternal and Child Care. The revised Guidelines along with the Handbook provides up-to-date, comprehensive, evidence based information and defines and illustrates the skills needed to keep pregnant women, mothers and their newborns healthy, including routine and preventive care as well as early detection and management of life threatening problems. It will require effective training, logistics and supportive supervision to provide quality ANC and PNC services for every beneficiary in the State, a reality.

The current mentoring module envisages a uniform, standardized, training on the VHND days that would also provide hands on training platform to the service providers to reinforce the quality aspects of service delivery. At the same time it would also generate a demand in the community for all facets of quality maternal and child care. The module is developed in English with the checklists in bilingual languages of English and Odia for the ease of the Front line health workers . The module is very simplified and comprehensive so that it can be even used by the literate community and the bilingual checklists if practiced appropriately can serve to enhance and consolidate the performance of the health workers in the said areas.

The broad thematic areas touched in this module are:

- Antenatal Care
- Postnatal Care
- Biomedical Waste Management
- Essential Newborn and Childhood care
- Relevant Health Programs (JSY, Mamta, JSSK)
- Identification, screening and Management of Common Childhood illnesses

This module would be used for skill based training of the ANM's health workers to enable them to provide quality services for mothers and children of the state.

# Care during Pregnancy-Antenatal Care

## KEY MESSAGES

- Register every pregnancy within 12 weeks.
- Track every pregnancy by name for provision of quality ANC, skilled birth attendance and postnatal services.
- Ensure four antenatal visits to monitor the progress of pregnancy. This includes the registration and 1st ANC in the first trimester.
- Give every pregnant woman Tetanus Toxoid (TT) injections and Iron Folic Acid (IFA) supplementation.
- Test the blood for hemoglobin, urine for sugar and protein at EVERY VISIT.
- Record blood pressure and weight at EVERY VISIT.
- Advise and encourage the woman to opt for institutional delivery.
- Maintain proper records for better case management and follow up.
- Do not give a pregnant woman any medication during the first trimester unless advised by a physician.

## Subcontents:

- Components of ANC in general
- History taking in Pregnancy
- Physical examination in Antenatal Period
- Identification of high risk pregnancy
- Abdominal examination
- Laboratory Investigations in Pregnancy
- Timely interventions on basis of History taking and Laboratory Tests
- Micro Birth Planning

## ANTENATAL CARE

Antenatal care is the systematic supervision of women during pregnancy to monitor the progress of foetal growth and to ascertain the well-being of the mother and the foetus. A proper antenatal check-up provides necessary care to the mother and helps **identify any complications** of pregnancy and allows for the **timely management** of complications through **referral** to an appropriate facility for further treatment. It also provides opportunity to prepare a birth plan and identify the facility for delivery and referral in case of complications. As provider of ante natal care, one is involved in ensuring a healthy outcome both for the mother and her baby.

However, one must realize that even with the most effective screening tools, one cannot predict which woman will develop pregnancy-related complications during and immediately after child birth.

One must therefore:

- Recognize that 'Every pregnancy is special and every pregnant woman must receive special care'.
- Complications being unpredictable may happen in any pregnancy/child birth and we should be ready to deal with them if and whenever they happen.
- Ensure that ANC is used as an opportunity to detect and treat existing problems, e.g. essential hypertension.
- Prepare the woman and her family for the eventuality of an emergency.
- Make sure that services to manage obstetric emergencies are available on time.
- Quality ANC has several components, which are described below:

### A. A few primary steps (MUST DO)

- Ensure **early registration** and see to it that the first check-up is conducted within 12 weeks (first three months of pregnancy).
- Track every pregnancy for conducting at least **four antenatal check-ups** (including the first visit for registration)
- Administer two doses of TT injection.
- Provide at least 100 tablets of IFA.

### B. Essential components of every antenatal check-up:

- Take the patient's history.
- Conduct a physical examination—measure the weight, blood pressure and respiratory rate and check for pallor and edema.

- Conduct abdominal palpation for fetal growth, foetal lie and auscultation of Foetal Heart Sound (FHS) according to the stage of pregnancy.
- Carry out laboratory investigations, such as hemoglobin estimation and urine tests for sugar and proteins).

### C. Desirable components

- Determine the blood group, including the Rh factor.
- Conduct the Venereal Disease Research Laboratory (VDRL)/Rapid Plasma Reagin (RPR) test to rule out syphilis.
- Test the woman for Human Immunodeficiency Virus (HIV).
- Check the blood sugar.
- Carry out the Hepatitis B Surface Antigen (HBsAg) test.

### D. Counselling

- Help the woman to plan and prepare for birth (birth preparedness/micro birth plan). This should include deciding on the place of delivery and the presence of an attendant at the time of the delivery.
- Advantages of institutional deliveries and risks involved in home deliveries.
- Advise the woman on where to go if an emergency arises, and how to arrange for transportation, money and blood donors in case of an emergency.
- Educate the woman and her family members on signs of labour and danger signs of obstetric complications.
- Emphasize the importance of seeking ANC and PNC.
- Advise on diet (nutrition) and rest.
- Inform the woman about breastfeeding, including exclusive breastfeeding.
- Provide information on sex during pregnancy.
- Warn against domestic violence (explain the consequences of violence on a pregnant woman and her foetus).
- Promote family planning.
- Inform the woman about the Janani Suraksha Yojana (JSY)/any other incentives offered by the state like Mamta and JSSK.

\*Tie up with the nearest Integrated Counselling and Testing Centre (ICTC)/Prevention of Parent-to-Child Transmission (PPTCT) facility for counselling and testing for HIV.

## COMPONENTS OF ANTENATAL CARE

### A. EARLY REGISTRATION

#### Timing of the first visit/registration:

It should take place **as soon as** the pregnancy is suspected. Ideally, **the first visit** should take place within **12 weeks**. However, even if a woman comes for registration later in her pregnancy, she should be registered and care should be provided to her according to the gestational age. Her husband and mother-in-law or accompanying person should be counseled to give her support during pregnancy, delivery, after an abortion and during the post-partum period.

#### Early detection of pregnancy is important for the following reasons:

- ⇒ It facilitates proper planning and allows for adequate care to be provided during pregnancy for both the mother and the foetus.
- ⇒ Record the date of the Last Menstrual Period (LMP), and calculate the Expected Date of Delivery (EDD).
- ⇒ Health status of the mother can be assessed and any medical illness that she might be suffering from can be detected and also to obtain/record baseline information (on blood pressure, weight, hemoglobin, etc.)
- ⇒ Helps in timely detection of complications at an early stage and manage them appropriately by referral as and where required.
- ⇒ Helps to **confirm whether the pregnancy is wanted** and if it is not, then refer the woman at the earliest to a 24-hour PHC or First Referral Unit (FRU) (whichever is closer) that provides safe abortion services. It is important to find out as early as possible whether the woman wants to go in for an abortion so that the procedure can be done safely as per the legal provisions laid down under the Medical Termination of Pregnancy (MTP) Act, 1972:
- ⇒ Before referring the woman for the abortion, make sure that the closest 24-hour PHC provides safe abortion services for pregnancies up to eight weeks.
- ⇒ Manual Vacuum Aspiration (MVA) is a safe and simple technique for termination of early pregnancy and is available at 24 x 7 PHCs and other higher facilities for safe abortion within eight weeks.
- ⇒ **Be alert to the possibility of sex selective abortion. Such abortions are illegal under the Pre- Natal Diagnostic Techniques (PNDT) Act. However, as per the MTP Act, abortions are legal for up to 20 weeks of pregnancy, though they can be conducted only under certain circumstances (which exclude sex selection).**
- ⇒ If a pregnancy is detected early and the woman is provided care from the initial stage, it facilitates

a good interpersonal relationship between you and her. She will thus, be more likely to express her particular needs and wants while planning for the delivery.

### REMEMBER:

**All women in the reproductive age group should be advised to have folic acid for 2–3 months pre-conception and continue with it during the first 12 weeks of pregnancy. This remarkably reduces the incidence of neural tube defects in the foetus. A daily dose of 500 micrograms folic acid taken orally is the recommended daily dose.**

**Low iodine levels during pregnancy can cause cretinism, which can lead to mental/physical retardation of the baby. So regular consumption of iodized salts is advised, as a prophylactic measures.**

## B. DETECTION AND CONFIRMATION OF PREGNANCY

The simplest way for you to confirm pregnancy in the first trimester is to conduct a **urine examination** using a pregnancy test kit.

The pregnancy test should be offered to any woman in the reproductive age group who comes to you with a history of amenorrhoea or symptoms of pregnancy. These kits detect pregnancy on the basis of the presence of Human Chorionic Gonadotrophin (HCG) hormone in the urine. This test can be performed soon after a missed period and is simple to perform. It requires just five minutes and two drops of the woman's urine. Pregnancy test kits have also been provided to Accredited Social Health Activists (ASHAs)/link workers in each area. The woman should be counseled appropriately on the results of the test.

*Practice the steps of Detection of Pregnancy using a Pregnancy Test Kit and other essential tests in pregnancy - Checklist No: 1*

### NUMBER AND TIMING OF VISITS

- ▶ Ensure that every pregnant woman makes **at least four visits** for ANC, including the first visit/ registration. It should be emphasized that this is only a minimum requirement and that more visits may be necessary, depending on the woman's condition and needs.
- ▶ Suggested schedule for antenatal visits

- \_ **1st visit:** Within 12 weeks—preferably as soon as pregnancy is suspected—for registration of pregnancy and first antenatal check-up
- \_ **2nd visit:** Between 14 and 26 weeks
- \_ **3rd visit:** Between 28 and 34 weeks
- \_ **4th visit:** Between 36 weeks and term

The first and second visit can be done by the health workers at the field but it is advisable for the pregnant woman to visit the MO at the PHC for an antenatal checkup during the period of 28–34 weeks (third visit). Besides this, she may also be advised and guided to avail investigation facilities at the nearest PHC/CHC/FRU which is more so important if the woman falls in the high risk category.

**Registering every pregnancy within 12 weeks is primarily the responsibility of the ANM. Opportunities such as the Village Health and Nutrition Day (VHND) should be optimally utilized for ensuring early registration and antenatal check-ups. This task though may sound simple but is most challenging and all the field level workers ASHAs, Anganwadi Workers (AWWs) as well as various community-based functionaries, such as members of Mahila Mandals, Self-Help Groups (SHGs), NGOs, village health committees as well as school teachers should contribute in this work.**

[Checklist for the ANM/field workers to know the number of pregnancy in one's area-Checklist 2](#)

## RECORD KEEPING

For the purpose of record keeping, the following must be done:

- ▶ **A Mother and Child Protection Card** should be duly completed for every woman registered by you. The case record should be handed over to the woman. She should be instructed to bring the record with her during all subsequent check-ups/visits and also to carry it along with her at the time of delivery. ([Checklist 3-Mother Child Protection Card](#)).
- ▶ This card has been developed jointly by the Ministry of Health and Family Welfare (MoHFW) and Ministry of Women and Child Development (MoWCD) to ensure uniformity in record keeping. This will also help the service provider to know the details of previous ANC/PNCs both for routine and emergency care.
- ▶ The information contained in the card should also be recorded in your antenatal register as per the Health Management Information System (HMIS) format.

## ANTENATAL CHECKUPS

Broadly during antenatal check-ups the following preparedness and detailed history taking is necessary on the part of the immediate health provider at the community level.

### Preparations:

- ☞ You must greet every pregnant woman in a friendly manner at each visit.
- ☞ Listen to the woman's problems and concerns, and counsel her and her relatives. Remember, all women need social/psychological support during pregnancy.
- ☞ The antenatal examination should be carried out at an appropriate place where there is enough privacy for conducting abdominal palpation.
- ☞ All findings must be accurately recorded.

### Logistics:

**Before beginning each antenatal check-up at your SC or during the VHND, ensure that all the required instruments and equipment are available and are in working condition. These include a stethoscope, blood pressure apparatus, weighing scale, inch tape, foetoscope, thermometer, Mother and Child Protection Card and register, watch, gloves, 0.5% chlorine solution, syringes and needles, hub cutter, spirit swabs, IFA tablets, TT injections, and equipment for testing haemoglobin and urine.**

### Current problem details

During the first visit, a detailed history of the woman needs to be taken to:

- (i) Confirm the pregnancy (first visit only).
- (ii) Identify whether there were complications during any previous pregnancy/confinement that may have a bearing on the present one.
- (iii) Identify any current medical/surgical or obstetric condition(s) that may complicate the present pregnancy.

### Current Symptoms during pregnancy

Symptoms can be normal for any pregnancy or it can indicate a complication which needs immediate attention.

#### Usual symptoms:

- 
- \_ Nausea and vomiting
  - \_ Heartburn
  - \_ Constipation
  - \_ Increased frequency of urination

#### Symptoms indicating complications:

- 
- \_ Fever
  - \_ Persistent vomiting
  - \_ Abnormal vaginal discharge/itching
  - \_ Palpitations, easy fatigability
  - \_ Breathlessness at rest/on mild exertion
  - \_ Generalized swelling of the body, puffiness of the face
  - \_ Severe headache and blurring of vision
  - \_ Passing smaller amounts of urine and burning sensation during micturition
  - \_ vaginal bleeding
  - \_ Decreased or absent foetal movement
  - \_ Leaking of watery fluid per vaginum (P/V)

## HISTORY TAKING IN PREGNANCY

### Menstrual history to calculate the EDD

It is important to record the date of the LMP during the first visit as this helps to calculate the EDD and prepare a birth plan.

Remember that the LMP *refers to the FIRST day of the woman's last menstrual period*. Make sure that the woman is not referring to the date of the first *missed* period, i.e. the date when menstruation was expected to occur the following month and failed to occur. This mistake will lead to a miscalculation of the gestational age and EDD by about four weeks

If the woman is unable to remember the exact date, encourage her to remember some major event, festival or occurrence which she might link with her LMP. A calendar with the Indian system of months and local festivals might come in handy while determining the LMP.

If the exact date of the LMP is not known and it is late in the pregnancy, ask for the date when the foetal movements were first felt. This is known as '*quickening*' and is felt at around 20 weeks of gestation. This information would give a rough idea about the period of gestation, which needs to be correlated with the fundal height to estimate the gestational age. Calculate the EDD on this basis. A special note should be made of such cases in the records.

If the woman is not able to recollect any of the above things, encourage her to mention what she believes is her current month of pregnancy. For example, if a woman has come to the ANC clinic on 20 September and says that she completed eight months of her pregnancy 10 days ago, it becomes clear that she will be completing her ninth month on 10 October and her EDD (9 months plus 7 days) is 17 October.

If the woman has undergone a test to confirm the pregnancy, ask her the approximate date of the test and also, after how many days of amenorrhea it was conducted. This will also assist you in estimating her LMP.

The LMP is used to calculate the gestational age at the time of check-up and the EDD. The following formula is used to calculate the EDD. It is based on the assumption that the menstrual cycle of the woman was regular before conception and that it was a 28–30 days' cycle.

**EDD=Date of LMP + 9 months + 7 days**

### Obstetric history/history of previous pregnancies

It is essential to ask a woman about her previous pregnancies or obstetric history. This is important especially if she had any complications in previous pregnancies, as some complications may recur during the present pregnancy.

The following information must be obtained while taking the obstetric history:

- \* Ask about the *number of previous* pregnancies. Confirm whether they were all live births, and if there was any stillbirth, abortion or any child who died.
- \* Ascertain the date and outcome of each event, along with the birth weight, if known. It is especially important to know about the last pregnancy. Find out if there was any adverse perinatal (period between 7 days before birth and 28 days after birth) outcome.
- \* Obtain information about any obstetric complications and events in the previous pregnancies (specify which pregnancy). The complications and events to be inquired about are as follows:
  - \_ Recurrent early abortion
  - \_ Post-abortion complications
  - \_ Hypertension, pre-eclampsia or eclampsia
  - \_ Ante-Partum Haemorrhage (APH)
  - \_ Breech or transverse presentation
  - \_ Obstructed labour, including dystocia
  - \_ Perineal injuries/tears
  - \_ Excessive bleeding after delivery
  - \_ Puerperal sepsis.
- \* **Ascertain whether the woman has had any obstetrical operations (caesarean sections/ instrumental delivery/vaginal or breech delivery/manual removal of the placenta).**
- \* **Ask for a history of blood transfusions.**

**Listed below is the *bad obstetric history which is an indication for referral to a higher health facility, where further antenatal check-ups and the delivery perhaps can be conducted.***

- Stillbirth or neonatal loss
- Three or more spontaneous consecutive abortions
- Obstructed labour
- Premature births, twins or multiple pregnancies
- Weight of the previous baby <2500 g or >4500 g
- Admission for hypertension or pre-eclampsia/eclampsia in the previous pregnancy
- Surgery on the reproductive tract
- Congenital anomaly
- Treatment for infertility
- Spinal deformities, such as scoliosis/kyphosis/polio
- Rh negative in the previous pregnancy

### History of any current systemic illness (es)/past history of illness

Find out whether the woman has or is suffering from any of the following:

- \* High blood pressure (hypertension)
- \* Diabetes
- \* Breathlessness on exertion, palpitations (heart disease)
- \* Chronic cough, blood in the sputum, prolonged fever (tuberculosis)
- \* Renal disease
- \* Convulsions (epilepsy)
- \* Attacks of breathlessness or asthma
- \* Jaundice
- \* Malaria
- \* Other illnesses, e.g. Reproductive Tract Infection (RTI), Sexually Transmitted Infection (STI) and HIV/AIDS.

### Family history of systemic illness

Once you have ruled out the presence of any systemic illness, ask the woman whether there is a family history of hypertension, diabetes or tuberculosis.

If present, such a history predisposes the woman to developing these problems during pregnancy (e.g. hypertensive disorders of pregnancy and gestational diabetes). As pregnancy is a physiologically stressful period, it can unmask the underlying tendency to develop these disorders.

In addition, ask whether there is a family history of thalassaemia and sickle cell disease or whether anybody in the family has received repeated blood transfusions. You must also ask if anybody in the family has had twins and/or given birth to an infant with congenital malformation, as the presence of such a history in the family increases the chances of the woman giving birth to a child with the same condition.

### History of drug intake or allergies

It is important to find out if the woman is allergic to any drug, or if she is taking any drug that might be harmful to the foetus. Find out whether she has taken any treatment or drugs for infertility. If so, she has a higher chance of having twins or multiple pregnancies.

### History of intake of habit-forming or harmful substances

Ask the woman if she chews or smokes tobacco and/or if she takes alcohol. If so, she needs to be counseled to discontinue the use of these substances during pregnancy, as they harm the developing foetus. The woman should be advised to continue to abstain from taking alcohol and using

tobacco even after the delivery because it may cause other problems/complications, such as addiction and/or cancer. Further, passive smoking can harm the foetus.

[Refer to Checklist 4: Getting ready and History taking practice](#)

## PHYSICAL EXAMINATION IN ANTENATAL PERIOD

This activity will be nearly the same during all the visits. The initial readings may be taken as a baseline with which the later readings are to be compared.

### General examination

This is a gross examination of the various systems. It includes:

**Pallor:** The presence of pallor indicates anemia. The woman should be examined for pallor at each visit. For this, one needs to examine the woman's conjunctiva, nails, tongue, oral mucosa and palms. Increasing pallor should be co-related with Hemoglobin estimation and would require investigation or referral to the MO. It is estimated using hemoglobinmeter.

**Jaundice:** Jaundice is a yellowish staining of the skin and sclera (the whites of the eyes), caused by high levels of the chemical bilirubin in the blood. Jaundice is not a disease, but a sign that can occur in many different diseases. Look for yellowish discoloration of the skin and sclera. The colour of the skin and sclera vary depending on the level of bilirubin. When the bilirubin level is mildly elevated, they are yellowish. When the bilirubin level is high, they tend to be brown. Approximately 3%–5% of pregnant women have abnormal liver function tests and however, jaundice in pregnancy is relatively rare but has potentially serious consequences for maternal and fetal health.

**Pulse:** The normal pulse rate is 60–90 beats per minute. If the pulse rate is persistently high or low, with or without other symptoms, the woman requires medical attention at the PHC/FRU.

**Respiratory rate:** It is important to check the Respiratory Rate (RR), especially if the woman complains of breathlessness. Normal respiratory rate is 18-20 breathes per minute. If the RR is above 30 breathes per minute and pallor is present, it indicates that the woman may have severe anemia, heart disease or associated medical problems. She must be immediately referred to the MO for further investigation and management of any illness that may be present.

**Edema:** Edema (swelling), which appears in the evening and disappears in the morning after a full night's sleep, could be a normal manifestation of pregnancy. However edema that warrants alert is:

- \* Any edema of the face, hands, abdominal wall and vulva is abnormal. Edema can be suspected if a woman complains of abnormal tightening of any rings on her fingers. She must be referred immediately for further investigations.

- \* If there is edema in association with high blood pressure, heart disease, anaemia or proteinuria, the woman should be referred to the MO.
- \* Non-pitting edema indicates hypothyroidism or filariasis and requires immediate referral for investigations.

**Blood pressure:** Measure the woman's blood pressure *at every visit*. This is important to rule out hypertensive disorders of pregnancy. Hypertension is diagnosed when two consecutive readings taken four hours or more apart show the systolic blood pressure to be 140 mmHg or more and/or the diastolic blood pressure to be 90 mmHg or more.

High blood pressure during pregnancy may signify Pregnancy-Induced Hypertension (PIH) and/or chronic hypertension. If the woman has high blood pressure, check her urine for the presence of albumin. The presence of albumin (+2) together with high blood pressure is sufficient to categorize her as having pre-eclampsia. Refer her to the MO immediately.

If the diastolic blood pressure of the woman is above 110 mmHg, it is a danger sign that points towards imminent eclampsia. The urine albumin should be estimated at the earliest. If it is strongly positive, the woman should be referred to the FRU IMMEDIATELY.

If the woman has high blood pressure but no urine albumin, she should be referred to the MO at 24x7PHC. A woman with PIH, pre-eclampsia or imminent eclampsia requires hospitalization and supervised treatment at a 24-hour PHC/FRU.

**Weight:** A pregnant woman's weight should be taken *at each visit*. The weight taken during the first visit/registration should be treated as the baseline weight.

**Normally, a woman should gain 9–11 kg during her pregnancy.** Ideally after the first trimester, a pregnant woman gains around 2 kg every month.

If the diet is not adequate, i.e. if the woman is taking less than the required amount of calories, she might gain only 5–6 kg during her pregnancy. An inadequate dietary intake can be suspected if the woman gains less than 2 kg per month. She needs to be put on food supplementation. You should take the help of the AWW in this matter, especially for those categories of women who need it the most. Low weight gain usually leads to Intrauterine Growth Retardation (IUGR) and results in the birth of a baby with a low birth weight.

**Excessive weight gain (more than 3 kg in a month)** should raise suspicion of preeclampsia, twins (multiple pregnancy) or diabetes. Take the woman's blood pressure and test her urine for proteinuria or sugar. If her blood pressure is high, i.e. more than 140/90 mmHg, and her urine has proteins or sugar, refer her to the MO at the PHC.

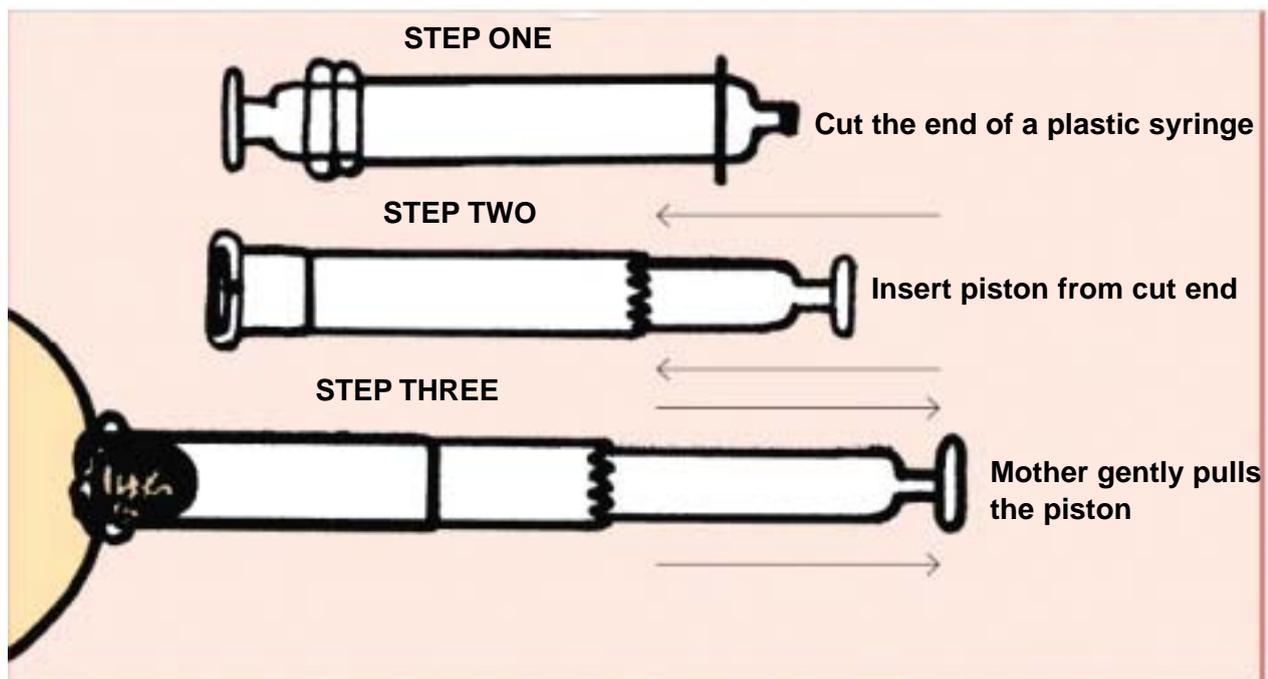
### **Breast examination:**

Observe the size and shape of the nipples for the presence of inverted or flat nipples. Try and pull out the nipples to see if they can be pulled out easily. Flat nipples that can be pulled out do not interfere with breastfeeding.

**Truly inverted nipples** might create a problem in breastfeeding. If the nipples are inverted, the woman must be advised to pull on them and roll them between the thumb and index finger. Look for crusting and soreness of the nipples. If these are present, the woman must be advised on breast hygiene and the use of emollients such as milk cream.

The breasts must be palpated for any lumps or tenderness. If there are lumps or tenderness, refer the woman to the nearest Medical Officer.

Figure 1 below describes the method of correcting inverted nipples.



Checklist No.5 details the Format for Physical/General Examination

#### IDENTIFICATION OF HIGH RISK PREGNANCY

As per WHO mandate now every pregnancy is a risk. Antenatal care assures that the possible risks may be timely identified and timely interventions planned. However as a part of history taking identification of high risk pregnancy is warranted. The following conditions categorize the woman as high risk:

- Short stature less than 140cm
- Elderly primigravida- woman pregnant for the first time after age of 30 years
- Multigravida
- Previous Caesarian section
- Pre-eclampsia/ eclampsia
- Severe anemia
- Twin pregnancy
- Associated with co-morbid conditions

At the same time the ANM should be cautious about the women who complain of –

- Bleeding per vaginum
- Premature rupture of membranes
- Prolapse of uterus
- Edema/ swelling of legs or generalized body
- Excessive vomiting

Timely identification of such woman enables the Health worker to be alert regarding her antenatal check ups and also the other family members are aware that the lady needs extra care.



## Danger Signs During Pregnancy



### Pregnancy Danger Signs

#### What You Should Know

Below is a list of danger signs and symptoms you should be aware of during pregnancy.

**If you have any of these danger signs, call your doctor right away. If you cannot reach someone, go the emergency room of the hospital where you plan to deliver or call 911.**

- Chills and a fever of 101 degrees Fahrenheit or higher
- Sudden very bad or continuous pain in the lower abdomen.
- Continuous vomiting, nausea or diarrhea
- Heavy bleeding from your vagina.
- See spots, blurry vision, bad headaches, sudden swelling in your face and hands, and sudden weight gain.
- Strong, regular contractions (4 or more in one hour) before your due date.
- Sudden flow of water from your vagina.
- Baby does not move for more than 1 day after the 20<sup>th</sup> week of pregnancy, or baby moves less than 10 times in 2 hour after 28 weeks of pregnancy.

**If you have any signs of pain or discomfort contact your doctor as well as possible.**

#### What you should Know

Below is a list of danger signs and symptoms you should be aware of during pregnancy.

**Call your doctor if you have any of the following:**

- Sharp pain when you are urinating.
- Swelling of face, hands and feet.
- Suddenly feel thirsty but you are not urinating very much or at all for 1 day.
- Bleeding from you nipples or other parts of the body, or blood in your urine or stool.
- Serious constipation.
- Itching or burring in your vagina and unusual discharge from your vagina.
- Sores or blisters on your genitals.

**If you any signs of pain or discomfort, contact your doctor as soon as possible**



## ABDOMINAL EXAMINATIONS

Purpose: monitor the progress of the pregnancy and foetal well-being.

### It includes:

1. Measurement of fundal height
2. Determination of fetal lie and presentation by fundal palpation, lateral palpation and pelvic grips
3. Auscultation of the Fetal Heart Sound (FHS)
4. Inspection of scars/any other relevant abdominal findings.

### Preparation

- \* Ask the woman to empty her bladder (give her a clean bottle to collect a sample of urine for testing) immediately before proceeding with the examination. This is important as even a half-full bladder might result in an increase in the fundal height.
- \* She should lie on her back with the upper part of her body supported by cushions. Never make a pregnant woman lie flat on her back, as the heavy uterus may compress the main blood vessels returning to the heart and cause fainting (supine hypotension). Ask her to partially flex her hips and knees.
- \* Stand on the woman's right side to examine her in a systematic manner.
- \* You may divert the woman's attention with conversation.
- \* Whole dry and warm hand should be placed on abdomen till the uterus is relaxed before you begin palpation. Poking the abdomen with the fingertips should be avoided.
- \* Maintain privacy throughout the examination.

### Fundal height measurement

This indicates the progress of the pregnancy and fetal growth. The uterus becomes an abdominal organ after 12 weeks of gestation. **The gestational age (in weeks) corresponds to the fundal height (in cm) after 24 weeks of gestation.**

*Remember that while measuring the fundal height, the woman's legs should be kept straight and not flexed.*

To estimate the gestational age through the fundal height, the abdomen is divided into parts by imaginary lines. The most important line is the one passing through the umbilicus. Then divide the lower abdomen (below the umbilicus) into three parts, with two equidistant lines between the symphysis pubis and the umbilicus. Similarly, divide the upper abdomen into three parts, again with two imaginary equidistant lines, between the umbilicus and the xiphisternum. The procedure is denoted in the figure below:

<b>At 12<sup>th</sup> week</b>	<b>Just palpable above the symphysis pubis</b>	
<b>At 16<sup>th</sup> week</b>	<b>At lower one third of the distance between the symphysis pubis and umbilicus</b>	
<b>At 20<sup>th</sup> week</b>	<b>At two thirds of the distance between the symphysis pubis and umbilicus</b>	
<b>At 24<sup>th</sup> week</b>	<b>At the level of the umbilicus</b>	
<b>At 28<sup>th</sup> week</b>	<b>At lower one third of the distance between the umbilicus and xiphisternum</b>	
<b>At 32<sup>nd</sup> week</b>	<b>At two thirds of the distance between the umbilicus and xiphisternum</b>	
<b>At 36<sup>th</sup> week</b>	<b>At the level of the xiphisternum</b>	
<b>At 40<sup>th</sup> week</b>	<b>Sinks back to the level of the 32<sup>nd</sup> week, but the flanks are full, unlike that in the 32<sup>nd</sup> week.</b>	

**Note:** If the height of the uterus is more or less than that indicated by the period of amenorrhoea, the possible reasons could be as follows:

### Height of the uterus more than that indicated by the period of amenorrhea

- Wrong date of Last Menstrual Period(LMP)
- Full bladder
- Multiple pregnancy/large baby
- Polyhydramnios
- Hydrocephalus
- Hydatidiform mole

### Height of the uterus less than that indicated by the period of amenorrhea

- Wrong date of LMP
- IUGR
- Missed abortion
- Intrauterine Death (IUD)
- Transverse lie

If there is any disparity between the fundal height and the gestational age as calculated from the LMP or if there is a difference of 3 cm or more or if there is no growth compared to the previous check-up, then it should be considered significant. Such cases require further investigation and should be referred to the MO.

### Foetal Movements

Foetal movements are a reliable sign of foetal well-being. Foetal movements, also called 'quickening', begin at around 18–22 weeks of pregnancy. They are felt earlier in a multigravida and later in a primigravida. At every antenatal visit, the ANM should ask the pregnant woman about the foetal movements. Decreased movements may be an indication of foetal distress. Women in whom the foetal movements are decreased need to be referred to the higher center.

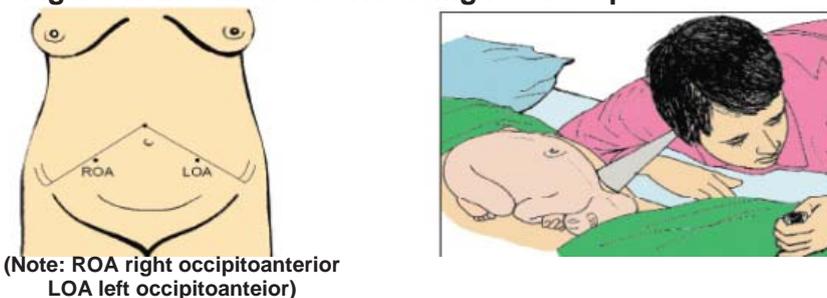
Although the pattern of foetal movement may change prior to labour due to reduced space, foetal activity should continue throughout pregnancy and labour.

**How to count foetal movements:** Ask the woman to lie down in the left lateral position for an hour, three times a day after meals. Count the number of foetal movements in each hour. If the total number of movements in all three periods is less than 10, the woman should be referred to the FRU.

### Foetal Heart Sounds

If the Foetal Heart Rate (FHR) is between 120 and 160 beats per minute, it is normal. If it is less than 120 beats per minute or more than 160 beats per minute, the woman should be referred to the MO.

**Figure 3: Location of FHS using foetoscope**



(Note: ROA right occipitoanterior  
LOA left occipitoanterior)

Remember that the FHS cannot be heard through the abdomen with the help of a stethoscope or foetoscope before 24 weeks of pregnancy. Hence, checking for the FHS should start only when the gestational age is more than 24 weeks.

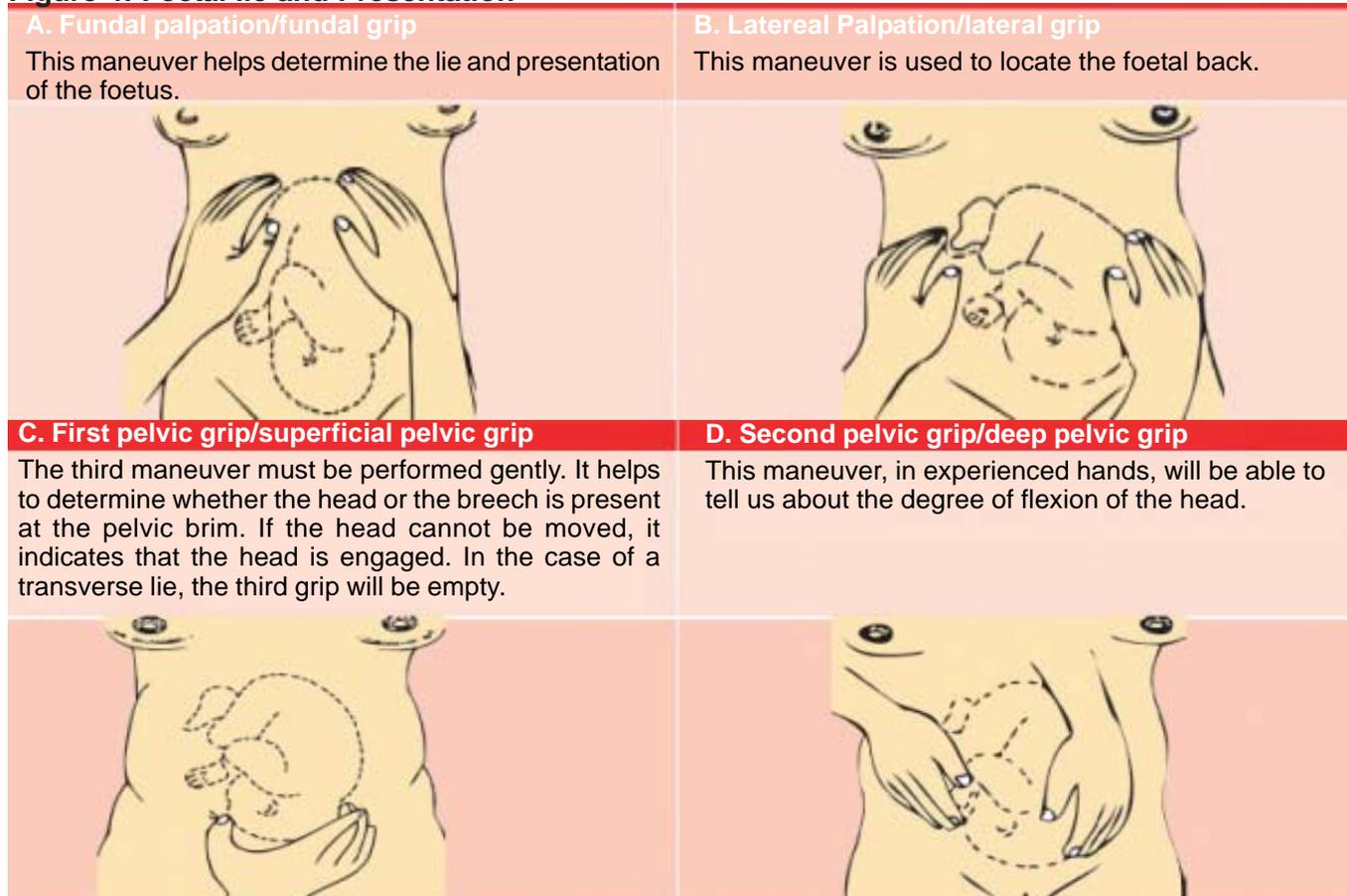
### **Foetal lie and presentation**

Determining the foetal lie and presentation is relevant only in late pregnancy (32 weeks onwards). Before that, it is important to only palpate the foetal parts while conducting an abdominal examination.

The normal lie at term in the majority of pregnancies is longitudinal, with a cephalic presentation. Any other lie is abnormal and normal delivery is difficult. So the woman may be counseled to be mentally prepared for an intervention and higher center referral.

The pelvic grips (four in number) are performed to determine the lie and the presenting part of the foetus.

**Figure 4: Foetal lie and Presentation**



Lie detection is important for a health worker so as to detect an abnormal lie late in pregnancy like the transverse lie. Missing it can be disastrous because there is no mechanism by which a woman with a transverse lie can deliver normally, i.e. vaginally. The woman needs an elective caesarean section, i.e. she must not go into labour. She should, therefore, be referred to an FRU where emergency obstetric services and facilities for a caesarean section are available. This is one of the reasons of maternal and fetal death.

The practice of palpation of abdomen can also timely suggest multiple pregnancies. This is suspected when:

- An unexpectedly large uterus for the estimated gestational age
- Multiple foetal parts discernible on abdominal palpation.
- This also warrants referral of woman to higher center for confirmation of the diagnosis and counsels her to have her delivery in an institution.

### LABORATORY INVESTIGATIONS IN PREGNANCY

Pregnancy is often considered a physiological phenomenon and laboratory investigations are overlooked considering them cumbersome and time consuming. But WHO now states **“every pregnancy is a risk pregnancy”** and warrants exclusive care for all women.

Following lab investigations are mandatory now to be conducted for any pregnant woman:

<b>At the SC:</b>	
■	Pregnancy detection test
■	Haemoglobin estimation
■	Urine test to assess the presence of sugar and proteins
■	Rapid malaria test
<b>At the PHC/CHC/FRU:</b>	
■	Blood group, including Rh factor
■	VDRL/RPR
■	HIV testing
■	Rapid malaria test (if unavailable at SC)
■	Blood sugar testing
■	HBsAg

### Hemoglobin estimation:

The initial hemoglobin level will serve as a baseline with which the later results, obtained at the three subsequent antenatal visits, can be compared. Haemoglobin estimation can be done at SCs or the outreach level by the Sahli method.

A woman who has a haemoglobin level below 11 g/dl at any time during the pregnancy is considered to be suffering from anaemia.

More than 11 g/dl Absence of anaemia

7–11 g/dl Moderate anaemia

Less than 7 g/dl Severe anaemia

If woman is anemic Iron Folic Acid (IFA) supplementation recommended (described in details under intervention). Estimate the haemoglobin level again after one month. If it has not increased, **refer the woman to a higher facility** with a good laboratory infrastructure and trained personnel so that the cause of the anaemia can be determined and the requisite treatment started.

### **Blood grouping and Rh factor:**

If the pregnant woman is a primi, (if multiparae and the Blood grouping has not been done in the previous pregnancy) then during the third antenatal visit, i.e. between 28 and 34 weeks, encourage the woman to go to the PHC/FRU and get her blood group, including the Rh factor, tested. In case the woman suffers from hemorrhage, knowledge regarding her blood group would come in handy if blood transfusions have to be arranged, helping to save precious time and the life of the woman. It also detects Rh negative pregnancies and appropriate management can be initiated.

### **Testing the urine for the presence of protein (albumin):**

This is a very important test used for the detection of pre-eclampsia, which (along with eclampsia) is one of the five major causes of maternal mortality. This test is to be carried out at the field level at every antenatal visit more so in the latter visits.

### **Testing the urine for the presence of sugar**

This is a test used to diagnose women with gestational diabetes. This test is to be carried out at the field level at every antenatal visit. If a woman's urine is positive for sugar, refer her to the MO to get her blood sugar examined and a glucose tolerance test carried out, if required.

***Refer to Checklist 6 on Laboratory Investigations during ANC***

## **TIMELY INTERVENTIONS ON THE BASIS OF HISTORY TAKING AND LABORATORY TESTS**

The interventions that are initiated at the community level by the ground level health providers have proven their effectiveness in addressing our efforts towards Maternal and Child Health. These interventions are easy to initiate and address some of the key causes that lead to high maternal and child mortality in developing nations. This chapter enlists the interventions which are key to providing quality care in the antenatal period.

They are discussed in the order:

- Counselling
- Iron Folic Acid Supplementation
- Tetanus Toxoid(TT) administration
- Malaria Prophylaxis and Treatment
- Micro Birth Planning/Birth preparedness (next subheading)

## Counseling:

Counseling is defined as a helping process where a person (in this case skilled service provider) explicitly and purposefully gives his/her time, attention and skills to assist a client to explore their situation, identify and act upon solutions within the limitations of their given environment. Many countries have documented weak communication and counseling skills in health workers as a major deterrent to health service use. Many countries have documented weak communication and counseling skills in health workers as a major deterrent to health service use; improved interpersonal communication and intercultural competence of health care workers result in greater client satisfaction levels, higher compliance with treatments, more accurate diagnoses, positive outcomes, enhanced perceptions of quality of care, and overall increased service use (WHO, 2003). Counseling addresses the importance of:

- the woman making health decisions in partnership with the health provider
- the woman's wishes and choices being respected
- the health provider helping to find solutions and generate alternatives to suit the woman's needs
- the health provider respecting the woman, ensuring confidentiality, and demonstrating a non-judgmental attitude

**Counseling is not an isolated event but an ongoing process that should be part of every interaction with the client. It can be divided into three phases:**

- **General counseling** (during the initial contact with the client): the client is provided basic information on a reproductive health and pregnancy
- **Method-specific counseling** (prior to and immediately following provision of the method chosen): This is more pertinent to just before usage or acceptance of the client of a public health intervention like iron tablets consumption or tetanus injection. Hence the client is provided more detailed information about the method, as well as instructions on how to use it safely and effectively; and
- **Follow-up counseling** (during return visits): the client's satisfaction with the method is assessed, and any problems or concerns are discussed.

In fact, counseling is an inbuilt and indispensable component of every part of health care delivery especially in Reproductive Health as the clients need empathetic and convincing explanations and sharing of ideas before they can comply with any health advice. Hence counseling is rated as the most important and foremost quality that should be inculcated in a health provider at all levels.

## IFA supplementation

Need for increased intake of iron during pregnancy and the dangers of anaemia should be stressed. The anemia in pregnancy is mainly Iron deficiency anemia. Measuring the hemoglobin levels in the blood is a good way to diagnose this anemia which is responsible for weakness, loss of appetite reeling of head and even worsening of anemia in the mother along with growth retardation of the foetus. The normal hemoglobin levels are considered to be 11g/dl which can be done by the Sahli's method.

**Therapeutic dose:**

- If a woman is anemic (hemoglobin less than 11 g/dl) or has pallor, **she needs two IFA tablets per day for three months.**
- This means that a pregnant woman with anaemia needs to take at least 200 tablets of IFA. This is the dose of IFA needed to correct anaemia (therapeutic dose).
- This dosage regimen is to be repeated for three months post-partum in women with moderate to severe anaemia.
- Besides recommending IFA supplementation, counsel the woman to increase her dietary intake of iron-rich foods, such as green leafy vegetables, whole pulses, jaggery, meat, poultry and fish and regionally popular diets which are rich in the nutrient like in Odisha nuts and some forms of green leafy vegetables.

Ensure that you have adequate supplies of IFA in your stock to meet the requirements of all pregnant women registered with you.

In India IFA is given as a blanket instruction to all pregnant women i.e. one tablet of IFA (100 mg elemental iron and 0.5 microgram folic acid) every day for at least 100 days, starting after the first trimester, at 14–16 weeks of gestation. This is the dose of IFA given to prevent anaemia (prophylactic dose). This dosage regimen is to be repeated for three months post-partum.

Women with severe anaemia (hemoglobin of less than 7 g/dl), or those who have breathlessness and tachycardia (pulse rate of more than 100 beats per minute) due to anaemia, should be started on the therapeutic dose of IFA and referred immediately to the MO in the FRU for further management.

Many women do not take IFA tablets regularly due to some **common side-effects** such as nausea, constipation and black stools. Inform the woman that these side-effects are common and not serious.



Explain the necessity of taking IFA and the dangers associated with anaemia. The woman should be counseled on the issues mentioned below:

- IFA tablets must be taken regularly, preferably at night before bed time. In case the woman has nausea and pain in the abdomen, she may take the tablets after meals or at night. This will help avoid nausea.
- Dispel the myths and misconceptions related to IFA and convince the woman about the importance of IFA supplementation. An example of a common myth is that the consumption of IFA may affect the baby's complexion.
- It is normal to pass black stools while consuming IFA. Tell the woman not to worry about it.
- **Advise the pregnant women to put a cross mark in the inside of the back page of the MCP card after taking the tablet.**
- In case of constipation, the woman should drink more water and add roughage to her diet.

- IFA tablets should not be consumed with tea, coffee, milk or calcium tablets as these reduce the absorption of iron.
- IFA tablets may make the woman feel less tired than before. However, despite feeling better, she should not stop taking the tablets and must complete the course, as advised by the health care provider.
- Ask the woman to return to you if she has problems taking IFA tablets. Refer her to the MO for further management.
- Emphasize the importance of a high protein diet, including items such as black gram, groundnuts, *ragi*, whole grains, milk, eggs, meat and nuts, for anaemic women.
- Encourage the woman to take plenty of fruits and vegetables containing vitamin C (e.g. mango, guava, orange and sweet lime), as these enhance the absorption of iron.

### Administration of TT injection

This is a very important intervention for every pregnant woman and has helped bring down the incidence of neonatal tetanus which was a major cause of neonatal mortality in the developing world to almost nil.

#### **The health provider should remember to advocate the following regarding Tetanus Toxoid administration-**

- The administration of two doses of TT injection is an important step in the prevention of maternal and neonatal tetanus (tetanus of the newborn).
- The first dose of TT should be administered as soon as possible, preferably when the woman registers for ANC.
- The second dose is to be given one month after the first, preferably at least one month before the EDD. *If the woman skips one antenatal visit, give the injection whenever she comes back for the next visit.*
- If the woman receives the first dose after 38 weeks of pregnancy, then the second dose may be given in the postnatal period, after a gap of four weeks.
- If the woman has been previously immunized with two doses during a previous pregnancy within the past three years, then give her only one dose as early as possible in this pregnancy.
- The dosage of TT injection to be given is 0.5 ml. Tetanus toxoid to be administered by deep intramuscular injection. It should be given in the upper arm, and not in the buttocks as this might injure the sciatic nerve.
- Inform the woman that there may be a slight swelling, pain and/or redness at the site of the injection for a day or two. Application of ice to the injection site helps soothe the complaints.

## Malaria prophylaxis and treatment

The pregnant mother should know about the potential risk of malaria for her newborn and herself, hence the following instructions should be offered to her:

- No prophylaxis is recommended, but **insecticide-treated bed nets or Long-Lasting Insecticidal Nets (LLIN)** should be given on a priority basis to pregnant women in malaria-endemic areas. These women should be counseled on how to use the LLINs.
- Check with the MO of your PHC whether your area is malaria-endemic or not.
- In non-endemic areas, all clinically suspected cases as per the National Vector-Borne Disease Control Programme (NVBDCP) guidelines should preferably be investigated for malaria with the help of microscopy or a Rapid Diagnostic Kit (RDK), if these are available with you.
- In high malaria-endemic areas, pregnant women should be routinely tested for malaria at the first antenatal visit. Screen the woman for malaria every month by conducting the rapid diagnostic test even if she does not manifest any symptoms of malaria. If a pregnant woman shows symptoms of malaria at any time, she should be tested. If the result is positive, refer her to the PHC for treatment.

## Micro-birth planning

The JSY (Janani Surakshya Yojana) is a centrally sponsored demand promotion scheme for promoting institutional delivery among poor pregnant women. The scheme integrates cash assistance with delivery and post-delivery care. The objective of the scheme is to reduce maternal and neonatal mortality through institutional care.

Micro birth planning is an integral part of the JSY. Under the scheme, ANMs have to draw up a micro-birth plan or birth preparedness plan for each pregnant woman in their area. It is necessary to draw up the micro-birth plan in advance to prepare the pregnant woman and her family for any unforeseen complications and to prevent maternal morbidity and mortality due to delays.

*As a community worker, you have to help the ASHAs to bring pregnant women to you as early as possible to ensure that a birth plan is prepared for each pregnant woman. This will help you to track down these women for the provision of regular ANC, referral in case of emergency and counseling to convince them to opt for institutional delivery. The Maternal and Child Protection Card should be correctly and completely filled by you. Counsel the woman to bring this card along at every visit.*

## MICROBIRTH PLANNING

Micro-birth planning has the following components:

1. Registration of pregnant woman and filling up of the Maternal and Child Protection Card and JSY card/Below poverty line (BPL) certificates/necessary proofs or certificates for the purpose of keeping a record.
2. Informing the woman about the dates of antenatal visits, schedule for TT injections and the EDD.
3. Identifying the place of delivery and the person who would conduct the delivery.
4. Identifying a referral facility and the mode of referral.
5. Taking the necessary steps to arrange for transport for the beneficiary.
6. Making sure that funds are available to the ASNM/ASHA.

To opt for an institutional delivery, explain to the woman why delivery at a health facility is recommended and emphasize the following:

Complications can develop at any time during pregnancy, during delivery or in the postnatal period. These complications are not always predictable. If they are not handled by professionals at the health facility in time, they can cost the mother and/or the baby.

**Mobile number of Local Ambulance/108/102/ASHA worker should be with the family**

**Other Counselling tips essential for the pregnant mother:**

### **A. Planning and preparing for birth (birth preparedness)**

Details of the activities to be carried out while planning and preparing for birth are listed below:

**1. Registration of the pregnant woman:** During the woman's first antenatal visit, fill up the Maternal and Child Protection Card and the antenatal register.

Inform her of the dates of her subsequent antenatal visits and emphasize the importance of making all these visits in time.

**2. Identification of a skilled provider for birth:** Help all pregnant women to reach a decision regarding the health care provider they want for conducting their delivery. Other factors such as the condition of the pregnant woman, her financial situation, the distance to the health care facility and transport facilities, all need to be kept in mind before finally reaching a decision on the choice of the SBA.

### ***Institutional delivery***

All pregnant women must be encouraged to opt for an institutional delivery.

Explain to the woman why delivery at a health facility is recommended and emphasize the following:

- Complications can develop at any time during pregnancy, during delivery or in the postnatal period. These complications are not always predictable. If they are not handled by professionals at the health facility, they can cost the mother and/or the baby their life.
- Since a health facility has staff, equipment, supplies and drugs, it can provide the best care. It also has a referral system should the need for referral arise.

### ***Home delivery***

If in spite of all your efforts the pregnant woman decides to go for a home delivery, tell *her that there are situations when complications arise* and a home delivery may be risky and potentially life-threatening. Disposable Delivery Kits (DDKs) are to be supplied to those pregnant women in your community who insist on having a home delivery.

#### ***Explain the 'six cleans' to such women.***

These are clean surface,  
clean hands,  
clean cord cut,  
clean cord tie,  
clean umbilical stump  
and clean perineum. Counsel and help them to maintain the 'six cleans' during delivery at home.

You should keep a record of high risk and women opting for home delivery and *continue counseling* them during all their subsequent antenatal visits to opt for an institutional delivery. You should prepare yourself to attend to such women at their home during delivery. The pregnant woman, her family members or the ASHA should call you (the ANM) to conduct the delivery at home.

The items required during and immediately after delivery at home include:

- Presence of an SBA trained ANM for conducting the delivery
- The Maternal and Child Protection Card (for complete information regarding the antenatal period)
- Clean towels/cloth for drying and wrapping the baby
- Clean clothes that have been washed and sun-dried for the mother and the baby
- Sanitary pads/clean cloth for the mother
- Supplies like Tab. Misoprostol, Cord Clamps, Sterile Surgical Knife with Blade, Paediatric size Bag and Mask and other emergency drugs
- A dry and comfortably warm environment\room
- Food and water for the woman and the support person.

### 3. Recognizing the signs of labour:

Advise the woman to go to the health facility or inform the ASHA to contact the SBA if the woman has any one of the following signs, which indicate the start of labour:

- A bloody, sticky discharge from the vagina ('show')
- Painful uterine contractions increasing in duration, frequency and intensity with the passage of time.

### 4. Identify and arrange for referral transport:

Delay in reaching a health care facility is one of the major 'delays' responsible for maternal mortality. It is, therefore, necessary to ensure the following:

- If the woman has decided to deliver at a health facility, ensure that a vehicle is available to transport her to the health facility whenever required.
- Even if the woman decides to deliver at home, a vehicle should be identified and kept ready to transport her to the nearest health facility or referral centre in case she or the newborn develops complications.

Contact number of the ambulance or vehicle provided by the state ie 108/102(Janani Express), private or any other provider, should be available with the ANM/ASHA, and should be communicated to the pregnant woman and her family members.

If a vehicle is not available in the village, help of the Panchayat, village health committee, Mahila Mandals, youth groups or any other such groups can be taken to decide on how to obtain a vehicle in case of an emergency.

### 5. Locate the nearest PHC/FRU:

The woman and her family members should be aware of the nearest health facilities: the PHC, where 24-hour emergency obstetric care services are available and the FRU, where facilities for a blood transfusion and surgery are available.

### 6. Identify support people:

These people are needed to help the woman look after her children and/or household, arrange for transportation, and/or accompany her to the health facility. Seek help from either the close relatives of the woman or community based health functionaries, such as the AWW/ASHA.

### 7. Finances:

The woman and her family should be assisted in calculating an estimate of expenses of the delivery and related aspects (such as transport). They should also be advised to keep an emergency fund, or have a source for emergency funding in case of complications. **Reiterate that all services are free under the JSSK scheme.** Help the woman and her family access these schemes and collect the allocated funds to pay for the delivery. Also, keep yourself up to date on any new schemes that may be launched by the Central and the state government from time to time.

## B. Complication readiness—recognizing danger signs during pregnancy, labour and after delivery/abortion

The pregnant woman and her family/caretakers should be informed about the potential danger signs during pregnancy, delivery and in the post-partum period. She must be told that if she has any of the following signs during pregnancy or delivery or in the post-partum/ post-abortion period, she should immediately visit a PHC/FRU *without waiting*, be it day or night. Also, counsel her to inform you and the ASHA.

### Box: Danger signs for referral during pregnancy and labour and after delivery/abortion

Visit FRU	Visit PHC
<ul style="list-style-type: none"> <li>• Malpresentation</li> <li>• Multiple pregnancy</li> <li>• Any bleeding P/V during pregnancy and after delivery (a pad is soaked in less than 5 minutes)</li> <li>• Severe headache with blurred vision</li> <li>• Haemoglobin &lt;7 g%</li> <li>• Convulsions or loss of consciousness</li> <li>• Decreased or absent foetal movements</li> <li>• Active labour lasting longer than 12 hours in a primipara and more than 8 hours in a multipara</li> <li>• Continuous severe abdominal pain</li> <li>• Premature rupture of membranes (PROM) before 37 weeks</li> <li>• High BP (eH140/90 mmHg) with proteins in the urine, and severe headache with blurred vision or epigastric pain</li> <li>• Temperature more than 38°C</li> <li>• Foul smelling discharge before or after delivery/abortion</li> <li>• Ruptured membranes for more than 18 hours</li> <li>• FHR &gt;160/minute or &lt;120/minute</li> <li>• Perineal tear (2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> degree)</li> </ul>	<ul style="list-style-type: none"> <li>• High fever with or without abdominal pain, too weak to get out of bed</li> <li>• Fast or difficult breathing</li> <li>• Haemoglobin 7-11 g% even after consuming IFA tablets for 30 days</li> <li>• Excessive vomiting, unable to take anything orally</li> <li>• Breathlessness at rest</li> <li>• Reduced urinary output with high BP</li> <li>• High BP (eH140/90 mmHg) with or without proteins in the urine</li> </ul>

*Note: If the ANM is not able to decide on whether she should send a case to the FRU or PHC, she should refer the case to the FRU.*

In case you detect a complication during examination or the woman arrives at your centre with complications, you must refer her to the FRU/24-hour PHC. Also, see to it that she carries a filled in referral slip with her (see Annexure 1 for referral slip).

### C. Diet and rest

The pregnant woman should be advised to eat more than her normal diet throughout her pregnancy. Remember that a pregnant woman needs about 300 kcal extra per day, over and above her usual diet, and 500 kcal extra in the post-partum period. She should be told that she needs these extra calories in order to maintain her health as a mother and meet the needs of the growing foetus, and for successful lactation.

Special categories of women who require additional nutrition during pregnancy have been identified. These include the following:

- Women who are underweight (less than 45 kg)
- Women who have an increased level of physical activity, above the usual levels during that time
- Adolescent girls who are pregnant (10-19 years of age)
- Those who become pregnant within two years of the previous delivery
- Those with multiple pregnancy
- HIV positive women

The woman's food intake should be especially rich in proteins, iron, vitamin A, vitamin C, calcium and other essential micronutrients. Other members of the family especially those who take decisions regarding the type of food brought home and/or to be given to the pregnant woman such as the woman's husband and mother-in-law should also be taken into confidence and counseled on the recommended diet for the pregnant woman. Encourage them to help ensure that the woman eats enough and avoids hard physical work.

Some of the *recommended dietary* items are cereals, milk and milk products (such as curd and paneer), green leafy vegetables and other vegetables, pulses, eggs, meat (including fish and poultry), groundnuts, *ragi*, jaggery and fruits (like mango, guava, orange, sweet lime and watermelon).

The woman should avoid taking tea, coffee or milk within an hour after a meal, as these have been shown to interfere with the absorption of iron. Also, advise her to take foods rich in proteins and vitamin C (e.g. lemon, *amla*, guava and oranges), as both help in the absorption of iron. The diet should be rich in fibre to avoid constipation.

Taboos against certain foods must be looked into while counselling the woman on her dietary intake. If there are taboos related to nutritionally important foods, the woman should be advised against these taboos. Certain communities adhere to particular taboos (especially omissions) for the purpose of sex selection of the foetus. These should be strongly discouraged.

**If a woman has PIH**, she should be encouraged to take a normal diet with no restrictions on fluid, calories and/or salt intake. Such restrictions do not prevent PIH from turning into pre-eclampsia and may be harmful for the foetus.

The woman should be advised **to sleep for eight hours at night and rest for another two hours** during the day. She should be told to refrain from doing heavy work, especially lifting heavy weights as this can adversely affect the birth weight of the baby. The other members of the household should be taken into confidence and advised to help the woman carry out her routine household chores.

The woman should be advised to refrain from taking alcohol, tobacco in any form or addictive drugs such as opium derivatives during pregnancy as these have adverse effects on the foetus. For example, they can slow growth *in utero* and even after delivery. She should be advised **not to take any medication** unless prescribed by a qualified health practitioner.

All pregnant women should be told to lie on their left side while resting and avoid the supine position (lying flat on the back), especially in late pregnancy, as it affects both the maternal and foetal circulation. Due to the pressure exerted by the pregnant uterus on the main pelvic veins, a reduced quantity of circulating blood reaches the right side of the heart. This causes a reduced supply of oxygen to the brain and can lead to a fainting attack, a condition referred to as the supine hypotension syndrome. It can also result in abnormal FHR patterns and in addition, may cause a reduction in the placental blood flow. If the supine position is preferred, recommend the use of a small pillow under the lower back, at the level of the pelvis.

While giving dietary advice, keep in mind the woman's socio-economic status, food habits and taste, as well as the locally and seasonally available produce.

#### **D. Breastfeeding**

Pregnancy is the ideal time to counsel the mother on the benefits of breastfeeding her baby. Though breastfeeding is almost universal in India, the following key messages need to be given to the would-be mother:

##### **Key messages on breastfeeding:**

- Initiate breastfeeding especially colostrum feeding within an hour of birth.
- Do not give any pre-lacteal feeds.
- Ensure good attachment of the baby to the breast.
- Exclusively breastfeed the baby for six months.
- Breastfeed the baby whenever he/she demands milk.
- Follow the practice of rooming in.

The messages should be reinforced during the antenatal period especially for the primigravidae (the women who are pregnant for the first time). The persons closest to the lady should also be asked to advise the same to the woman. The breast feeding practices would be discussed in details in post partum care.

### E. Sex during pregnancy

- It is safe to have sex throughout pregnancy, as long as the pregnancy is uncomplicated.
- Sex should be avoided during pregnancy if there is a risk of abortion (history of previous recurrent spontaneous abortions, or threatened abortion in the current pregnancy), a risk of pre-term delivery (history of previous pre-term labour), or a history of Acute Postpartum Hemorrhage (APM) or PROM.
- Some women experience a decreased desire for sex during pregnancy. The husband should be informed that this is normal and the woman's consent should be sought before engaging in sex.
- Some couples find engaging in sex uncomfortable during pregnancy. The husband must see to the comfort of the woman while engaging in sexual activities.
- Advise couples to have safe sex and use condoms especially if the woman has discharge or itching in the vaginal area or the husband has urethral discharge or experiences burning while urinating.
- The couple should be advised to abstain from having sex during the first six weeks postpartum or longer if the perineal wounds have not healed by then.

### F. Domestic violence

Domestic abuse and violence against pregnant women has immediate and lasting effects both on the pregnant woman and the foetus. While some of the complications might be visible directly such as immediate injury to the woman, there could also be other effects on the pregnancy such as blunt trauma to the abdomen, hemorrhage (including placental separation), uterine rupture, miscarriage/still birth, pre-term labour and PROM which need to be ruled out.

The husband and the immediate family members of the pregnant women should be counseled on the consequences of domestic abuse and violence against pregnant women. Counselling prior to labour can help the abused woman reduce the psychological trauma.

### G. Family Planning

Pregnancy is the best period for family planning counselling as it gives the couple time to think about and choose the method they would want to use after the birth of their baby. The woman should be advised on birth spacing or limiting, as necessary. Explain to her and her husband that if after the delivery she is not exclusively breastfeeding and has unprotected sex, she can become pregnant as early as six weeks after delivery. Therefore, it is important to start thinking in advance about which family planning method to use.

*The couple should be advised to abstain from having sex during the first six weeks post-partum, or longer if the perineal wounds have not healed by then.*

Ask about the couple's plans for having more children. If they desire more children then advise them that a gap of 3–4 years between pregnancies is healthy for the mother and the child. The couple should be given advice on the range of contraceptive methods available to them.

These include the ones described below:

**Table 1: Methods of post-partum contraception**

Contraceptive method	COC	DMPA	ECP	IUCD	PS	NSV (For husband)
<b>Breastfeeding (fully or nearly fully or partial)</b>						
<6 weeks post partum	No	No(unless other more suitable options are not available)	Yes	<b>Post-placental insertion</b> within 10 minutes of delivery, only by trained provider	<b>Immediate post-partum</b> sterilisation after 24 hours to 7 days of childbirth	Any time
≥ 6 Weeks to <6 months post-partum	No.	Yes	Yes	<b>Immediate post-partum</b> <48 hours of childbirth by trained provider	<b>or</b> > 6 weeks post - partum	
>6 Months post-partum	Yes(linked with return of menstrual cycle)	Yes	Yes	<b>Post-partum</b> >6 weeks post-partum		
<b>Not breastfeeding</b>						
<21 days >21 days	No Yes	Yes Yes	Yes Yes	<48 hours after childbirth or >6 weeks post-partum	After 24 hours to 7 days of after childbirth  <b>or</b> <6 weeks post-partum	Any time

Note: COC: combined oral contraceptive, DMPA: depot medroxyprogesterone acetate, ECP: emergency contraception pill, IUCD: intrauterine contraceptive device, FS: female sterilization, NSV: no-scalpel vasectomy

### **Lactational Amenorrhoea Method (LAM)**

A woman can use a natural method, such as lactational amenorrhoea, as a method of contraception, provided she keeps three points in mind:

\_ *Amenorrhoea*: The woman should be amenorrhoeic and her menstrual cycle should not have resumed after delivery. Whenever it resumes, she cannot use this method.

\_ *Lactation*: The woman should be exclusively breastfeeding her baby, i.e. the baby should be given no complementary foods or fluids. She should be feeding the baby eight times or more during the day, with a gap of not more than four hours between feeds, including at least one night feed. Even a single missed

feed increases the risk of pregnancy.

\_ *Six months*: The woman cannot use this method for more than six months post-partum, even if she has not started menstruating again.

### ***Intrauterine Contraceptive Device (IUCD)***

Copper-containing IUCDs can be inserted within 48 hours of childbirth (post-placental insertion: within 10 minutes of the delivery of the placenta; **immediate post-partum insertion: within 48 hours of the delivery) by a service provider who is trained specifically for post-placental IUCD insertion. Alternatively, they can be inserted more than six weeks post-partum.** The expulsion rate is high after post-partum insertion compared with interval insertion if not done by a skilled provider. The IUCD has the advantage of offering protection for 10 years or even more, depending on the type of IUCD inserted. Those IUCDs which contain copper are safe and reliable, and women should be advised to consult and visit a trained personnel and visit health facilities - SC, PHC & FRUs for insertion.

### ***Condoms***

These can be safely used as soon as, and for as long as, the woman/couple so desires. It should be impressed upon the couple that condoms should be used correctly and consistently, during each act of sexual intercourse. The brand supplied free of cost by the government is 'Nirodh'. Many other brands are available, which are either socially marketed or available in the open commercial market. These may also be offered to the couple if they are interested.

### ***Injectables***

Injectable hormonal depot preparations for contraception are commercially available in the market. They are safe for lactating mothers as they do not interfere with lactation and have no known side-effects on the infant. Depot Medroxyprogesterone Acetate (DMPA) acts for three months and is commonly available. The injection can be given immediately after an abortion or delivery.

### ***Natural methods***

Natural methods of contraception, such as abstinence, periodic abstinence (e.g. the Standard Days' Method [SDM]), and cervical mucus method, may be discussed with the couple. This is especially important in cases where religious bindings prohibit the couple from using any other method of contraception.

### ***Oral contraceptive pills***

The use of combined oral contraceptive pills (such as the government supplied Mala-N and Mala-D, and other commercially and socially marketed brands) is *not* advisable during the post-partum period, as the

woman is lactating during that time. Combined oral contraceptive pills are known to decrease the milk output. However, the woman may be advised to use them after six months of delivery, once her menstrual cycle resumes.

The woman may, however, use progestin-only pills six weeks after childbirth if she is breastfeeding the baby, or immediately after birth if she is not breastfeeding the baby. At present, these are not supplied by the government and have to be bought from the commercial market. These pills have the advantage of having no effect on the output of breast milk and can therefore, be safely used by lactating women.

### ***Emergency contraception pills***

Emergency Contraception Pills (ECPs) can be used any time during the post-partum period, within 72 hours following unprotected sexual intercourse. However, women should be counseled that ECPs have to be *used for emergency purposes only and not as a regular form of contraception*. They should be advised to shift to regular and more effective methods of contraception.

### ***Female sterilization***

If the couple has achieved its desired family size, the woman may be advised to undergo a tubectomy, a permanent method of contraception. Immediate post-partum female sterilization, using the minilaparotomy technique, can be offered 24 hours after the delivery of the baby up to seven days post-partum. Apart from immediate post-partum female sterilization, female sterilization can also be offered any time after six weeks of the delivery.

### ***No-scalpel vasectomy***

If the couple has achieved its desired family size and wishes to adopt a permanent method of contraception, the husband may be encouraged to opt for No-Scalpel Vasectomy (NSV). This is a simple and safe surgical procedure, which provides lifelong and effective protection against pregnancy. It can be performed any time during the post-partum period. However, the couple must be warned that the procedure will take three months to become effective and hence, they need to use other back-up methods of contraception, such as condoms and oral contraceptive pills, for three months after the NSV.

Refer to Checklist 8 for Interventions and Counselling in ANC

The table below denotes specific actions to be taken by the health worker at the Sub Center level on specific complaints by the pregnant woman:

	Symptoms	Signs/ investigations	Most probable diagnosis	Action(s) to be taken
A	Heartburn and nausea	-	● Reflux oesophagita	<ul style="list-style-type: none"> <li>● Advise the woman to avoid spicy and oily foods.</li> <li>● Ask her to take cold milk during attacks.</li> <li>● If severe, antacids may be prescribed.</li> </ul>
B	Vomiting during the first trimester	-	● May be physiological (morning sickness)	<ul style="list-style-type: none"> <li>● Advise the woman to eat small frequent meals; avoid greasy food; eat lots of green vegetable; and drink plenty of fluids.</li> <li>● If vomiting is excessive in the morning, ask her to eat dry foods, such as roti/paratha, biscuits or toast, after waking up in the morning.</li> </ul>
C	Excessive vomiting, especially after the first trimester	The woman may be dehydrated - dry tongue, loss of skin turgor, decreased urine output in severe cases. Tachycardia may be present.	● Hyper-emesis gravidarum	● Start IV Ringer lactate, 500 ml, and refer the woman to be MO.
D	Palpitations, easy fatigability, breathlessness at rest	<ul style="list-style-type: none"> <li>● Conjunctival and /or pallor of the plam present</li> <li>● Hb&lt;7 g/dl</li> </ul>	● Severe anaemia	<ul style="list-style-type: none"> <li>● Refer her to the MO for further management.</li> <li>● Advise her to have a hospital delivery.</li> </ul>
E1	<ul style="list-style-type: none"> <li>● Puffiness of the face, generalised body oedema</li> </ul>	<ul style="list-style-type: none"> <li>● Check protein in urine.</li> <li>● Check BP.</li> </ul> <p>If BP&gt;140/90 mmHg on 2 readings and proteinuria absent</p> <p>If diastolic BP is <math>\geq 90</math> mmHg on two readings</p>	<p>Hypertensive disorder of pregnancy</p> <p>Pre-eclampsia</p>	<ul style="list-style-type: none"> <li>● Advise her to reduce workload and to rest.</li> <li>● Advise on danger signs.</li> <li>● Re-assess at the next antenatal visit or in one week if more than eight months pregnant.</li> <li>● If hypertension persists after one week or at next visit, refer to hospital or MO.</li> <li>● Refer to hospital.</li> <li>● Revise birth plan.</li> </ul>
E2	<ul style="list-style-type: none"> <li>● Puffiness of the face, generalised body oedema</li> <li>● Severe headache</li> <li>● Blurred vision</li> <li>● Epigastric pain</li> <li>● Reduced urine output</li> </ul>	If diastolic BP is $\geq 110$ mmGh and 3+ proteinuria	Severe pre-eclampsia	<ul style="list-style-type: none"> <li>● Give Inj Magsult, 5g (10 ml), deep IM, in each buttock.</li> <li>● Refer urgently to hospital.</li> </ul>
F	Increased of urination up to 10-12 weeks of pregnancy		● May be physiological due to pressure of the gravid uterus on the urinary bladder.	● Re-assure her that it will be relieved on its own.

G	Increased frequency of urination after 12 weeks, or persistent symptoms, or burning on urination	<ul style="list-style-type: none"> <li>• Tenderness may be present at the sides of the abdomen and back.</li> <li>• Body temperature may be raised.</li> </ul>	<ul style="list-style-type: none"> <li>• UTI</li> </ul>	<ul style="list-style-type: none"> <li>• Refer the woman to be MO at the PHC.</li> </ul>
H	Constipation		<ul style="list-style-type: none"> <li>• Physiological</li> </ul>	<ul style="list-style-type: none"> <li>• Advise the woman to take more fluids, leafy vegetables and a fibre rich diet.</li> <li>• If not relieved, give her Isabgol (2 tablespoonse to be taken at bedtime, with water or milk).</li> <li>• Do NOT prescribe strong laxatives as they may start uterine contractions.</li> </ul>
I	Pain in the abdomen	<ul style="list-style-type: none"> <li>• Fainting</li> <li>• Retropubic/suprapubic pain</li> </ul>	<ul style="list-style-type: none"> <li>• Ectopic pregnancy</li> <li>• UTI</li> </ul>	<ul style="list-style-type: none"> <li>• Refer the woman to be MO at the FRU.</li> </ul>
J	Bleeding P/V, before 20 weeks of gestation	<ul style="list-style-type: none"> <li>• Check the pulse and BP to assess for shock.</li> <li>• Ask for history of violence.</li> </ul>	<ul style="list-style-type: none"> <li>• Threatened abortion/spontaneous abortion/hydatidiform mole/ectopic pregnancy</li> <li>• Spontaneous abortion due to violence</li> </ul>	<ul style="list-style-type: none"> <li>• If the woman is bleeding and the retained products of conception can be seen coming out from the vagina, remove them with your finger.</li> <li>• Start IV fluids.</li> <li>• Refer her to the MO of a 24-hour PHC/FRU.</li> <li>• Put her in touch with local support groups.</li> <li>• Do NOT carry out a vaginal examination under any circumstances.</li> </ul>
K	Bleeding P/V, after 20 weeks of gestation	<ul style="list-style-type: none"> <li>• Check the pulse and BP to assess for shock.</li> </ul>	<ul style="list-style-type: none"> <li>• Antepartum haemorrhage</li> </ul>	
L	Fever	<ul style="list-style-type: none"> <li>• Body temperature is raised</li> <li>• Peripheral smear for malarial parasite +ve</li> </ul>	<ul style="list-style-type: none"> <li>• Site of infection somewhere, including possible sepsis</li> <li>• Malaria</li> </ul>	<ul style="list-style-type: none"> <li>• Refer her to the MO.</li> <li>• If malaria is diagnosed, refer her to the PHC for management of malaria according to the NVBDCP guidelines.</li> </ul>
M	Decreased or absent foetal movements	<ul style="list-style-type: none"> <li>• FHS heard, and is within the normal range of 120 - 160/minute.</li> <li>• FHS heard, but the rate is &lt; 120/minute or &gt;160/minute</li> <li>• FHS not heard</li> </ul>	<ul style="list-style-type: none"> <li>• Baby is Normal.</li> <li>• Foetal distress</li> <li>• Intrauterine foetal death</li> </ul>	<ul style="list-style-type: none"> <li>• Re-assure the woman.</li> <li>• Repeat FHS after 15 minutes.</li> <li>• If the FHS is still out of the normal range, refer her to the MO.</li> <li>• Inform the woman and her family that the baby might not be well.</li> <li>• Refer her to the MO.</li> </ul>
N	Abnormal vaginal discharge, with or without abdominal pain	<ul style="list-style-type: none"> <li>• Vaginal discharge with or without odour</li> </ul>	<ul style="list-style-type: none"> <li>• RTI/STI</li> </ul>	<ul style="list-style-type: none"> <li>• Refer the woman to the MO.</li> <li>• Advise her on vaginal hygiene, i.e. cleaning the external genitalia with soap and water.</li> </ul>
Q	<ul style="list-style-type: none"> <li>• Leaking of watery fluids P/V</li> </ul>	<ul style="list-style-type: none"> <li>• Wet pads/cloths</li> </ul>	PROM	<ul style="list-style-type: none"> <li>• Refer the woman to the MO.</li> </ul>

FRU: first referral unit; NVBDCP: national Vector Borne Disease Control Programme; FHS: foetal heart sound; BP: blood pressure; UTI: urinary tract infection; RTI: reproductive tract infection; STI: Sexually transmitted infection; PROM: premature rupture of membranes; P/V: per Vaginam

## Care after Delivery—Post-partum Care

### KEY MESSAGES

#### *Mother*

- Make at least four post-partum visits to ensure that complications during the post-partum period are recognized in time.
- Look out for symptoms and signs of PPH and puerperal sepsis during post-partum visits as they are the major causes of maternal mortality.
- Advise the mother on colostrum feeding and exclusive breastfeeding.
- Advise the couple on family planning.

#### *Newborn*

- Keep the baby warm.
- Ensure care of the umbilicus, skin and eyes.
- Ensure good suckling while breastfeeding.
- Screen the newborn for danger signs.
- Advise the mother and family members on immunization.

#### Subcontents:

- ❑ What is post partum care and Post partum visits
- ❑ First Visit for Mother and Baby
- ❑ Second and Third visits for Mother and Baby
- ❑ Fourth Visit for Mother and Baby
- ❑ Steps for transfer and referral of baby if need is there

## What is Post partum care?

Conventionally, the first 42 days (six weeks) after delivery are considered the post-partum period. The first 48 hours of the post-partum period, followed by the first one week, are the most crucial period for the health and survival both of the mother and her newborn.

Most of the fatal and near-fatal maternal and neonatal complications occur during this period. Evidence has shown that more than 60% of maternal deaths take place during the post-partum period.

## Post-partum visits

### Number and timing of post-partum visits by ANM/ASHA

Visits	After home delivery/ Delivery at SC	After delivery at PHC/FRU (woman discharged after 48 hours)
First visit	1 <sup>st</sup> day (within 24 hours)	Not applicable
Second visit	3 <sup>rd</sup> day after delivery	3 <sup>rd</sup> day after delivery
Third visit	7 <sup>th</sup> day after delivery	7 <sup>th</sup> day after delivery
Fourth visit	6 weeks after delivery	6 weeks after delivery

There should be *three additional visits* in the case of babies with low birth weight, on days 14, 21 and 28 (as per the Integrated Management of Neonatal and Childhood Illness [IMNCI] guidelines).

**The first 48 hours after delivery are the most critical** in the entire post-partum period. Most of the major complications of the post-partum period, such as PPH and eclampsia, which can lead to maternal death, occur during this period. Hence, a woman who has just delivered needs to be closely monitored during the first 48 hours. It is your duty to inform the woman about the importance of staying at the health facility where she has delivered for at least 48 hours, so that proper care is provided to her. You must emphasize that monitoring is essential for her and the baby.

**If you have not been involved in conducting the delivery**, you should go and pay a visit to the mother during the first 24 hours after delivery or as soon as the woman reaches her home from the health facility. Ask her for the Mother and Child Protection Card and or discharge/delivery card (if delivered at an institution). The card will have all the antenatal and delivery details if she has visited a health facility for antenatal check-ups and her delivery. Take her history and conduct a quick examination, as described below.

If the woman has delivered at home, find out who attended the delivery and ask the birth attendant about the delivery. If the birth attendant is not an SBA (for example, she might be a relative of the woman or a TBA), and is staying with the woman during the initial postpartum period, explain to her the possible complications that could arise, the symptoms and signs to look for, and the necessary action to be taken, including referral.

The next most critical period is the first week following the delivery. A considerable number of complications can occur during this period, both for the mother as well as the baby. Hence, visits have to be made to the mother and the baby on the 3<sup>rd</sup> and 7<sup>th</sup> days after delivery.

### First visit for mother and baby

#### MOTHER

##### **A. History-taking**

This is especially important if you were not present for the delivery. Review the events at labour and birth to identify any risk factor or events during the birth that may be important in the management of the mother and the baby. Ask the following:

1. Where did the delivery take place?
2. Who conducted the delivery?
3. Any significant history...
  - a. any complications during the delivery?
  - b. bleeding P/V (how many pads or pieces of cloth are getting soaked with blood)
  - c. convulsions or loss of consciousness
  - d. pain in the legs
  - e. abdominal pain
  - f. fever
  - g. dribbling or retention of urine
  - h. any breast tenderness, etc.
4. Has the mother started breastfeeding the baby?
5. Has she started her regular diet?
6. Are there any other complaints?

##### **B. Examination**

1. Check the woman's pulse, blood pressure, temperature and respiratory rate.
2. Check for the presence of pallor.
3. Conduct an abdominal examination. Normally, the uterus will be well contracted, i.e. hard and round. If it is soft and uterine tenderness is present, then refer the woman to the FRU.
4. Examine the vulva and perineum for the presence of any tear, swelling or discharge of pus. If any of these is present, refer the woman to the FRU.
5. Examine the pad for bleeding to assess if the bleeding is heavy, and also see if the lochia is healthy and does not smell foul (for puerperal sepsis). If these signs are present, refer the woman to the FRU.
6. Examine the breasts for any lumps or tenderness, check the condition of the nipples and observe breastfeeding. If the woman has any complaints regarding the condition of her breasts, refer her to the MOs at PHC/FRU. (Refer to *Module 2 – Breast conditions*).

### C. Management/counselling

Give the woman and her family the following advice:

#### 1. Postpartum care and hygiene

- She should have someone near her for the first 24 hours to take care of her and the baby.
- She should wash the perineum daily and after passing stools.
- The perineal pads must be changed every 4–6 hours or more frequently if there is heavy lochia. This is essential to ensure that the woman does not contract any infection.
- Cloth pads should be washed with soap and water and dried in the sun. It is, however, preferable to use sanitary pads, which can be thrown away.
- She should bathe daily.
- She should take enough rest and sleep.
- She should wash her hands before and after handling the baby, especially after cleaning and before feeding the baby.
- Rooming in of the mother with the baby is advisable.
- Advise the mother on how to look after her newborn, e.g. how to bathe the newborn, maintain warmth and exclusive breastfeeding.

#### 2. Nutrition

- She should increase her intake of food and fluids.
- Advise her to refrain from observing taboos that exist in the community against nutritionally healthy foods (e.g. the taboo against eating solid food for six days).
- Talk to the woman's family members, such as her husband and mother-in-law, to encourage them to ensure that she eats enough and avoids heavy physical work.

#### 3. Contraception

- Advise the couple regarding the return of fertility.
- Advise the couple on birth spacing or limiting the size of the family.
- Advise the couple to abstain from sexual intercourse for about 6 weeks postpartum, or till the perineal wounds heal.

#### 4. Breastfeeding

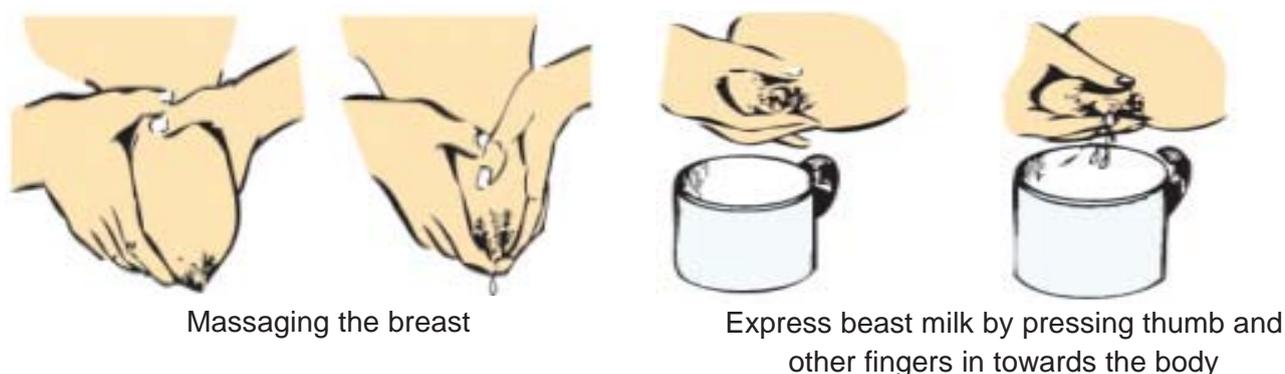
- Ask the mother whether breastfeeding was **initiated within one hour of the birth**. If breastfeeding is still not initiated, then assist her in breastfeeding the baby immediately.
- Observe breastfeeding and check if there is good attachment and effective suckling.
- Advise her to feed the baby colostrum.

- Ask her to breastfeed in a relaxed environment, free from any mental stress.
- Explain that breast milk is sufficient and the best for the baby. Stress exclusive breastfeeding and demand feeding.
- She should breastfeed frequently, i.e. at least 6–8 times during the day and 2–3 times during the night. She should not give water or any other liquid to the baby. Emphasis that breast milk is enough in quantity to satisfy the baby's hunger and that the baby does not even require water while on breastfeeds.
- She should breastfeed from both breasts during a feed. The baby should finish emptying one breast to get the rich hind milk before starting on the second breast.

#### Breastfeeding problems:

- If the mother is having difficulty breastfeeding, teach her the correct position to ensure good attachment.
- If the nipples are cracked or sore, she should apply hind breast milk, which has a soothing effect, and ensure correct positioning and attachment of the baby.
- If she continues to experience discomfort, she should feed expressed breast milk with a clean spoon from a clean bowl.( Figure Below)
- If the breasts are engorged, encourage the mother to let the baby continue to suck without causing too much discomfort to the mother. Putting a warm compress on the breast may help to relieve breast engorgement.
- If an abscess is suspected in one breast, advise the mother to continue feeding from the other breast and refer her to the FRU.

Figure 5 Below depicts the process of breast milk extraction for infant feeding



**Pre-lacteal feeds should not be given.**

#### 5. Registration of birth

Explain the importance of getting the birth of the baby registered with the local *panchayat*. This is a legal document.

The child will require the birth certificate for many purposes in the future, e.g. school admission.

## 6. IFA supplementation

- She should take one IFA tablet daily for three months.
- If she was anemic prior to the delivery, recheck her Hb level.
- If Hb < 11g/dl, then advise her to take two IFA tablets daily for three months and if after one month her Hb level hasn't improved, refer her to PHC
- If Hb is < 7 g/dl refer to FRU.

## 7. Danger signs

Counsel the mother to go directly to the FRU without waiting if she notices the following danger signs:

- Excessive bleeding, i.e. soaking more than 2–3 pads in 20–30 minutes after delivery.
- Convulsions
- Fever
- Severe abdominal pain
- Difficulty in breathing
- Foul-smelling lochia

## FIRST VISIT FOR BABY

### A. History-taking

This is especially important if you were not present at the delivery. Keep the following in mind and ask the mother/relative taking care of the mother and baby:

1. When did the child pass urine and meconium?
2. Has the mother started breastfeeding the baby and are there any difficulties in breastfeeding?
3. Is there a history of problems such as the following?
  - The baby has fever.
  - The baby is not suckling well (could have ulcers or white patches in the mouth—thrush).
  - The baby has difficulty in breathing.
  - The umbilical cord is red or swollen, or is discharging pus.
  - The movements of the newborn are less than normal (normally, newborns move their arms or legs or turn their head several times in a minute).
  - There is skin infection (pustules)—red spots which contain pus or a big boil.
  - There are convulsions.
4. Are there any other complaints?
5. If any of the above problems is present, refer the newborn to the FRU. However, there is no need for

referral in case of umbilical discharge or if the number of skin pustules is less than 10. Provide home treatment, as detailed in IMNCI guidelines for these problems and refer the baby to the FRU only if there is no improvement after two days.

## **B. Examination**

1. Count the **respiratory rate** for one minute. The normal respiratory rate is 30-60 breaths per minute. If it is less than 30 breaths or more than 60 breaths per minute, refer the baby to the FRU as per the steps for referral set forth in Box 12.

2. Look for severe **chest indrawing**:

- Mild chest indrawing is normal in an infant because the chest wall is very soft.
- Severe chest indrawing (lower chest wall goes *in* when the infant breathes *in*) is a sign of pneumonia and is serious in an infant.
- Refer the baby to an FRU as per the steps for referral set forth in Box 12.

3. Check the **baby's colour**.

- Check for **pallor**.
- Check for **jaundice**. It is not normal if appears less than 24 hours after birth and the palms and soles are yellow. Refer the baby to an FRU as per the steps for referral detailed in Box 12.
- Check for **central cyanosis** (blue tongue and lips). This is an abnormality and such cases need to be urgently referred.

4. Check the baby's **body temperature**. The temperature can be assessed by recording the axillary temperature or feeling the infant's abdomen or axilla.

- If the temperature is less than 36.5° C or above 37.4° C, the newborn needs to be urgently referred to an FRU, as per the steps for referral listed in Box 12.

5. Examine the **umbilicus** for any bleeding, redness or pus. If there is any, provide treatment and refer the baby to an FRU if there is no improvement after two days.

6. Examine for **skin infection**.

\_ Red rashes on the skin may be seen 2–3 days after birth. These are normal.

\_ If there are 10 or more pustules (red spots or blisters which contain pus) or a big boil/abscess, refer the newborn to the FRU immediately.

7. Examine the newborn for **cry and activity**.

\_ If the newborn is not alert and/or has a poor cry; is lethargic/unconscious; or if the movements are less than normal, he/she needs to be referred to the FRU.

8. Examine **the eyes** for discharge. Check if they are red or if the eyelids are swollen. Provide treatment and refer the baby to the FRU if there is no improvement after two days.

9. Examine for **congenital malformations and any birth injury**. If there are any, refer the newborn to the FRU.

### ***C. Management/counselling***

Give the mother the following advice:

1. She should maintain hygiene while handling the baby.
2. She should delay the baby's first bath to beyond 24 hours after birth.
3. In cool weather, the baby's head and feet should be covered and he/she should be dressed in extra clothing. The baby must be kept warm at all times.
4. She should not apply anything on the cord, and must keep the umbilicus and cord dry.
5. She should observe the baby while breastfeeding and try to ensure proper/good attachment.

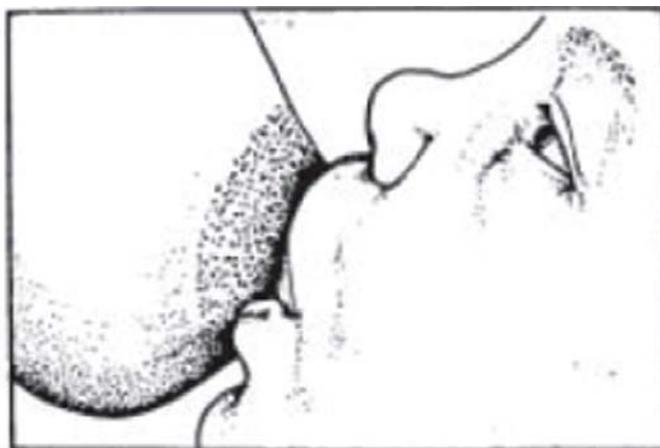
**Good attachment of the baby to the mother's breast:** Ensure that the baby's mouth is attached correctly to the breast. The four signs of good attachment are:

1. Chin touching breast (or very close)
2. Mouth wide open
3. Lower lip turned outward
4. More areola visible above than below the mouth

***Figure 6 : Good attachment***



***Figure 7 : Poor attachment***



### Poor attachment results in the following:

- It causes pain and/or damage to the nipples, leading to sore nipples.
- The breast does not get completely emptied of milk, resulting in breast engorgement.
- The milk supply becomes poor, so that the baby is not satisfied and is irritable after feeding.
- The baby does not put on enough weight.
- If the baby is having the following problems, take him/her immediately to the MO at the FRU.
- The baby is not breastfeeding.
- The baby looks sick (lethargic or irritable).
- The baby has fever or feels cold to the touch.
- Breathing is fast or difficult.
- There is blood in the stools.
- The baby looks yellow, pale or bluish.
- The baby's body is arched forward.
- The movements of the body, limbs or face are irregular.
- The umbilicus is red, swollen or draining pus.
- The baby has not passed meconium within 24 hours of birth.
- There is diarrhea.
- Counsel the mother on where and when to take the baby for immunization.

*Refer Checklist No. 9 for care during first Post-partum visit*

## SECOND AND THIRD VISITS FOR MOTHER AND BABY

### MOTHER

#### A. *History-taking*

A similar history needs to be taken as during the first visit. Apart from the questions asked during the first visit, also ask the mother the following.

- Is there continued bleeding P/V? This, i.e. postpartum bleeding occurring 24 hours or more after delivery, is known as 'delayed' PPH.
- Is there foul-smelling vaginal discharge? This could be indicative of puerperal sepsis.
- Has there been any fever?
- Is there a history of swelling (engorgement) and/or tenderness of the breast?
- Is there any pain or problem while passing urine (dribbling or leaking)?
- Is there fatigue and is she 'not feeling well'?
- Does she feel unhappy or cry easily? This indicates postpartum depression, and usually

occurs 4–7 days after delivery. Assure her that everything will be fine and refer her to the MO only if the problem persists.

- Are there any other complaints?

### **B. Examination**

This is similar to the examination conducted during the first visit. It includes the following:

- Check the pulse, blood pressure and temperature.
- Check for pallor.
- Conduct an abdominal examination to see if the uterus is well contracted (hard and round), and to rule out the presence of any uterine tenderness. If there is a problem, refer the woman to the FRU.
- Examine the vulva and perineum for the presence of any swelling or pus. If either of these is present, refer her to the FRU.
- Examine the pad for bleeding and lochia. Assess if it is profuse and whether it is foulsmelling. If so, refer her to the FRU.
- Examine the breasts for the presence of lumps or tenderness. If either is present, then refer her to the FRU.
- Check the condition of the nipples. If they are cracked or sore, then manage.

### **C. Management/counselling**

#### **Diet and rest**

- Inform the mother that during lactation, she needs to **eat more than her normal** pre-pregnancy diet. This is because she needs to regain her strength during the period of exclusive breastfeeding and also for her baby to derive its full nutritional requirements from breast milk.
- She should be advised to **take foods rich in calories, proteins, iron, vitamins and other micro-nutrients** (milk and milk products, such as curd and cottage cheese; green leafy vegetables and other seasonal vegetables; pulses; eggs; meat, including fish and poultry; groundnuts; *ragi*; jaggery; fruits, such as mango, guava, orange, sweet lime and watermelon).
- The taboos on food imposed by the family and community are usually stronger and greater in number in the postpartum period and during lactation than during pregnancy. These should be enquired into and the mother advised against following them if they are harmful to her and/or her baby.
- The mother **needs sufficient rest** during the postpartum period; to be able to regain her strength. Advise her to refrain from doing any heavy work during the postpartum period, and to focus solely on looking after herself and her baby. Her family members should also be advised to ensure this.

## Contraception

- Inform the mother that whenever her periods begin again and/or she stops exclusive breastfeeding, she can conceive even after a single act of unprotected sex.
- Inform the couple about the various choices of contraceptive methods available and help them choose the method most suitable to them.

## SECOND AND THIRD VISITS FOR BABY

### A. *History-taking*

- The same questions should be asked during history-taking as during the first postpartum visit. If any of the problems inquired about is present, refer the baby to the FRU.

### B. *Examination*

Observe the baby and record the following:

- Whether he/she is sucking well
- If there is difficulty in breathing (fast or slow breathing and chest indrawing).
- If there is fever or the baby is cold to the touch.
- If there is jaundice (yellow palms and soles)
- Whether the cord is swollen or there is discharge from it
- If the baby has diarrhea with blood in the stool
- If there are convulsions or arching of the baby's body

Refer the baby to the PHC/FRU if any of the above is present.

### C. *Management/counselling*

In addition to the lines along which counselling was provided during the first visit, counsel the mother on the following:

- She should exclusively breastfeed the baby for six months.
- She should feed the baby on demand.
- She should be encouraged to "room in".
- Supplementary foods should be introduced at 6 months of age. She can continue breastfeeding simultaneously.

Also talk to the mother about the following:

**Baby's weight loss:** The baby loses a little weight in the first three days after birth. This is a normal process and the mother should not worry about it. After the third day, the baby starts gaining weight and regains its birth weight by the first week.

**Hygiene of the baby:** While bathing the baby, special attention should be paid to the head, face, skin flexures, cord and napkin area. These should be dried properly with soft cloth.

**When and where to seek help in case of signs of illness:** Inform the mother when to seek help and where to go in case the baby shows any signs of illness.

**Immunization:** The baby should be immunized as per the Universal Immunization Programme

*Refer Checklist No. 10 for steps for mother and baby during second and third post-partum visit*

## FOURTH VISIT FOR MOTHER AND BABY

### MOTHER

#### A. History-taking

Ask the mother the following:

- Has the vaginal bleeding stopped?
- Has her menstrual cycle resumed?
- Is there any foul-smelling vaginal discharge?
- Does she have any pain or problem while passing urine (dribbling or leaking)?
- Does she get easily fatigued and/or 'does not feel well'?
- Is she having any problems with breastfeeding?
- Are there any other complaints?

#### B. Examination

This examination includes the following:

- Check the woman's blood pressure.
- Check for pallor.
- Examine the vulva and perineum for the presence of any swelling or pus.

- Examine the breasts for the presence of lumps or tenderness. If either is present, refer her to the MO.

**C. *Management/counselling***

- Diet and rest:
- As in the second and third visits, emphasize the importance of nutrition.
- Contraception: Emphasize the importance of using contraceptive methods for spacing or limiting the size of the family.

**Fourth visit for baby**

**A. *History-taking***

Ask the mother the following:

- Has the baby received all the vaccines recommended so far?
- Is the baby taking breastfeeds well?
- How much weight has the baby gained?
- Does the baby have any kind of problem?

**B. *Examination***

- Check the weight of the baby.
- Check if the baby is active/lethargic.

**C. *Management/counselling***

- Emphasize the importance of exclusive breastfeeding.
- Tell the mother that if the baby is having any of the following problems, he/she should be taken immediately to the MO at the FRU.
- The baby is not accepting breastfeeds.
- He/she looks sick (lethargic or irritable).
- The baby has fever or feels cold to the touch.
- The baby has convulsions.
- Breathing is fast or difficult.
- There is blood in the stools.
- The baby has diarrhoea.
- Counsel the mother on where and when to take the baby for further immunization.

### Steps for transfer and referral of the baby if the need may be

If the baby needs to be transferred to a 24 hour PHC/FRU, ensure that the transfer is safe and timely. It is important to prepare the baby for the transfer, communicate with the receiving facility and provide care during the transfer.

**Under JSSK scheme up to one year of age the sick infant is eligible for free transportation to avail services, free medicines, free diagnostic tests and treatment; accompanying care giver is also eligible for free diet**

### Preparation

- Explain to the family the reason for transferring the baby to a higher facility.
- If possible, transfer the mother with the baby so that she can continue to breastfeed or provide expressed breast milk.
- You or another health care worker should accompany the baby.
- Ensure that the baby is not exposed to heat or cold.
- Ask a relative to accompany the baby and mother, if possible.

### Communication

- Fill up a referral form with the baby's essential information and send it with the baby.
- If possible, contact the health care facility in advance so that it can be prepared to receive the baby.

### Care during transfer

- Keep the baby in skin-to-skin contact with the mother. If this is not possible, keep the baby dressed and covered and have the mother/relative accompany you.
- In hot weather, ensure that the baby does not become overheated.
- Ensure that the baby receives breastfeeds. If the baby cannot be breastfed, give expressed breast milk with a clean spoon or from a cup.
- Maintain and clear the airway, if required.
- If the baby is receiving oxygen, check the oxygen flow and tubing every 15 minutes.
- Assess the baby's respiratory rate every 15 minutes. If the baby is not breathing at all, is gasping or has a respiratory rate of less than 30 breaths per minute, resuscitate him/ her using a bag and mask.

## Management of Complications during Pregnancy and in the Postpartum Period

### KEY MESSAGES

- Educate the woman, her family and the community regarding the danger signs during pregnancy, labour and delivery and the postpartum period.
- Make local arrangements for transporting the woman to a higher health facility should the need arise.
- Always refer the woman to the appropriate health facility with a referral slip.
- Encourage and prepare the family members to donate blood should the need arise
- Do not carry out a vaginal examination on women who have bleeding during pregnancy beyond 12 weeks.
- Manage PPH by giving intravenous Oxytocin (20 IU) in 500 ml of Ringer Lactate at the rate of 40–60 drops per minute and refer the woman to a higher health facility immediately.
- Unless proven otherwise, assume that all cases of convulsions during pregnancy, labour and the postpartum period are due to eclampsia. Magnesium sulphate injection is the drug of choice for controlling eclamptic fits.

### Subcontents:

- \* Vaginal Bleeding
- \* PIH(Pregnancy Induced Hypertension)
- \* Eclampsia
- \* Anemia & others

Note: The module deals only with complications during antenatal and postnatal period

## VAGINAL BLEEDING

Vaginal bleeding can occur during pregnancy, delivery or in the postpartum period.

### Types of vaginal bleeding:

- a. Early pregnancy (before 20 weeks of pregnancy).
- b. Late pregnancy (after 20 weeks of pregnancy) or APH
- c. PPH—blood loss of 500 ml or more following and up to six weeks after delivery

### Types of PPH:

- Immediate PPH/primary PPH—during and within 24 hours of delivery
- Delayed PPH/secondary PPH—after 24 hours of delivery until six weeks postpartum

### A. Vaginal bleeding in early pregnancy

**This refers to vaginal bleeding before 20 weeks of pregnancy.**

The probable causes could be a threatened or spontaneous abortion, an ectopic pregnancy or a hydatidiform mole. In some cases, it may be a very early pregnancy, and the woman might not even be aware that she is pregnant. On the other hand, the woman might not be pregnant, and the vaginal bleeding might instead be menorrhagia (excessive bleeding during periods).

#### A.1 Incomplete spontaneous abortion

The following are the signs of incomplete spontaneous abortion:

- There is heavy bleeding and lower abdominal pain.
- There is a history of expulsion of the products of conception (POC).
- Abdominal examination shows the presence of uterine tenderness and the fundal height is less than the period of gestation.

### Management:

- \_ If retained POC are seen in the vagina, remove them gently with a finger. The procedure must be carried out under aseptic conditions.
- \_ If the bleeding does not stop and/or the woman is in shock, establish an intravenous line immediately and give intravenous fluids rapidly.
- \_ Send the woman to the MO with a referral slip.

## A.2 Complete abortion

The following are the signs of complete abortion:

- There is light bleeding or there has been heavy bleeding which has now stopped.
- There is lower abdominal pain.
- There is a history of expulsion of Products of Conception (POC).
- Abdominal examination shows a uterus that is softer than normal, and the fundal height is less than the period of gestation.

### Management:

- \_ Observe the woman for 4–6 hours. Advise her to take rest.
- \_ If the bleeding decreases or stops, explain the facts to her, reassure her and advise her to go home after you have checked her vital signs.
- \_ Advise her to return to you or the MO if the bleeding recurs.

## A.3 Threatened abortion

The following are the signs of threatened abortion:

- There is light bleeding.
- The woman complains of lower abdominal pain.
- There is no history of expulsion of POC.
- Abdominal examination shows the uterus to be softer than normal, and the fundal height corresponds to the period of gestation.
- On P/V examination, the cervical os is found to be closed.

### Management:

- \_ If the bleeding decreases or stops, explain the facts to the woman, reassure her and advise her to go home after you have checked her vital signs.
- \_ Advise her to avoid strenuous exercise/work and to avoid sexual intercourse.
- \_ Advise her to take bed rest.
- \_ Send her to the MO with a referral slip for further advice.

## General Care and advice after an abortion

The care of a woman who has been through an abortion consists of the following and she should be advised as described below.

*Follow up:* Advise the woman to return for follow up and to go directly to the MO for treatment if:

- There is increased bleeding.
- The bleeding does not decrease even after a week.
- There is foul-smelling vaginal discharge.
- There is abdominal pain.
- She has a fever and feels unwell.
- There is weakness, dizziness or fainting.

**Self-care: The woman must be given advice on self-care**

- Ask her to rest for a few days, especially if she is feeling tired.
- Advise her to use disposable sanitary napkins, if available. If not, then she should change the cloth/pad every 4–6 hours. The cloth should be washed with soap and water and dried in the sun.
- She should wash the perineum daily with soap and water.
- Advise her to avoid sexual intercourse until the bleeding stops.

**Family planning: Give the woman advice on family planning methods**

- Explain to her that she can conceive soon after the abortion if she resumes sexual intercourse, unless she uses a contraceptive.
- Any family planning method can be used after a first-trimester (up to 12 weeks' gestation) abortion.
- If the woman has an infection, the insertion of an IUCD or female sterilization should be delayed till the infection is treated completely.
- Give advice on the correct and consistent use of condoms if she or her partner is at risk for STI or HIV infection.
- Address her concerns regarding future pregnancy through counselling.

Tell the woman that if, after the abortion, there is a delay of six weeks or more in the resumption of her menstrual cycle, she should go to the MO for an examination and advice

**B. Vaginal bleeding in late pregnancy (APH)**

Vaginal bleeding any time after 20 weeks of pregnancy is called APH. The most serious causes are placenta praevia (placenta lying at or near the cervix), abruptio placentae (detachment of the placenta before the birth of the foetus) or a ruptured uterus. *Any bleeding (light or heavy) at this time of pregnancy is dangerous.*

**Remember:**

P/V should not be performed in women who have bleeding during pregnancy beyond 20 weeks.

Immediate management of bleeding in late pregnancy:

- Establish an intravenous line and start intravenous fluids (Ringer lactate/normal saline).
- Refer the woman to an FRU which has facilities for blood transfusion

**C. Bleeding during and within 24 hours of delivery (immediate PPH)**

PPH is defined as the loss of 500 ml or more of blood during or within 24 hours of the birth and up to six weeks after delivery.

PPH may be immediate or delayed.

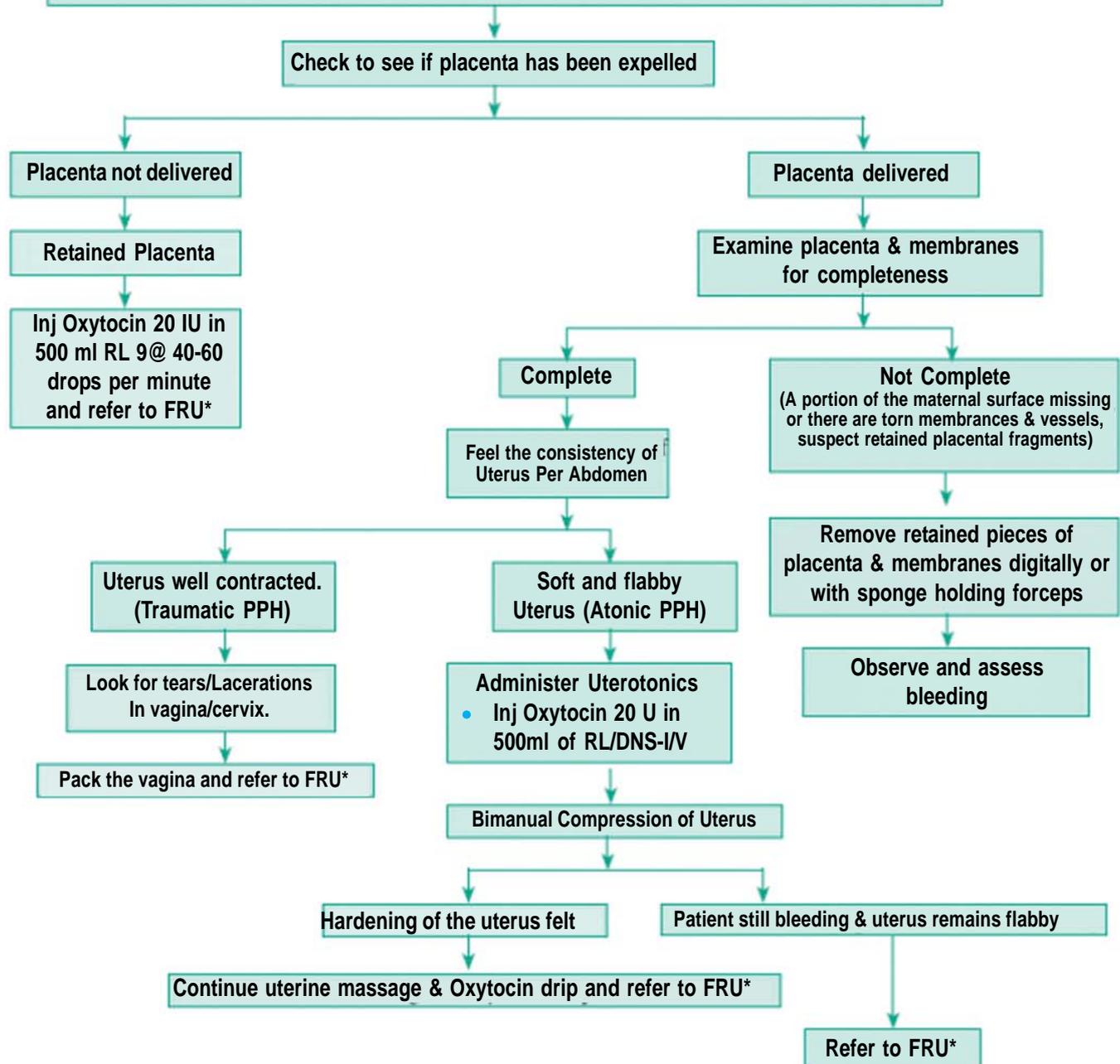
Immediate PPH may be due to a number of causes, such as:

- Atonic uterus
- Tears in the lower vagina, cervix or perineum
- Retained placenta or placental fragments
- Inverted or ruptured uterus

The following flowchart gives the method by which the cause of immediate PPH can be diagnosed and managed. The ANM has to ascertain from the records whether oxytocin injection has been given as part of the AMTSL (acute management of third stage of labor).

### Management of PPH

- **Shout for Help: Mobilise all available health personnel.**
- **Evaluate Vital Signs: Pulse, BP, respiration and temperature**
- **Establish IV. Line (draw blood for blood grouping & cross matching and catheterize the bladder, if at health facility).**
- **Start rapid infusion of Normal Saline/Ringer Lactate & 1L in 15-20min, if possible**
- **Massage the uterus to expel the clots.**
- **Give Oxygen @ 6-8 L per minute by mask (if at health facility)**
- **Monitor Vital Signs and blood loss (every 15 minutes)**
- **Monitor fluid intake and urinary output.**



## Please Note the Steps for Referral:

- Referral should be made with Referral Slip (Annexure I) with Intravenous line intact and all interventions recorded.
- Preferably a Health worker should accompany the patient to referral institution
- Telephone message should be conveyed to the Referral Institution/Doctor with information on Patient's Blood Group and status.

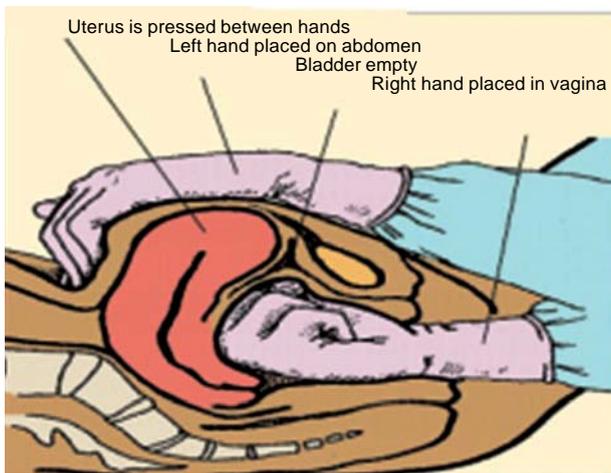
The general steps to be taken for the management of PPH, before referring the woman to an FRU, are as follows:

- Evaluate her general condition and look for signs of shock (cold, clammy skin), check the level of consciousness, pulse (should not be weak or fast, at 110 per minute or more), blood pressure (systolic should not be less than 90 mmHg), respiration (the RR should not be more than 30 breaths per minute) and temperature
- Monitor the vital signs every 15 minutes and estimate the amount of blood loss.
- Try and ascertain the cause of PPH using the flowchart given above.
- Give the woman an Oxytocin injection (10 IU, intramuscular stat). (If she has already received a prophylactic Oxytocin injection or a Misoprostol tablet during AMTSL, this is not required).
- Massage the uterus to expel blood and blood clots. Blood clots trapped in the uterus will inhibit effective contractions.
- Establish an intravenous line and start an intravenous infusion of Ringer Lactate or normal saline. Do not use dextrose solutions unless others are unavailable.
- Add 20 IU of oxytocin to 500 ml of Ringer Lactate/normal saline that is running intravenously at the rate of 40–60 drops per minute. (If an intravenous line cannot be established, give her an intramuscular Oxytocin injection (10 IU) stat).
- If the bleeding persists and the uterus continues to be in the relaxed state (i.e. it is soft), make arrangements for transporting the woman to the FRU, where facilities for blood transfusion and appropriate surgical care are available.
- Do not give the woman anything to eat or drink since she may require an obstetric intervention under anesthesia.
- If the woman is bleeding heavily, i.e. soaking one pad or cloth in less than five minutes, or if she is in shock, give her fluids rapidly (60 drops per minute) through another drip.
- Raise the foot end of the bed so that her head is lower than her body. This will help increase the flow of blood to the heart.
- Keep the woman warm and covered with a blanket. If she is in shock, she might feel cold even in warm weather.
- Utilize the intervening time to perform bimanual compression.

### Steps of Bimanual compression are:

- Use a Foley catheter (preferable)/Plain catheter to catheterize and empty the urinary bladder.
- Use a pair of sterile gloves.
- Insert a gloved hand in the vagina and remove any clots from the lower part of the uterus or the cervix.
- Form a fist and place it in the anterior vaginal fornix and apply pressure against the anterior wall of the uterus.
- Ensure that family members/attendants accompany the woman to the FRU. You should also accompany her, if possible.
- Arrange for two or three donors to donate blood in case a blood transfusion is required. The donors should also accompany the woman during referral.

Figure 7: Procedure of Bimanual compression



On the way to the FRU, try and estimate the amount of blood lost (by counting the number of pads soiled).

**Remember that the interval from the onset of PPH to death can be as little as two hours, unless appropriate life-saving steps are taken immediately**

*Note: Delayed/Secondary PPH is beyond the scope of this book and its objectives*

## Pregnancy-induced hypertension

### PIH includes:

- \_ Hypertension—systolic blood pressure of 140 mmHg or more and/or diastolic blood pressure of 90 mmHg or more, on two consecutive readings taken four hours or more apart
- \_ Pre-eclampsia—hypertension with proteinuria
- \_ Eclampsia—hypertension with proteinuria and convulsions

Measure the woman's blood pressure during every antenatal and postnatal visit. If it is high (more than 140/90 mmHg), check it again after four hours. If the situation is urgent, the blood pressure should be measured after one hour.

If the woman has hypertension, check her urine for the presence of proteins. The combination of a raised blood pressure and proteinuria is sufficient to categorize the woman as having pre-eclampsia.

Refer the woman to the 24 x 7 PHC/FRU so that she can receive anti-hypertensive medication. She should be managed at home as per the advice of the MO.

Keep in touch with the woman or her family, and undertake appropriate follow up of these cases.

### Follow-up care of women with pre-eclampsia

- Advise the woman to come to you for a check-up twice a week regularly.
- Monitor her blood pressure, her urine for the presence of proteins, and the foetal condition.
- Encourage her to take rest.
- Encourage her to take a normal diet. She should not be advised to restrict her intake of salt and fluids.
- Advise her to go for an institutional delivery.
- Women who have a history of hypertension in previous pregnancies have a greater chance of having a raised blood pressure in the present pregnancy also.

**Inform her family members to take her urgently to the PHC/FRU if there are danger signs such as:**

- Headache (increasing in frequency and duration)
- Visual disturbances (blurring, double vision, blindness)
- Oliguria (passing less than 400 ml urine in 24 hours)
- Upper abdominal pain
- Oedema, especially of the face, sacrum/lower back

**Convulsions—Eclampsia**

Convulsions that occur during pregnancy, delivery or in the postpartum period should be assumed to be due to eclampsia, unless proved otherwise.

Eclampsia is characterized by:

- Convulsions
- High blood pressure (a systolic blood pressure of 140 mmHg or more and/or a diastolic blood pressure of 90 mmHg or more)
- Proteinuria +2 or more.
- Keep in touch with the woman or her family and undertake appropriate follow up of the cases.

If the woman has convulsions, offer supportive care. The initial management of convulsions includes the following:

- Ensure that the airway is clear and she is breathing well
- If the woman is unconscious, position her on her left lateral side to reduce the risk of aspiration (vomitus and blood).
- Clean the mouth and nostrils by applying gentle suction and remove the secretions.
- Remove any visible obstruction or foreign body from her mouth.
- Keep a padded mouth gag between the upper and lower jaw to prevent tongue bite (do not attempt this during a convulsion).
- Administer the first dose of Magnesium Sulphate injection (as described below).
- Keep her in the left lateral position.

**Do not leave the woman alone. The presence of an attendant is mandatory.**

- Protect the woman from fall or injury.
- Maintain a record of the vital signs.
- Immediately arrange to refer the woman to an FRU and ensure that she reaches the FRU as early as possible, preferably within two hours of receiving the first dose of Magnesium Sulphate injection.

- Accompany the woman to the FRU, if possible. Manage any convulsions that may occur on the way.
- If delivery is imminent, you may not have the time to transport the woman to an FRU. In this case, deliver the baby after giving the first dose of Magnesium Sulphate injection. *After the delivery, you must refer her, together with the baby, to the FRU for further management.*

**REMEMBER: The first dose of Magnesium Sulphate injection (Checklist 11- Mentoring module)**

- Magnesium Sulphate injection has been provided in ANM kit (Magnesium Sulphate 50% w/v, 1 g in each 2 ml vial).
- A 22-gauge needle and a 10 cc syringe is provided in kit.
- Inform the woman, if she is conscious, that she may feel warm during the injection.
- Inject 10 ml (5 g) of Magnesium Sulphate in each buttock - a total of 20 ml (10 g).
- Ensure that this is given deep intramuscularly because otherwise, an abscess can form at the site of injection.
- After receiving the injection, the woman may have flushing, may feel thirsty, get a headache, feel nauseous or even vomit.
- Do not repeat the dose of Magnesium Sulphate.

## Anaemia & Others

### A. ANEMIA

A haemoglobin level of less than 11 g/dl at any time during pregnancy or the postpartum period is termed anaemia. A haemoglobin level of less than 7 g/dl is severe anaemia.

Prophylactic treatment against anaemia, in the form of IFA tablets, should be given to every pregnant woman from the second trimester onwards. Each tablet should contain 100 mg elemental iron and 0.5 mg folic acid, and the dosage should be one tablet daily for three months. The prophylactic treatment against anemia should be continued for three months even in the postpartum period

- All women with anaemia (hemoglobin less than 11g/dl) must be given the therapeutic dose of IFA, i.e. one tablet *twice a day*, a period of at least 100 days (three months). The treatment should be continued till the level of hemoglobin rises. The therapeutic dosage of IFA should be continued for three months even in the postpartum period.
- The woman should be given dietary advice regarding foods rich in iron, e.g. green leafy vegetables, eggs, meat, lentils, beans and nuts. Foods rich in Vitamin C, such as citrus fruits, increase the absorption of iron. Anemic women should be advised to increase their overall dietary intake.
- A woman with severe anaemia and/or severe palmar/conjunctival/nail pallor, along with any of the following, should be referred to the FRU for detailed tests and a blood transfusion, if necessary:
  - 30 breaths or more per minute
  - Easy fatigability
  - Breathlessness even at rest

A woman with severe anaemia must deliver in an institutional setting.

## **B. URINARY TRACT INFECTION**

When a woman complains of fever and/or burning on urination and/or pain in either of the flanks, UTI should be suspected.

- Ask her to drink plenty of water and fluids.
- Refer her to the MO for further management.

## **C. PUERPERAL SEPSIS**

Puerperal sepsis is infection of the genital tract at any time between the onset of rupture of membranes or labour and till 42 days after delivery or abortion. Any two or more of the following signs and symptoms are present.

- Fever (temperature  $>38^{\circ}\text{C}$  or  $> 100.5^{\circ}\text{F}$ )
- Lower abdominal pain and tenderness
- Abnormal and foul-smelling lochia, may be blood-stained
- Burning micturition
- Uterus not well contracted
- Feeling of weakness
- Vaginal bleeding

Fever in the postpartum period could be due to causes other than puerperal sepsis such as urinary tract infection (UTI), mastitis or other non-obstetric causes.

If the general condition of the woman is fair, give her the first dose of antibiotics (i.e. ampicillin capsule, 1 g orally; Metronidazole tablet, 400 mg orally; and Gentamicin injection, 80 mg intramuscular stat) and refer her to a PHC/FRU.

If the general condition of the woman is poor and she has the above signs and symptoms, start her on intravenous fluids and give her the first dose of antibiotics. Refer her to a MO at 24 hour PHC/FRU immediately.

### ***Case study No. 3 in mentoring module***

## **D. BREAST CONDITIONS**

Breast conditions include mastitis, cracked/fissured nipples and breast engorgement (being too full) and breast abscess. Breast examination should be an essential part of routine postpartum examination.

Following advice is to be offered to the mother both in the antenatal and reinforced during post natal period-

- Encourage the mother to continue breastfeeding. Tell her that if she does not breastfeed, there will be further engorgement of the breasts.
- If the breasts are engorged, and the baby is unable to take the areola and nipple in and suckle, tell the mother to apply hot, wet cloths on the breasts for 5–10 minutes to make them soft. Ask her to hand-express a small amount of milk before putting the baby to the breast.
- Ask the mother to feed the baby from both the breasts during each feed.
- If engorgement persists despite regular feeding, the mother may be advised to express breast milk. She should empty her breasts at regular intervals and feed the expressed milk to the baby.
- Applying hind milk (the milk which comes out during the latter part of breastfeeding) to sore and cracked nipples has a healing effect.
- Ask the mother to avoid wearing tight-fitting bras.
- If there is accompanying fever, redness or pain that does not subside despite the above measures, refer the woman to the PHC.

### General Steps to be followed during referral of a woman

**Keep the following points in mind while *referring the woman to a higher centre*.**

- After appropriate management of the emergency, discuss the decision to refer with the woman and her relatives, especially those who are decision-makers in the family.
- Quickly organize transport and possible financial aid.
- Inform the referral centre by phone, if possible.
- Accompany the woman, if possible; otherwise send another health worker/ASHA.
- Send relatives who can donate blood, should the need arise.
- Carry drugs and supplies such as an intravenous drip and set, antibiotics, Oxytocin injection and Magsulph injection (provided in your delivery kit) in the vehicle in which the woman is being transported.
- If the referral is being made after the delivery, send the baby with the mother, if possible.
- Write a referral note (see Annexure III) to the health personnel at the referral centre. The note should contain the salient points about the following:
  - \_ History
  - \_ Main clinical findings
  - \_ Medication given (dose, route and time of administration)
  - \_ Other interventions done, if any
- During the journey:
  - \_ Watch the intravenous infusion.
  - \_ Give appropriate treatment on the way, if the journey is long.
  - \_ Keep a record of all the intravenous fluids and medications given, including the time of administration, and of the condition of the woman from time to time.

**Refer to Checklist 11 for Common Complications and their management in ANC & PNC**

## COUNSELLING AND SUPPORTIVE ENVIRONMENT

### KEY MESSAGES

- **Respect the right of women to receive maternity care services.**
- **Respectful communication and genuine empathy are the most important elements of quality maternal care.**

Pregnancy is a physiological event and is typically a time of joy and anticipation. Any complication or risk of a complication that could lead to a problem shatters the dreams of the pregnant woman and her family members. Often one comes across instances when family members blame the health providers for adverse pregnancy outcomes, which leads to unpleasant situations. An increasing trend of initiating legal cases against service providers is also being noticed. Much of this can be avoided if women and their families are better informed about care during pregnancy and signs of complications and appreciate the need to seek care from a skilled health provider. You have an important role to play in ensuring that correct information is disseminated on how to make pregnancies safer among women and their families.

To prevent all the unpleasantness, you, as the health-care provider at the community level, should keep the following points in mind while dealing with the woman and her family.

- Respect the woman's dignity and her right to privacy.
- Be sensitive and responsive to the woman's needs.
- Be non-judgmental about the decisions that the woman and her family have made regarding her care. You should provide corrective counselling, if required, but only after the complication has been dealt with and not before or during the management of problems.
- Respect the right of women to receive maternity care services.

### Rights of women

As the health-care provider, you should be aware of the rights women; when they receive maternity care services. These are as follows:

- has a right to information about her health.
- has the right to discuss her concerns in an environment in which she feels confident.
- Should know, in advance, all the relevant information regarding the type/s of procedure/s that will be performed on her.
- has a right to privacy. While working in a facility, procedures should be conducted in an environment (e.g. labour wards) in which the woman's right to privacy is respected.
- has a right to express her views about the care and services she receives.

When you talk to a woman about her pregnancy or a related complication, you should use simple language and basic communication techniques. This will help you establish an honest, caring and trusting relationship with the woman. If a woman trusts you and feels that you have her best interests at heart she will be more likely to either go to the PHC or call you at home to conduct her delivery. She will also be more likely to approach you early in case she feels there is a complication and share her experience with other women in the community who might also be encouraged to use the services provided by you and at the PHC.

### **Supportive care during a normal delivery**

Ensure that the woman has a companion of her choice and wherever possible the same caregiver throughout labour and delivery. Supportive companionship can enable a woman to face fear and pain and reduce loneliness and distress.

- When possible, encourage the companion to take an active part in the care of the woman. Position the companion at the head end of the woman to allow her/him to focus on talking to the woman and caring for her emotional needs.
- Both during and after the delivery/event, provide as much privacy as possible to the woman and her family.

### **Supportive care during an emergency/complication**

#### **Emotional and psychological reactions of the woman and her family**

The reaction of various members of the family to an emergency situation depends on the social, cultural and religious circumstances, the personalities of the people involved and the gravity of the problem. Common reactions of people to obstetric emergencies or maternal death include:

- Denial (feelings of 'it can't be true')
- Guilt regarding possible responsibility
- Anger (frequently directed towards the health care staff, but often masking anger directed at oneself for 'failure')
- Depression and loss of self-esteem, which may be long-lasting
- Disorientation

#### **General principles of communication and support**

While each emergency situation is unique, the following general principles offer guidance on how to handle emergencies. Communication and genuine empathy are probably the most important components of effective care in such situations.

### **At the time of the event**

- \_ Listen to those who are distressed. The family/woman will need to discuss their problems, fears and excitement.
- \_ Do not change the subject or move on to easier or less painful topics of conversation. **Show empathy.**
- \_ Tell the family/woman as much as you can and as much as they can understand about what is happening. Understanding the situation and its management can reduce their anxiety and prepare them for what happens next.
- \_ Be honest. Do not hesitate to admit what you do not know. Maintaining trust matters more than appearing knowledgeable.
- \_ If language/dialect is a barrier to communication identify someone to translate for you.

### **After the event**

- \_ Give practical assistance, information and emotional support.
- \_ Respect traditional beliefs and customs, and accommodate the family's needs as far as possible.
- \_ Explain the problem to help reduce anxiety and guilt. Repeat information several times and give written information, if possible. People going through an emergency will not remember much of what is said to them.
- \_ Many families and women blame themselves for what has happened. Counsel the family and woman and allow them to reflect on the event.
- \_ Listen and express understanding and acceptance of the woman's feelings. Non-verbal communication may speak louder than words: a touch of the hand or a look of concern can say an enormous amount.
- \_ You yourself may feel anger, guilt, sorrow, pain and frustration in the face of obstetric emergencies that may lead you to avoid talking to the family/woman. Remember, expressing your emotions is not a weakness.

## PREVENTION OF INFECTION

### KEY MESSAGES

- Hand washing is one of the most important measures for reducing transmission of microorganisms and preventing infection.
- Always wear gloves when conducting procedures where there is a risk of touching blood, body fluids, secretions, excretions or contaminated items.
- Proper handling of contaminated waste minimizes the spread of infection to health care personnel and to the local community.
- 0.5% bleach solution is the least expensive and the most rapid acting and effective agent to use for decontamination.

Note: The major objectives of prevention of infection are to prevent the occurrence and minimize the risk of transmitting infections such as Hepatitis B, Hepatitis C and HIV/AIDS to clients and the health-care staff when providing services.

Subcontents:

- Infection & prevention- and overview
- Hand washing
- Use of protective clothing
- Processing of used items/equipment
- Proper handling and disposal of sharps
- Maintaining a clean environment
- Biomedical waste disposal

## INFECTION & PREVENTION- AND OVERVIEW

Proper washing of hands is the most important way to reduce the spread of infection in any health care setting.

*Appropriate times for health care staff to wash hands:*

- Immediately after arriving at work
- Before and after examining each patient
- After contact with blood, secretions, excretions or contaminated items/equipment
- After handling specimens
- Before putting on gloves
- After removing gloves
- Before leaving work

**The main forms of hand hygiene**

Technique	Main purpose	Agents	Residual effect
Routine hand washing	Cleansing	Non-medicated soap	Short
Careful hand washing	Cleansing after contact with patient	Non-medicated soap	Short
Hygienic hand rub	Disinfection after contamination	Alcohol	Disinfection
Surgical hand disinfection	Pre-operative disinfection	Antibacterial soap, alcoholic solutions, antiseptic solutions	Long

*Tips for hand washing:*

- Keep the soap bar in a soap dish and allow drainage.
- Always use running water to wash hands—avoid dipping or washing your hands in a basin of standing water.
- Always use a separate towel or air dry your hands. Do not use shared towels to dry your hands.
- Make sure that your nails are clipped short.
- Roll your sleeves up to the elbow before washing your hands.

**Norms for handwashing in newborn:**

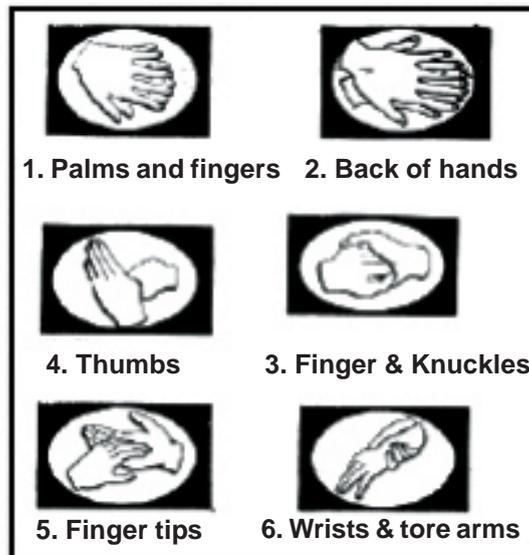
- 2 MINUTES, hand washing (6 steps) to be done before entering the unit.
- 20 seconds hand washing to be done before and after touching babies.

**Procedure for washing hands (note the figure below)**

- + Roll sleeves above elbow.
- + Remove wrist watch, bangles, rings etc.
- + Using plain water and soap, wash parts of the hand in the following sequence:

1. Palms and fingers and web spaces
2. Back of hands
3. Fingers and knuckles
4. Thumbs
5. Finger tips
6. Wrists and forearm upto elbow

**Steps for handwashing:**



*Once you have washed your hands, do not touch anything, e.g. hair, pen or any fomite, till you carry out the required job.*

**Remember:**

**Rinsing the hands with alcohol is NOT A SUBSTITUTE for proper hand-washing.**

## USE OF PROTECTIVE CLOTHING

### Gloves

- Wear gloves when there is a risk of touching blood, body fluids, secretions, excretions or contaminated items during the procedure. Put on clean/sterile gloves just before touching the mucous membranes and non-intact (broken) skin.
- A separate pair of gloves should be used for each client to avoid cross-contamination.
- Although disposable gloves are preferred, when resources are limited, surgical gloves can be reused provided they have been:
  - + \_ Decontaminated by soaking in 0.5% chlorine solution for 10 minutes
  - + \_ Washed and rinsed
  - + \_ Sterilized by autoclaving or High Level Disinfection (HLD), i.e. by steaming or boiling
- Do not use gloves that are cracked or peeling, or have detectable holes or tears.
- Sterile, clean gloves should be worn during all delivery procedures.

### Masks

- Masks prevent microorganisms expelled during talking, coughing or breathing from entering the client and protect the provider's mouth from splashes of blood or other fluids
- Masks should be worn while performing any procedure/intervention, such as while conducting a delivery.

### Eye covers

- Eye covers are used to protect the eyes from accidental splashes of blood or other body fluids. They should be used, for example, while conducting a delivery or cleaning instruments.

### Gowns/aprons

- Gowns and waterproof aprons prevent microorganisms from the provider's arms, body and clothing from entering the client's body and protect the provider's skin and clothes from splashes of blood and other fluids.

### Caps

- Caps prevent microorganisms from the hair and skin on the provider's head from entering the client.

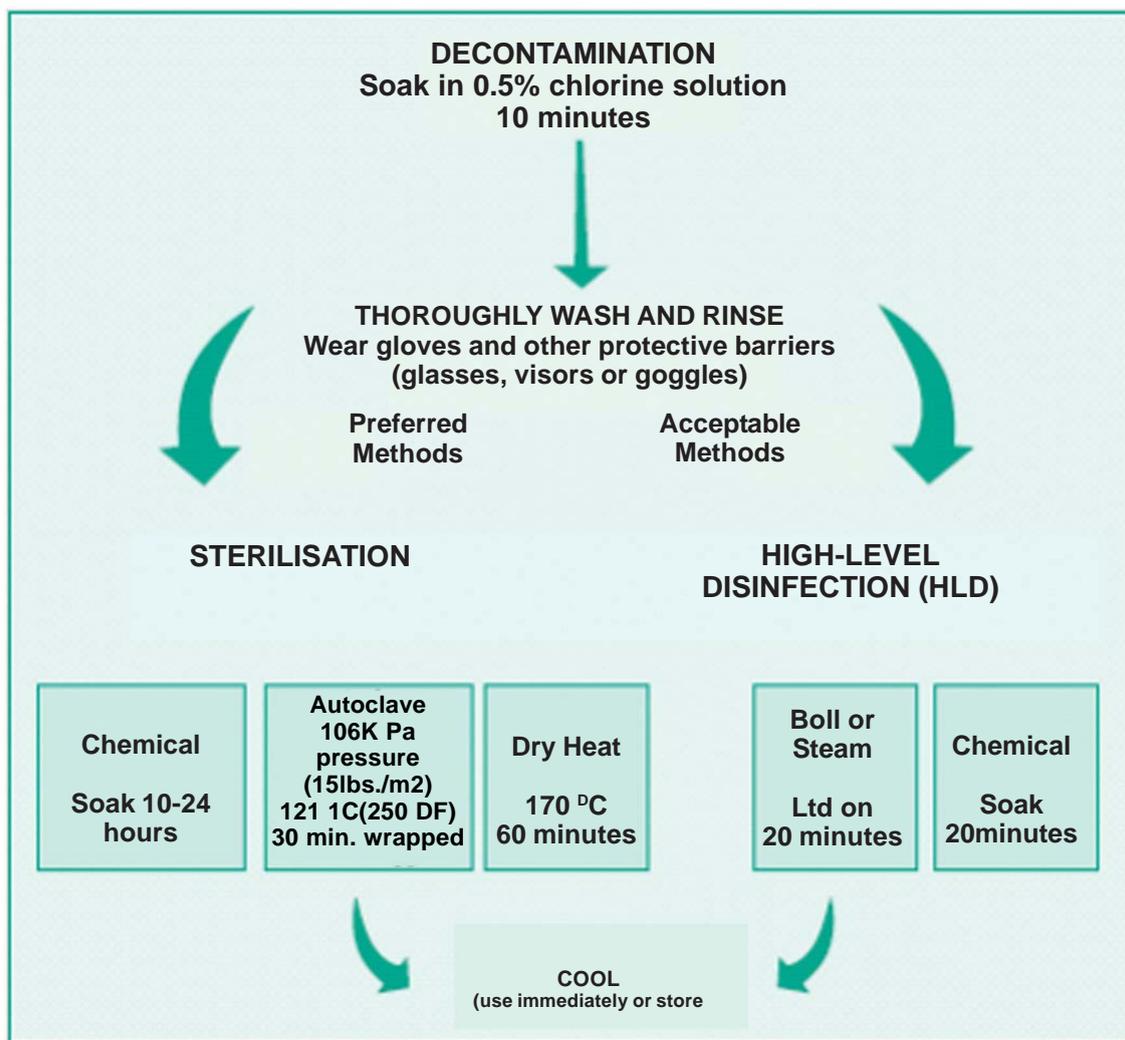
### Footwear

- Footwear that is clean and sturdy helps minimize the number of microorganisms brought into the surgical/procedure area and protects the service provider's feet from injury or splashes of blood and other fluids.

## PROCESSING OF ITEMS TO BE USED

Processing instruments and other items used during clinical and surgical procedures consists of four steps (as in the figure below)

- A) Decontamination
- B) Cleaning
- C) Sterilization and HLD
- D) Storage



**A) Decontamination:** This kills viruses such as Hepatitis B, other Hepatitis viruses and HIV and many other microorganisms making items safer for handling by staff that performs cleaning and further processing. To decontaminate items use 0.5% bleach solution.

**B) Cleaning:** Cleaning refers to scrubbing with a brush, detergent and water and is a crucial step in processing. Detergent is important for effective cleaning because water alone will not remove protein, oils and grease. Do not use hand soap for cleaning instruments and other items as fatty acids in soap will react with the minerals of hard water, leaving behind a residue that is difficult to remove.

**C) Sterilization and HLD:** Sterilization ensures that items are free of all microorganisms (bacteria, viruses, fungi and parasites) including endospores. Sterilization kills all microorganisms and is therefore recommended for items such as needles and surgical instruments that come in contact with the bloodstream or tissues under the skin. When sterilization is not available HLD is the only acceptable alternative. **There are three methods of sterilization:**

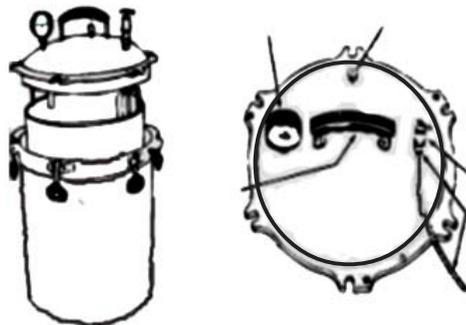
- Steam sterilization/autoclaving/pressure cooker autoclave
- Dry heat sterilization (electric oven)
- Chemical (cold) sterilization

### C.1 Steam sterilization/autoclaving/pressure cooker autoclave

A pressure cooker type autoclave is commonly used in rural areas. To use it properly fill water in the autoclave (up to the ridge on the inner wall). Place the items loosely in it, place the autoclave over the heat source (stove) and turn to high heat. Once steam starts coming out of the pressure valve begin timing the sterilization cycle. For this type of autoclave a cycle of 20 minutes is suggested regardless of whether the items are wrapped or unwrapped. After 20 minutes remove the autoclave from the heat source, open the pressure valve to release the steam and allow it to cool for 15–30 minutes before opening it.

### C.2 Dry heat sterilization (electric oven)

When available, dry heat is a practical way to sterilize needles and other instruments. A convection oven with an insulated stainless steel chamber and perforated shelving to allow the circulation of hot air is recommended, but dry heat (170° C for 60 minutes) sterilization can be achieved with a simple oven as long as a thermometer is used to verify the temperature inside the oven.



### C.3 Chemical (cold) sterilization

An alternative to high-pressure steam or dry-heat sterilization is chemical sterilization often called cold sterilization. If objects need to be sterilized but high-pressure steam or dry heat sterilization would damage them then they can be chemically sterilized. Some high level disinfectants kill endospores after prolonged exposure (10–24 hours). A commonly used chemical disinfectant is 2%–4% glutaraldehyde (the items must be soaked for at least 10 hours).

### C.4 High-level disinfection (HLD)

HLD eliminates bacteria, viruses, fungi and parasites but does not kill all endospores which cause diseases for example those causing tetanus and gas gangrene.

### There are three methods of HLD.

- Boiling: Boiling in water is an effective, practical way of HLD of instruments and other items. Although boiling instruments in water for 20 minutes will kill all vegetative forms of bacteria, viruses, yeast and fungi, it will not kill all endospores. Boiling is not sterilization.
- Chemical HLD: Although a number of disinfectants are commercially available four routinely used disinfectants are chlorine, glutaraldehyde, formaldehyde and hydrogen peroxide.
- Steaming: A steamer pan with holes in its bottom is used for steaming gloves, cannulae, etc. for a duration of 20 minutes.

**D) Storage:** Sterilized items should be used or properly stored immediately after processing so that they do not become contaminated. If they are not stored properly all the effort and supplies used to properly process them will be wasted and the items may get contaminated.

**Note:** *No matter what method is used do not store instruments or other items such as scalpel blades and suture needles in solution; **always store them dry.** Microorganisms can live and multiply in both antiseptic and disinfectant solutions and items left soaking in contaminated solutions can lead to infections in clients.*

### PROPER HANDLING AND DISPOSAL OF SHARPS

The following measures should be strictly followed while handling needles and syringes.

- Use each disposable needle and syringe only once.
- Always wear utility gloves while handling sharps.
- Dispose of the needle with a hub cutter which cuts the plastic hub of the syringe and not the metal part of the needle.
- Dispose of needles and syringes in a puncture-proof container.
- Do not disassemble the needle and syringe after use. Make needles unusable after single use by burning them in a needle destroyer.
- Do not recap, bend or break needles before disposal.
- Never burn syringes.
- Dispose of the waste as follows: (i) dispose of needles and broken vials in a pit/tank, and (ii) send the syringes and unbroken vials for recycling or to a landfill.

### Maintaining a clean environment

- The general cleanliness and hygiene of a facility are vital for the health and safety of the staff, clients, visitors and the community at large. Maintaining a clean environment with the help of good housekeeping and waste disposal practices is the foundation of infection prevention.
- The three following types of cleaning solutions are used during housekeeping at a health facility.

\_ Plain detergent and water: scrubbing with plain detergent and water easily removes dirt and organic material such as grease, oil and other matter.

\_ Disinfectant (0.5% chlorine solution): this is used to clean up spills of blood or other body fluids.

\_ Disinfectant cleaning solution (containing a disinfectant, detergent and water): such solutions e.g. phenol and lysol, are used for cleaning areas such as operating theatres, procedure rooms and latrines.

***Refer to Checklist 12- Must Know Procedures in antenatal and post natal period for health workers***

## BIOMEDICAL WASTE DISPOSAL

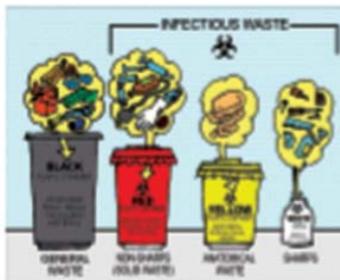
Biomedical waste is waste that is generated during the diagnosis, treatment or immunization of human beings. There is evidence that viruses causing infections such as Hepatitis B and HIV are transmitted via health care waste. These viruses can be transmitted through injuries from needles that are contaminated with human blood.

The purpose of waste disposal is to:

- Minimize/prevent the spread of infection to hospital personnel who handle waste
- Prevent the spread of infection to the local community
- Protect those who handle waste from accidental injury

The four steps of waste disposal are as shown below:

### 1. Segregation



### 2. Collection and storage



INCORRECT

CORRECT

### 3. Transportation

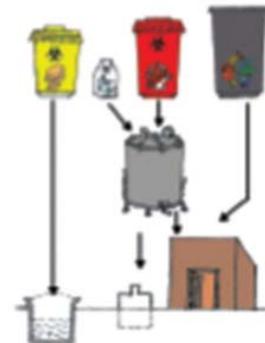


INCORRECT



CORRECT

### 4. Treatment and disposal



- ANMs who conduct deliveries at home or at the SC should collect all waste material such as needles, syringes, gloves, placenta and cotton/gauze, in a leak-proof container/ puncture-proof cardboard box.

- All the waste should then be disposed of in a pit that is two meters' deep and situated at a distance of 10 meters away from the water source. Ensure that all the waste is sprinkled with bleach powder and covered with soil.

## **Dos and Don'ts of waste management**

### **I. Segregation**

#### **Dos**

1. Always segregate waste into infectious and non-infectious waste at the source of generation.
2. Segregate infectious waste into:
  - \_ Sharps: needles, blades, broken ampoules, vials and slides. These should be disposed of in a puncture-proof container.
  - \_ Non-sharps: soiled waste, such as syringes, dressings, gloves and masks. These are to be disposed of in the red plastic bin/bag.
  - \_ Anatomical waste, such as placenta. This is to be disposed of in the yellow plastic bin/bag.
3. Non-infectious (general) waste such as waste similar to household waste including packaging material, cartons, fruit and vegetable peels, syringe and needle wrappers and medicine covers, should be disposed of in the black plastic bin/bag

#### **Don'ts**

Never mix infectious and non-infectious waste at the source of generation or during the collection, storage, transportation or final disposal of waste.

### **II. Collection and storage**

#### **Dos**

1. Always collect the waste in covered bins.
2. Fill the bin up to the three-quarter level.
3. Clean the bin regularly with soap and water.

#### **Don'ts**

1. Never overfill bins.
2. Never mix infectious and non-infectious waste in the same bin.
3. Never store waste beyond 48 hours.

### **III. Transportation**

#### **Dos**

1. When carrying/transporting waste from the source of generation to the site of final disposal, always carry it in closed containers.

2. Use dedicated waste collection bins for transporting waste.

**Don'ts**

1. Never transport waste in open containers or bags. It may spill and cause spread of infections.
2. Never transport waste with sterile equipment.

**IV. Treatment and disposal****Dos**

1. Always remember to disinfect and shred the waste before its final disposal.
2. Remember the following while treating waste
  - \_ Anatomical waste is to be buried deep at the SC.
  - \_ Syringes are to be cut (with hub cutters) and chemically disinfected at the source of generation before they are finally disposed of in the sharps pit located at the PHC.

**Don'ts**

1. Never throw infectious waste into general waste without any pre-treatment and shredding

***Practice using checklist 13 enumerating Infection Prevention Practices***

# COMMUNITY INVOLVEMENT

## KEY MESSAGES

- Raise awareness among the community regarding danger signs during pregnancy, labour and delivery, and the postpartum period.
- Seek the cooperation of other partners in the community, such as SHGs, Community-Based Organizations (CBOs), Non-Governmental Organizations (NGOs) and other community-level health functionaries.

Informing and involving the community in the process of improving the health of women will go a long way in bringing down maternal mortality. The community should be empowered to tackle the health problems affecting the women. The VHNDs should be utilized to generate awareness among communities and educate them on maternal health issues.

The following is a list of things that you can do as a part of your responsibility to empower the community to improve the health status of mothers and infants and share critical information regarding maternal and child health issues with them.

- Find out what the people know about maternal morbidity and mortality in their area. Ask them to share this information with you and discuss how deaths and morbidity can be prevented.
- Discuss the role of families and communities in preventing these illnesses and deaths.
- Share key messages on maternal and child health with community members and dispel their misconceptions.
- Discuss practical ways in which families and others in the community can support the woman during pregnancy, delivery, after abortion and in the postpartum period.

### Mention the need for the following:

- Recognizing and rapidly responding to emergency/danger signs during pregnancy, delivery and the postpartum period

- o \_ Accompanying the woman when she goes for delivery
  - o \_ Providing financial support for payment of medical fees and supplies
  - o \_ Providing care for children and other family members when the woman needs to be away from home during delivery or when she needs rest
  - o \_ Motivating partners to help with the workload, accompany the woman to the hospital, allow her to rest and ensure that she eats properly
  - o \_ Communication between husband and wife, including discussion regarding postpartum family planning needs.
- Discuss the following issues to support the community in preparing an action plan to respond to emergencies. Engage other groups, such as SHGs, CBOs, NGOs and various community-level functionaries (ASHAs, AWWs, etc.) in these discussions.

#### **How to identify emergency/danger signs: when to seek care:**

- The importance of a rapid response to emergencies in reducing maternal death, disability and illness
- The transport options available, giving examples of how transport can be organized
- Reasons for delay in seeking care and possible difficulties
- What services (emergency obstetric care) are available and where
- Costs and options for payment
- A response plan during emergencies, including roles and responsibilities
- The importance of blood transfusion for the mother in an emergency, and the need for blood donation
- Violence against women during pregnancy and its adverse effect on maternal and newborn health outcomes.
- It is important to establish links with ASHAs, AWWs, SHGs and other community health workers who provide health care to the community. People have faith in them and are likely to seek their help. Give them the correct information on safe motherhood and seek their cooperation in reducing maternal mortality.

- Discuss how you can support each other.
- Respect their knowledge, experience and influence in the community.
- Share with them the information you have on maternal morbidity and mortality, and listen to their opinions on these issues. Provide them with copies of the health education material that you distribute to community members and discuss the content with them. Have them explain to you the knowledge that they share with the community. Together, you can create information that is more locally appropriate.
- Review together with families and groups how you can provide support for maternal health to women
- Involve them in counselling sessions for families and other community members.
- Discuss the recommendation that all deliveries should be conducted by an SBA. Also discuss the requirements for a safe delivery at home (when it is not possible to follow this recommendation), postpartum care and when to seek emergency care.

### **Review of maternal deaths**

Maternal deaths are rare events at the village or SC level and therefore the community may not register their importance. You, as the ANM and the health worker visiting the area should build a rapport with SHGs and Panchayati Raj Institution (PRI) members to undertake a social review of the maternal deaths reported from the villages under your care. This 'review' focuses on finding the social factors responsible for maternal deaths.

Thus you should find out about the utilization of ANC services, the place of delivery, who attended the birth, and so on. Find out who made the decision to seek care in the event of the obstetric complication and how soon this was done after the complication arose. Find out about the availability of transport, the attitude of the health provider, access to money, whether blood and donors were available when required, and soon.

A member of the bereaved family should also be included in this exercise. The findings of the social review should be shared in PRI/SHG meetings with a view to prevent the recurrence of such an event in the future. All maternal deaths in your area must be reported to M.O. at block PHC for further review by him.

# ESSENTIAL NEW BORN & CHILDHOOD CARE

## Key messages:

State the importance of counselling care-givers of children on key practices for improved child health, growth and development.

Provide necessary hints to the mothers on B =Exclusive breastfeeding; I = Immunization; N = Nutrition; D = Common childhood diseases.

Given the high infant and child mortality rates in the country and the state the mothers should be convinced to seek an appropriate health care provider's help for care of their child

## Subcontents:

- Key steps for essential new born at birth
- Kangaroo Mother Care
- Adequate and age appropriate feeding practice for child
- Early identification and care of common childhood illnesses

## Key steps for essential new born care at birth

In eye of advocacy and actual increase in institutional deliveries in the country, the load on the ground level health workers in management of delivery and newborn has ceased considerably but given the diversity in our country with regards to socio-economic conditions of the mothers we need to train these workers in immediate care of new born in case of home delivery. This care includes very simple yet essential tips, which in a community setting emerge as keys to decrease neonatal mortality.

These steps are listed in a simple format for the benefit of the target audience of this training.

### Key Steps for Immediate Care of the Newborn

(the order may be changed according to the local needs except for steps 1-3)

<b>Steps 1</b>	Dry the baby and keep him / her warm by placing the baby on the mother's abdomen.
<b>Steps 2</b>	Assess breathing. Make sure the baby is breathing well.
<b>Steps 3</b>	If the <b>baby does not breathe</b> , clamp/tie and cut the cord immediately and start resuscitation. If the <b>baby does cry/breathe well</b> , clamp/tie and cut the cord after pulsations stop or after 1-3 minutes.
<b>Step 4</b>	Place the infant in skin-to-skin contact on the mother's chest and cover them with clean linen and blanket as required. Carry out all the steps noted below up to # 9 with the baby on the mother's chest.
<b>Steps 5</b>	Eye drops / eye ointment may given as per the MOs advice.
<b>Step 6</b>	Administer vitamin K1.
<b>Step 7</b>	Place the baby identification bands on the wrist and ankle.
<b>Step 8</b>	Assist the mother to initiate breastfeeding within the first hour. Select the appropriate method of feeding for the HIV-infected mother, based on informed choice.
<b>Step 9</b>	Weigh the infant when he/she is stable.
<b>Step 10</b>	Record observations and treatment provided in the registers / appropriate chart/cards.
<b>Note</b>	Defer bath for normal baby for 24 hours. Give the new born Nevirapine syrup for babies born from a HIV infected mother.

The first essential step is to **keep the baby warm** which can be done as follows:

- If the babies crying dry the baby immediately after birth with a clean, dry cloth (preferably sterile and pre-warmed).
- Discard the wet cloth and cover the bay with a fresh, dry cloth.
- Place the baby in skin-in-skin contact after cutting the cord on the mother's chest and cover the body and head of the baby.
- Have a source of warmth and a table for special procedures, such as resuscitation.
- Check the temperature either by thermometer or by touching abdomen and feet and ensure that they are warm.

**Counsel the mother before she leaves the delivery room. However, if she is very tired after delivery, only talk to her about the key points noted below.**

- **Keep the baby warm.**
- **Continue breastfeeding frequently on demand day and night.**
- **Do not give any other fluids/food to the baby.**
- **Do not apply any thing on cord.**

More detailed counseling can be done in the postnatal period in the facility before the mother is discharged and at subsequent postnatal visits as detailed in the previous chapters.

The health care provider at the community level should insist on the “**BIND**”:

- **B = Breastfeeding.** Breastfeeding will protect infants from malnutrition and infections
- **I=Immunization.** Immunization will protect infants from most common life – threatening diseases
- **N=Nutrition.** Adequate and age appropriate nutrition is key to optimal physical growth and overall development of the child
- **D=Diseases.** Early identification and care for most common childhood diseases will prevent morbidity and mortality among children

In the Indian context special importance should be stressed on **Low Birth Weight Baby who is one that weighs less than 2500 grams at birth.**

Ideally, all low birth weight babies should be evaluated and cared for by a competent health care provider. It may, however, not be practical to refer all low birth weight babies to a higher center. Thus, those babies who can be looked after at the place of birth are those who:

- Maintain body temperature with minimal help, such as additional clothing or skin -to- skin contact.
- Are able to breast feed or to drink expressed breast milk with a cup or a spoon.
- Have no problem or danger sign.

In this context, the KMC became an extremely popular and cost effective method to ensure survival of such babies in difficult conditions.

**The main advantages for the baby are:**

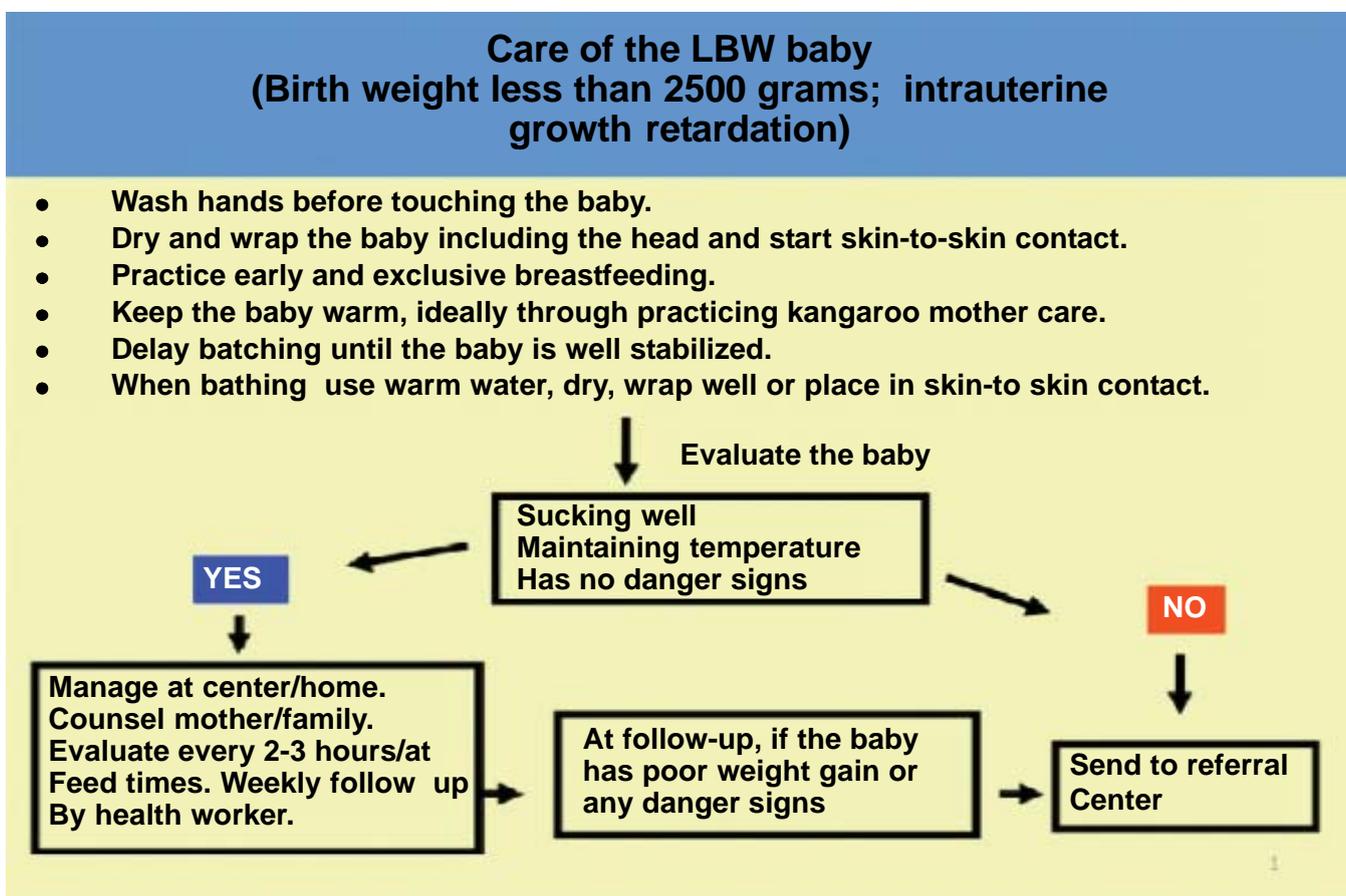
- It is a low cost method that is a good alternative to conventional care of preterm/LBW babies in low-resource countries.
- The outcome has been found to be better to the use of the incubator, for stable LBW babies which is expensive and more difficult to maintain.
- The baby is comfortable in this position and is quieter, crying less frequently than in incubators.

- The vertical position decreases the risk of aspiration, improves cardio-respiratory functions, and decreases apnea.
- Closeness to the breast favors frequent sucking that prolongs the duration of breastfeeding.
- The length of the hospital stay is reduced, thus decreasing the occurrence of nosocomial infections.
- The baby gains weight faster.

**The main *advantages for the mother* are:**

- KMC helps to empower the mother as she plays the main role by providing warmth to her baby, protection against infections, and nutrition via breastfeeding.
- An additional benefit is the promotion of mother-infant bonding and decreased rejection of preterm babies.
- The method involves other family members, reinforcing family interaction.

The Figure below summarizes the approach to care of LBW infants in the form of an algorithm:



**Components of Kangaroo Mother Care (KMC)**

- Skin-to-skin contact
- Exclusive breastfeeding

**Pre-requisites of Kangaroo Mother Care (KMC)**

- Support to the mother in hospital and at home
- Post-discharge follow up

***Kangaroo positioning***

- Baby should be placed between the mother's breasts in an upright position.
- Head should be turned to one side and in a slightly extended position. This slightly extended head position keeps the airway open and allows eye to eye contact between the mother and her baby.
- Hips should be flexed and abducted in a "frog" position; the arms should also be flexed.
- Baby's abdomen should be at the level of the mother's epigastrium. Mother's breathing stimulates the baby thus reducing the occurrence of apnea.
- Support the baby's bottom with a sling/binder.



## Adequate and Age appropriate Nutrition of the Child

### Adequate Nutrition of Infant and Young Child: Four Best Practices

- 1 **Initiation of breast feeding within 1 hour of birth**
- 2 **Exclusive breastfeeding for the first 6 months**
- 3 **Appropriate complementary feeding starting on completion of 6 months of age**
- 4 **Continued breastfeeding for 2 years or beyond**



#### Advantages of Breast Feeding:

##### Baby-

- Early skin to skin contact keeps the baby warm
- Colostrum (first milk) protects baby from infections
- Develops close loving relationship between baby and mother

##### Mother-

- Helps uterus to contract and placenta is expelled easily and completely
- Reduces risk of excessive bleeding post-delivery
- Helps early secretion of breast milk
- Lowers risk of pregnancy in first 6 months post-partum

#### Complimentary feeding:

Complimentary feeding is complimenting solid/semi-solid food with breast milk, when breast milk is no longer sufficient to meet nutritional requirements of infants. It should be initiated only after six months of age. Delayed and inadequate complimentary feeding is the most common reason for growth faltering in children. The table below outlines the proposed complimentary feeding in Indian children:

Complimentary Feeding			
Type of Food	Age	Frequency Amount/meal	Average
● Mashed roti/rice/bread/biscuit in milk and sugar	6-9 months	2-3 meals/day+ frequent breastfeeding	Start with 2-3 table-spoonfulls
● Mashed rati/rice/bread in Dal with ghee or Khichri with ghee and vegetables (cooked in khichri)	9-12 months	3-4 meals + breastfeed+ 1-2 snacks	½ of a 250ml cup/bowl
● Swai/Dalia/Halwa/Kheer cooked in milk	12-24 months	3-4 meals+breastfeed+ 1-2 snacks	¾ to a 250 ml cup/bowl
● Mashed potato/fried potato or one seasonal fruit (banana, cheeku, mango) or meat, fish and egg			

### **Feeding during illness:**

Food intake decreases during illness in child but paradoxically energy requirement increases. Breast feeding should be continued. Children should be encouraged to eat small frequent energy rich food. Immediately after the illness the mother should be advised-

- To increase one or two meals in daily diet for a period of a month
- Nutritious snacks between meals
- Give extra amount at the time of meals
- Continue breast feeding
- If illness is due to diarrhea zinc supplementation for 14 days is to be ensured.
- Growth monitoring should be done

### **Growth Monitoring:**

This tool is very important to assess child's growth. It is done with the growth chart available at the SC/AWW. Assessment should be done monthly during first year of age, then every two months in second year and thereafter every three months till the age of six. Any deviation from the normal growth as indicated in the growth chart points towards malnutrition which needs to be corrected. Growth monitoring should be done every week during neonatal period. Refer to growth chart in Annexure 2.

### **Screening for SAM in the community**

Active and early case finding is an important determinant of case fatality rate, program coverage and the programme impact . Community mobilization is crucial for active and early case-finding. To reduce the barriers to access, reduce case fatality and improve programme impact, screening must take place in the community and before the onset of medical complications. Active case finding should be done in the community by the ANM and AWW and aided by the ASHA of the village. It is important to supplement active case-finding with community sensitization which would lead to self-referral.

Frontline community workers (AWW, ASHA, ANM) can identify children with SAM by using simple coloured plastic strips that are designed to measure mid upper arm circumference (MUAC). They should also be able to recognise nutritional oedema of the feet, which is another sign of this condition. Regular growth monitoring at the Anganwadi centre or during Village Health and Nutrition Day is an opportunity for active case finding.

Once identified, these children with SAM need further assessment to determine if they require referral to health facility and facility based care or whether they can be managed at community level with visits as outpatients to a health centre or facility.

Besides active case finding in the community (through regular growth monitoring at AWC or during VHND) all possible contact opportunities with children should be exploited including home visits, immunisation outreach sessions, visit to sub centres and all levels of health facilities. Assessing the

nutrition status of all sick children presenting to health facility should be emphasized and wherever possible, included in physical examination guidelines/formats.

### **Recognize signs of severe malnutrition**

You may be familiar with the following conditions that are related to severe acute malnutrition.

#### **1. Severe wasting**

If the diet is deficient for a short duration, the body adapts its metabolism to compensate for the deficit to some extent. If the food deficit persists for a longer duration then the fat is utilized for energy & body metabolism and then muscle is depleted. A child with severe wasting has lost fat and muscle and appears like “skin and bones”. Another term used for this condition is marasmus. To look for severe wasting, remove the child’s clothes.

##### ***Look at the front view of the child:***

Is the outline of the child’s ribs easily seen?

Does the skin of the upper arms look loose?

Does the skin of the thighs look loose?

##### ***Look at the posterior view of the child:***

Are the ribs and shoulder bones easily seen?

Is there any wasting seen on buttock?

When wasting is extreme, there are folds of skin on the buttocks and thighs. It looks as if the child is wearing “baggy pants” . Because a wasted child has lost fat and muscle, this child will weigh less than other children of the same height and will have a low weight for height.

#### **2.Oedema**

Oedema is swelling from excess fluid in the tissues. Oedema is usually seen in the feet and lower legs. In severe cases it may also be seen in the upper limbs and face. To check for oedema, grasp the foot so that it rests in your hand with your thumb on top of the foot. Press your thumb gently for a few seconds (approx 10 seconds). The child has oedema if a pit (dent) remains in the foot when you lift your thumb .To be considered a sign of severe acute malnutrition, oedema must appear in both feet. If the swelling is only in one foot, it may just be a sore or infected foot.

The extent of oedema is commonly rated in the following way:

+ mild: both feet

+ + moderate: both feet, plus lower legs, hands, or lower arms

+ + + severe: generalized oedema including feet, legs, hands, arms and face

### **Identification of Children with Severe Acute Malnutrition**

Health professionals and healthcare providers should assess nutrition status of all children and detect children with SAM at every opportunity provided by health contacts, be it for a medical complaint or for health promotional measures (e.g. growth monitoring or immunization). This can be undertaken at every health facility (Primary Health Center and Sub-center, health posts, hospitals, day-care centers, etc.) and even in the community at anganwadis by anganwadi workers of ICDS scheme.

MUAC is a simple measure for the detection of SAM. Screening of children with SAM in the community can be done by using MUAC tape.

#### **Recommended criteria for identifying SAM in infants > 6 months of age**

Any child who has following features are treated as severe acute malnutrition:

Weight-for-height less than -3 SD and/or

Visible severe wasting and/or

Mid arm circumference (MUAC) < 11.5 cm and/or

Oedema of both feet

#### **Recommended criteria for identifying SAM in infants <6 months of age**

Any infant more than 49 cm\*\* in length who has following features are treated as severe acute malnutrition:

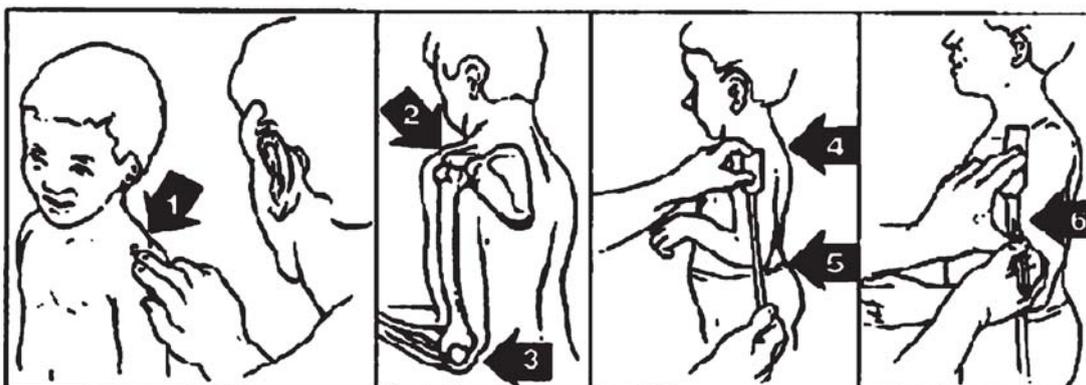
Weight-for-height less than -3 SD and/or

Visible severe wasting and/or

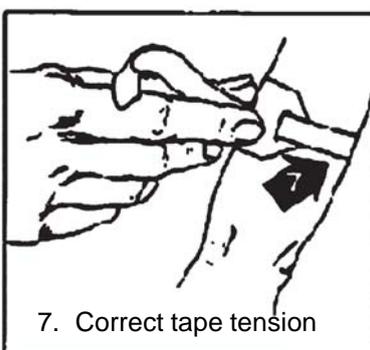
„Oedema of both feet

### **2. Mid-upper arm circumference (MUAC)**

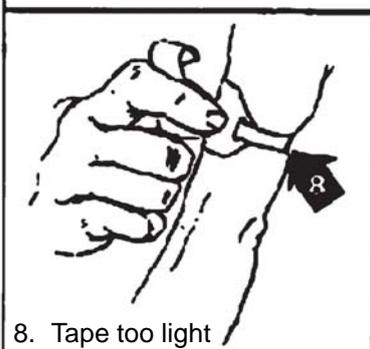
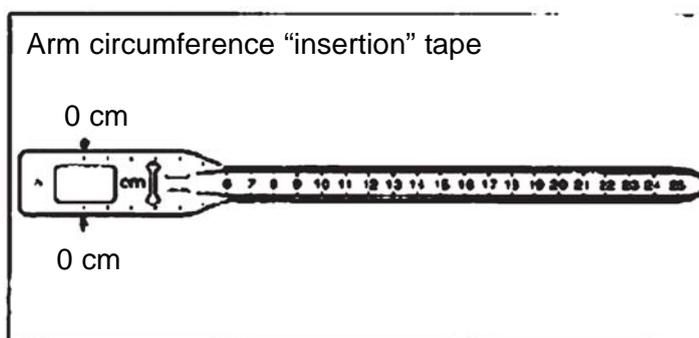
Community based screening programmes for severe malnutrition usually uses MUAC less than 11.5 cm to identify severe wasting. MUAC is a quick and simple way to determine whether or not a child is malnourished using a simple colored plastic strip. MUAC is suitable to use on children from the age of 6 months up to the age of 59 months. Arm circumference is measured on the upper left arm. To locate the correct point for measurement, the child's elbow is flexed to 90°. A measuring tape is used to find the midpoint between the end of the shoulder (acromion) and the tip of the elbow (olecranon); this midpoint should be marked . The arm is then allowed to hang freely, palm towards the thigh, and the measuring tape is placed snugly around the arm at the midpoint mark. The tape should not be pulled too tight.



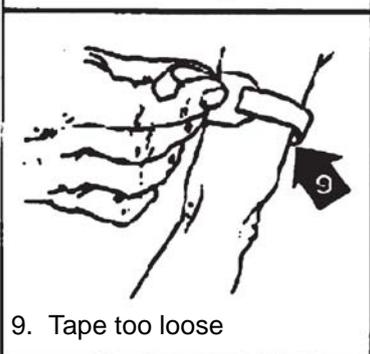
1. Locate tip of shoulder
2. Tip of shoulder
3. Tip of elbow
4. Place tape at tip of shoulder
5. Pull tape past tip of bent elbow
6. Mark midpoint



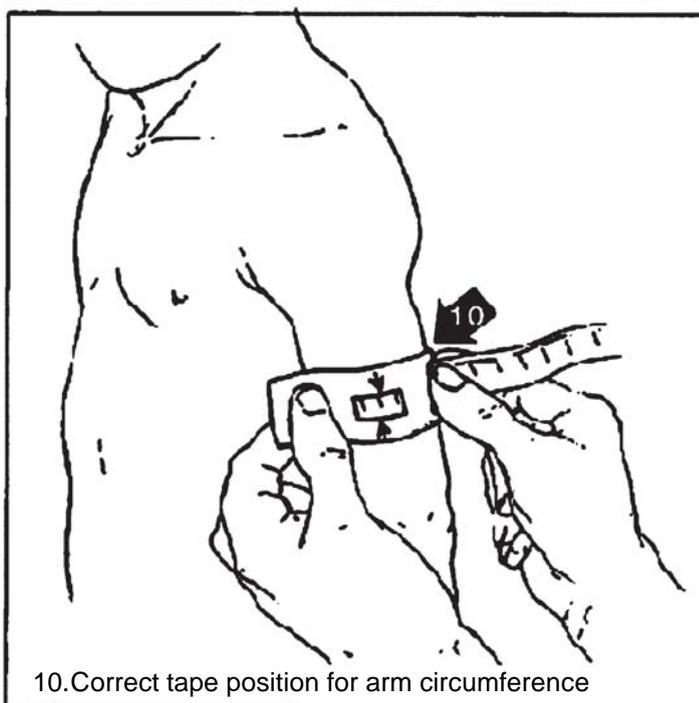
7. Correct tape tension



8. Tape too light



9. Tape too loose



10. Correct tape position for arm circumference

**If using a 3-colour tape:**

<sup>TM</sup>. A measurement in the green zone means the child is properly nourished;

<sup>TM</sup>. A measurement in the yellow zone means that the child is at risk of malnutrition;

<sup>TM</sup>. A measurement in the red zone means that the child is acutely malnourished.

**Repeat the measurement two times to ensure an accurate interpretation.**

## Early Identification and Care for major Childhood Diseases

### Two most common causes of illness and deaths in children

- **Diarrhea**
- **Acute Respiratory Infections (ARI)**



Deaths and severe illness from these causes can be prevented by:

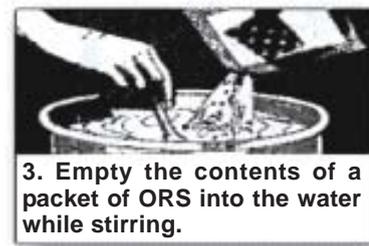
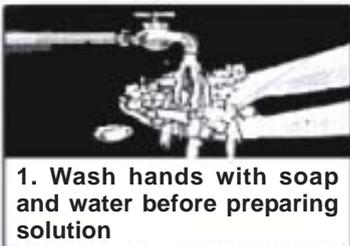
- **Simple recommended care**
- **Seeking medical care as soon as danger signs appear**

### Diarrhea

Diarrhea is the passage of liquid or watery stools more than three times a day with definite change in consistency (history elicited from the mother). Severe diarrhea causes loss of water and minerals from the body which is dangerous incase the child is unable to replenish the loss. Child with diarrhea should be given more fluids and breast feeding should be continued. Fluids can be ORS (Oral Rehydration Solution) or ORT (Oral Rehydration Therapy).

ORS is readily available mixture in packets available in all health facilities and with ANMs and ASHA. ORT is home available or home prepared fluids such as rice water, dal water with salt, dal, butter milk(lassi) with salt, soup with salt, lemon water with salt, coconut water or just plain water. Every health center should have the following chart on how to prepare ORS and key messages during diarrhea.

### How to Prepare ORS Solution



5. Use the solution within 24 hours and then prepare fresh solution

## How to Prepare ORS Solution

1. Wash hands with soap and water before preparing solution
2. Put 1 liter of clean water in a clean pot.
3. Empty the contents of a packet of ORS into the water while stirring.
4. Give the sick child as much of the solution it needs in small amounts frequently
5. Use the solution within 24 hours and then prepare fresh solution

## Counsel about care for children with diarrhea

1. **Breastfeed more often** 
2. **Give extra fluids** 
3. **Give ORS and dispersible Zinc tablets as prescribed** 
4. **Continue feeding** 
5. **Take the child to hospital if loose motion do not stop or danger signs appear as per IMNCI** 

Danger signs that would immediate referral are as follows:

- Child becomes lethargic or sicker
- Not able to drink or suck milk
- Develops blood in stool
- Does not pass urine for more than eight hours.

### GIVE ORAL ZINC SUPPLEMENTS IN CHILD DIARRHEA

Zinc is an important micronutrient for a child's overall health and development. Zinc is lost in greater quantities during diarrhoea. Replacing the lost zinc is important to help the child recover and to keep the child healthy in the coming months.

Zinc supplement is a part of treatment of a child with diarrhoea. Give zinc supplements to the child with diarrhoea for 14 days.

A child upto 6 months of age needs half tablet (20 mg tablet) per day for 14 days while children 6 months or more need 1 tablet per day for 14 days.

Explain and teach the mother how to give the zinc supplements to the child.

### PREPARATION OF ZINC

- ✿ Take a clean spoon, place 1 tablet (child > 6 months) on the spoon.
- ✿ Pour water carefully on the tablet taking care that the water does not reach the brim. Never dip the spoon with tablet into the water container.
- ✿ If the child is  $\leq$  6 months and breastfed, tell mother to express milk first in the spoon and then add half tablet, discard the other half. Be careful, while breaking the tablet into half, put pressure with your thumb on the groove in the tablet. If two halves are not equal, break off the extra bit from the larger half. Discard the remaining half.
- ✿ Shake the spoon slowly till the tablet dissolves completely. Take care that the solution does not overflow. Do not use fingertip or any other material to dissolve the tablet. Tell the mother to hold the child comfortably and ask her to feed the solution to the child.
- ✿ If there is any powder remaining in the spoon, let the child lick it or add little more water or breast milk to dissolve it and then ask the mother to give it again.

### A. Diarrhea : First we have to ascertain if the child has diarrhea

Does the young Infant have diarrhoea	
<b>If Yes, Asks</b> <ul style="list-style-type: none"> <li>• For how long?</li> <li>• Is there any blood in the stool?</li> </ul>	<b>Look, Listen, Feels</b> <ul style="list-style-type: none"> <li>• Look at the young infant's general condition. Is the infant: Lethargic or unconscious? Restless and irritable?</li> <li>• Look for sunken eyes.</li> <li>• Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?</li> </ul>

Then we have to see the level of dehydration and offer treatment as per findings as shown below:

<b>Two of the following signs:</b> <ul style="list-style-type: none"> <li>• Lethargic or unconscious</li> <li>• Sunken eyes</li> <li>• Skin pinch goes back very slowly</li> </ul>	<b>SEVERE DEHYDRATION</b>	<ul style="list-style-type: none"> <li>➤ If infant has low weight or another severe classification: Give first dose of intramuscular ampicillin and gentamicin - Refer Urgently to hospital with mother giving frequent sips of ORS on the way - Advise mother to continue breast feeding - Advise mother to keep the young infant warm on the way to the hospital</li> <li style="text-align: center;">OR</li> <li>➤ If infant does not have low weight or any other severe classification: - Give fluid for severe dehydration (Plan C) and then refer to hospital after rehydration</li> </ul>
<b>Two of the following signs:</b> <ul style="list-style-type: none"> <li>• Restless, irritable</li> <li>• Sunken eyes</li> <li>• Skin pinch goes back slowly.</li> </ul>	<b>SOME DEHYDRATION</b>	<ul style="list-style-type: none"> <li>➤ If infant has low weight or another severe classification: - Give first dose of intramuscular ampicillin and gentamicin - Refer Urgently to hospital with mother giving frequent sips of ORS on the way - Advise mother to continue breast feeding - Advise mother to keep the young infant warm on the way to the hospital</li> <li>➤ If infant does not have low weight or another severe classification: - Give fluids for some dehydration (Plan B) - Advise mother when to return immediately - Follow up in 2 days</li> </ul>
<ul style="list-style-type: none"> <li>• Not enough signs to classify as some or severe dehydration.</li> </ul>	<b>NO DEHYDRATION</b>	<ul style="list-style-type: none"> <li>➤ Give fluids to treat diarrhea at home (Plan A)</li> <li>➤ Advise mother when to return immediately</li> <li>➤ Follow up in 5 days if not improving</li> </ul>
<ul style="list-style-type: none"> <li>• Diarrhea lasting 14 days or more</li> </ul>	<b>SEVERE PERSISTENT DIARRHEA</b>	<ul style="list-style-type: none"> <li>➤ Give first dose of Intramuscular ampicillin and gentamicin if the young Infant has low weight, dehydration or another severe classification.</li> <li>➤ Treat to prevent low blood sugar,</li> <li>➤ Advise how to keep Infant warm on the way to the hospital.</li> <li>➤ Refer to hospital</li> </ul>
<ul style="list-style-type: none"> <li>• Blood in the stools</li> </ul>	<b>SEVERE DYSENTERY</b>	<ul style="list-style-type: none"> <li>➤ Give first dose of Intramuscular ampicillin and gentamicin if the young infant has low weight, dehydration or another severe classification,</li> <li>➤ Treat to prevent low blood sugar</li> <li>➤ Advise how to keep Infant warm on the way to the hospital</li> <li>➤ Refer to hospital</li> </ul>

## Acute Respiratory Infections (ARI)

ARI is characterized by cough, running nose, fever and difficulty breathing. It can be prevented by timely immunization of the child against Vaccine Preventable diseases and timely administration of Vitamin A. General principal for care of the child and danger signs is outlined below:

- Keep the child warm 
- Give plenty of fluids and continue age-appropriate feeding 
- Increase feeds after the child recovers
- Ensure that the child takes enough rest



**Danger Signs: Take the child to a doctor immediately**

- Breathing fast
- Breathing with difficulty
- Not able to drink or breast feed
- Becomes sicker
- Develops fever

The health workers are advised to manage no ARI or mild ARI and else refer the child for doctor care in case of danger signs. A lot of infants can be saved by curing mild ARI thus preventing it from complicating and timely referral of the moderate to severe cases for appropriate management



## ASSESS AND CLASSIFY THE SICK YOUNG INFANT AGE UPTO 2 MONTHS

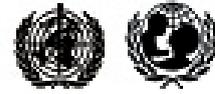


ASSESS		USE ALL BOXES THAT MATCH INFANT'S SYMPTOMS	CLASSIFY	IDENTIFY TREATMENT
<b>ASK THE MOTHER WHAT THE YOUNG INFANTS PROBLEMS ARE</b> <ul style="list-style-type: none"> <li>• Determine if this is an initial or follow-up visit for this problem</li> <li>- If follow-up visit, use the follow-up instructions on the bottom of this chart.</li> </ul>			<b>A child with a pink classification needs URGENT attention; complete the assessment and pre-referral treatment immediately so referral is not delayed</b>	
<b>CHECK FOR POSSIBLE BACTERIAL INFECTION/JAUNDICE</b>  <b>ASK:</b> <ul style="list-style-type: none"> <li>• Has the infant had convulsions?</li> </ul> <b>LOOK, LISTEN, FEEL:</b> <ul style="list-style-type: none"> <li>• Count the breaths in one minute.</li> <li>• Repeat the count if elevated.</li> <li>• Look for severe chest in drawing.</li> <li>• Look for nasal flaring.</li> <li>• Look and listen for grunting.</li> <li>• Look and feel for bulging fontanelle.</li> <li>• Look for pus draining from the ear.</li> <li>• Look at the umbilicus. Is it red or draining pus?</li> <li>• Look for skin pustules. Are there 10 or more skin pustules or a big boil?</li> <li>• Measure axillary temperature (if not possible, feel for fever or low body temperature).</li> <li>• See if the young infant is lethargic or unconscious.</li> <li>• Look at the young infant's movements. Are they less than normal?</li> <li>• Look for jaundice? Are the palms and soles yellow?</li> </ul>	<b>Classify ALL YOUNG INFANTS</b>  <b>And if the infant has jaundice</b>  <b>And if the temp. is between 35.5 – 36.4° C</b>	<b>SIGNS</b> <ul style="list-style-type: none"> <li>• Convulsions or</li> <li>• Fast breathing (60 breaths per minute or more) or</li> <li>• Severe chest in drawing or</li> <li>• Grunting or</li> <li>• Bulging fontanelle or</li> <li>• 10 or more skin pustules or a big boil or</li> <li>• If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or</li> <li>• Lethargic or unconscious or</li> <li>• Less than normal movements.</li> </ul>	<b>CLASSIFY AS</b>  <b>POSSIBLE SERIOUS BACTERIAL INFECTION</b>	<b>IDENTIFY TREATMENT</b> <i>(Urgent pre-referral treatments are in bold print)</i> <ul style="list-style-type: none"> <li>➤ Give first dose of intramuscular ampicillin and gentamicin.</li> <li>➤ Treat to prevent low blood sugar.</li> <li>➤ Warm the young infant by Skin to Skin contact if temperature less than 36.5°C (or feels cold to touch) while arranging referral.</li> <li>➤ Advise mother how to keep the young infant warm on the way to the hospital.</li> <li>➤ Refer URGENTLY to hospital.</li> </ul>
		<ul style="list-style-type: none"> <li>• Umbilicus red or draining pus or</li> <li>• Pus discharge from ear or</li> <li>• &lt;10 skin pustules.</li> </ul>	<b>LOCAL BACTERIAL INFECTION</b>	<ul style="list-style-type: none"> <li>➤ Give oral co-trimoxazole or amoxicillin for 5 days.</li> <li>➤ Teach mother to treat local infections at home</li> <li>➤ Follow up in 2 days.</li> </ul>
		<ul style="list-style-type: none"> <li>• Palms and soles yellow or</li> <li>• Age &lt; 24 hours or</li> <li>• Age 14 days or more</li> </ul>	<b>SEVERE JAUNDICE</b>	<ul style="list-style-type: none"> <li>➤ Treat to prevent low blood sugar.</li> <li>➤ Warm the young infant by Skin to Skin contact if temperature less than 36.5°C (or feels cold to touch) while arranging referral.</li> <li>➤ Advise mother how to keep the young infant warm on the way to the hospital.</li> <li>➤ Refer URGENTLY to hospital</li> </ul>
		<ul style="list-style-type: none"> <li>• Palms and soles not yellow</li> </ul>	<b>JAUNDICE</b>	<ul style="list-style-type: none"> <li>➤ Advise mother to give home care for the young infant.</li> <li>➤ Advise mother when to return immediately.</li> <li>➤ Follow up in 2 days.</li> </ul>
		<ul style="list-style-type: none"> <li>• Temperature between 35.5 – 36.4°C</li> </ul>	<b>LOW BODY TEMPERATURE</b>	<ul style="list-style-type: none"> <li>➤ Warm the young infant using Skin to Skin contact for one hour and REASSESS.</li> <li>➤ Treat to prevent low blood sugar.</li> </ul>

# If referral is not possible, see the section where referral is not Possible in the module treat the Young infant and counsel the Mother.



# ASSESS AND CLASSIFY THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS



## ASSESS

## CLASSIFY

## IDENTIFY TREATMENT

ASK THE MOTHER WHAT THE CHILD'S PROBLEMS ARE

- Determine if this is an initial or follow-up visit for the problem.
- If follow-up visit, use the follow-up institutions on TREAT THE CHILD chart.
- If initial visit, assess the child as follows:

**CHECK FOR GENERAL DANGER SIGNS**

<p><b>ASK:</b></p> <ul style="list-style-type: none"> <li>● Is the child able to drink or breastfeed?</li> <li>● Does the child vomit everything?</li> <li>● Has the child had convulsions?</li> </ul>	<p><b>LOOK:</b></p> <ul style="list-style-type: none"> <li>● See if the child is lethargic or unconscious</li> </ul>
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A child with any general danger sign needs URGENT attention; complete the assessment and any pre-referral treatment immediately so referral is not delayed.

USE ALL BOXES THAT MATCH THE CHILD'S SYMPTOMS AND PROBLEMS TO CLASSIFY THE ILLNESS.

**THEN ASK ABOUT MAIN SYMPTOMS:**  
Does the child have cough or difficulty breathing?

**IF YES, ASK:**

- For how long?

**LOOK, LISTEN:**

- Count the breaths in one minute.
- Look for chest indrawing
- Look and Listen for stridor

CHILD MUST BE CALM

**Classify COUGH or DIFFICULT BREATHING**

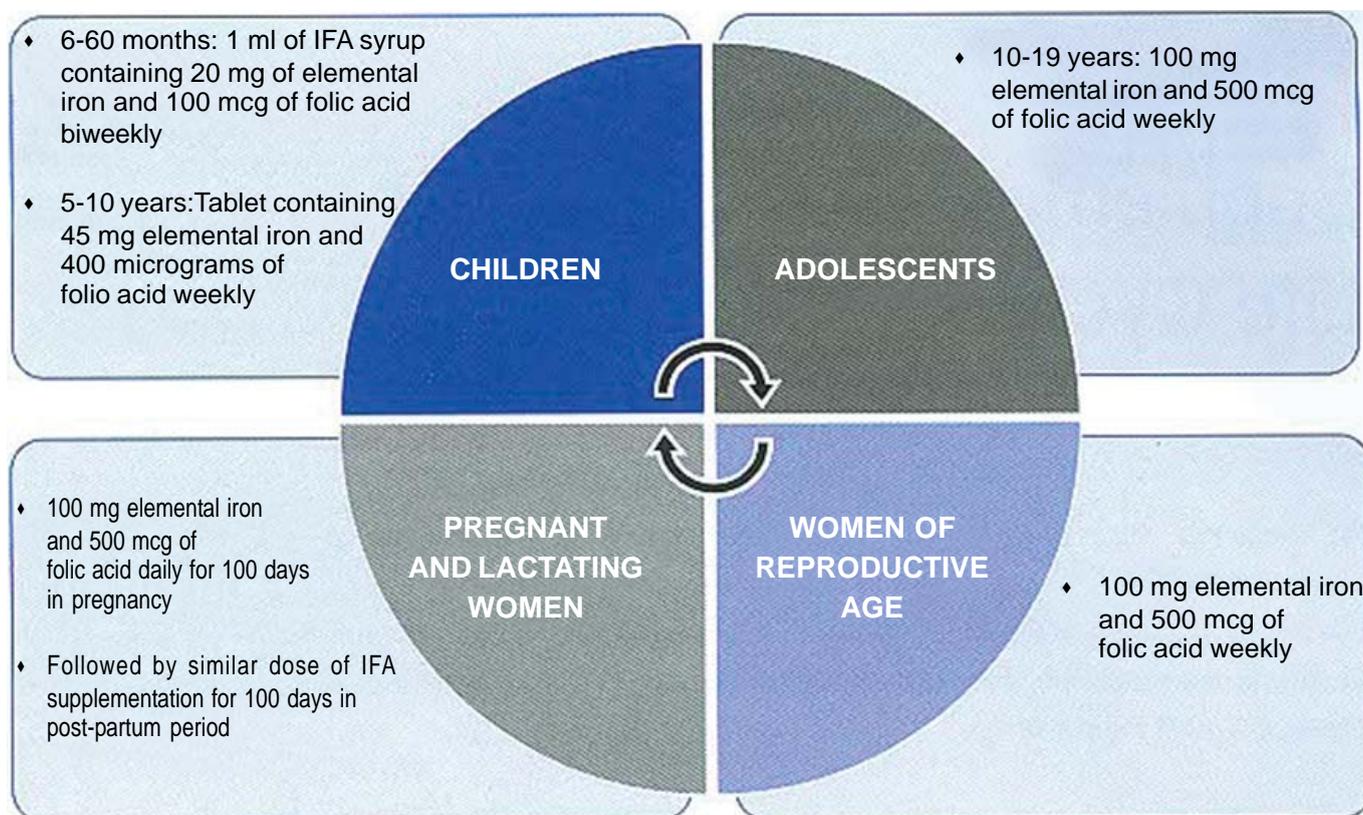
SIGNS	CLASSIFY AS	IDENTIFY TREATMENT <small>(Urgent pre-referral treatments are in bold print)</small>
<ul style="list-style-type: none"> <li>● Any general danger sign or</li> <li>● Chest indrawing or</li> <li>● Stridor in calm child.</li> </ul>	<p><b>SEVERE PNEUMONIA OR VERY SEVERE DISEASE</b></p>	<ul style="list-style-type: none"> <li>➤ Give first dose of injectable chloramphenicol (if not possible give oral amorycillin)</li> <li>➤ Refer URGENTLY to hospital</li> </ul>
<ul style="list-style-type: none"> <li>● Fast breathing</li> </ul>	<p><b>PNEUMONIA</b></p>	<ul style="list-style-type: none"> <li>➤ Give Cotrimoxazole for 5 days.</li> <li>➤ Soothe the throat and relieve the cough with a safe remedy if child is 6 months or older.</li> <li>➤ Advise mother when to return immediately.</li> <li>➤ Follow – up in 2 days.</li> </ul>
<p>No signs of pneumons Or very severe disease</p>	<p><b>NO PNEUMONIA: COUGH OR COLD</b></p>	<ul style="list-style-type: none"> <li>➤ If coughing more than 14 days, refer for assessment.</li> <li>➤ Soothe the throat and relieve the cough with a safe home remedy if child is 6 months or older.</li> <li>➤ Advise mother when to return immediately</li> <li>➤ Follow-up in 5 days if not improving.</li> </ul>

If the child is 2 months up to 12 months up to 5 years Fast breathing is 50 breaths per minute or more 40 breaths per minute or more

# If referral is not possible, see the section Where Referral is Not Possible in the module Treat the Child.

**Refer to Checklist 14 for Procedures and Drugs permitted to be used by Skilled Birth Attendants**

## Recommendations of National Iron Plus initiative



Overview of Implementation Modalities for IFA Supplementation for Each Target Segment

### Supplementation for Children 6-60 months

The onset of anaemia in young children is generally after 6 months of age. Before this, iron in breast milk is sufficient to meet the needs of a breastfed child. Iron from breast milk is also in a form that is more easily bio-available to the young child. Thereafter the incidence of anaemia increases from 6-8 months till the child is 1 year old. In India, diets for children in the age group 6-23 months are predominantly plant-based and provide insufficient amounts of micronutrients to meet the recommended nutrient intakes.

### Dose and Regime

One ml of IFA syrup containing 20 mg of elemental iron and 100 mcg of folic acid biweekly for 100 doses in a year. Iron folic acid supplements will be supplied in bottles of 100 ml each and composition, preparation, dose and duration of IFA supplementation will remain same as the existing guidelines. The bottles should have an auto-dispenser so that only 1 ml of syrup will be dispensed at a time.

Albendazole tablets will be provided to children for biannual de-worming.

### Dosage of Albendazole tablets for biannual de-worming

Age	Dose (Albendazole 400 mg tablet)	Appropriate administration of tablets to children between the ages of 1 and 3 years is important. The tablet should be broken and crusted between two spoons, then safe water added to help administer the drug.
1-2 years	Half tablet	
2 years upwards	One tablet	

**Note: Prophylaxis with iron should be withheld in case of acute illness (fever, Acute diarrhea, pneumonia etc.), Severe Acute malnutrition (SAM) and in a known case of haemoglobinopathy / history of repeated blood transfusion.**

### Implementation

For all children aged 6 to 60 months it is proposed that IFA supplement will be administered under the direct supervision of an Accredited Social health Activist (ASHA) on fixed days on a biweekly basis. The micro plan for reaching out to these children can be worked out at village level. It is recommended that a particular child should receive the supplement on the fixed day (Monday and Thursday), though it can vary for the groups of children depending on the home visits schedule prepared at block/district level. The nutritional status of children should be assessed by MUAC (Mid Upper Arm Circumference less than 11.5 cm) to ensure that IFA syrup is not given to children with Severe Acute Malnutrition (SAM).

ASHA would give IFA syrup bottles to mothers for safe storage and to lessen the logistic hurdle of carrying bottles around, but the IFA syrup will be administered under her direct supervision only. During the visits, the ASHA will also advise/inform the caregiver about the following issues.

- ♦ Time of administration – half an hour after food if the child has been breastfed (in LBW infants) / fed semisolid/solid food
- ♦ Benefits of regular intake of IFA syrup in physical and cognitive development of the child e.g. improvement in well – being, attentiveness in studies and intelligence etc.
- ♦ Minor side effects associated with IFA administration such as black discolouration of stools.
- ♦ Preservation of IFA bottle – in a cool and dark place, away from reach of children, keeping the lid of the bottle lightly closed each time after administration, etc.

*Note:* ASHAs/frontline workers/caregivers should be specifically instructed to administer IFA supplement half an hour after the child has been breastfed (in LBW infants)/fed semisolid/solid food.

Details of IFA supplementation will be included in the Mother and Child Protection (MCP) Card.

**ASHAs will be suitably incentivized for undertaking this activity.**

## INFORMATION ON NATIONAL INITIATIVES WITH REFERENCE TO MATERNAL HEALTH

### Key messages:

The health worker is a key stakeholder to advocate and implement programmes targeting improved maternal and child health

Every visit to the house or of the mother should be used as an opportunity to motivate to seek these special services

Lack of information is often the reason of not being able to take these benefits besides callousness

The benefits when drawn by the community become popular by word of mouth

Umbrella programme NRHM has several such initiatives.

### Subcontents:

- Universal Immunization Programme (UIP)
- Janani Surakshya Yojana
- Mamta scheme as in Odisha
- JSSK

## UIP

This programme lists the essential vaccines for the pregnant mother and new born till five years of age. The table below lists all the vaccines along with the timing, dose and route of administration

### National Immunisation Schedule for Pregnant Women, Infants and Children

Vadne	When to give	Dose	Route and site
<b>For pregnant Women</b>			
TT-1	Early in pregnancy at first contact	0.5 ml	Intramuscular in upper arm
TT-2	4 weeks after TT-1*	0.5 ml	
TT-Rooster	If pregnancy occurs within three Years of last TT vaccination*	0.5 ml	
<b>For Infants</b>			
BCG	At birth (for institutional deliveries) or along With DPT-1	0.1 ml (0.05 ml for Infant up to 1 months)	Intradermal in left upper arm
Hepatitis BO <sup>^</sup>	At birth for institutional delivery, preferably Within 24 hours of delivery	0.5 ml	Intramuscular in outer mid-thigh (antero-lateral side of mid-thigh)
OPV-0	At birth, if delivery is in institution	2 drops	Oral
OPV 1, 2 and 3	At 6 weeks, 10 weeks and 14 weeks	2 days	Oral
DPT 1,2a dn 3	At 6 weeks, 10 weeks and 14 weeks	0.5 ml	Intramuscular in outer mid-thigh (antero-lateral side of mid-thigh)
Hepatitis B1. 2 and 3	At 6 weeks, 10 weeks and 14 weeks	0.5 ml	
Measles	9-12 months	0.5 ml	Subcutaneous in right upper arm
Vitamin A (1 <sup>st</sup> dose)	At 9 months, with measles	1 ml (1lakh IU)	Oral
<b>For Children</b>			
DPT booster	1 <sup>st</sup> booster at 16-24 months	0.5 ml	Intramuscular in outer mid – thigh (antero-lateral side of mid-thigh)
	2 <sup>nd</sup> booster at 5 years of age	0.5ml	
OPV booster	16-24 months	2 drops	Oral
JE <sup>A</sup>	16 – 24 months	0.5 ml	Intramuscular in outer mid-thigh (antero-lateral side of mid-thigh)
MR	16-24 months	0.5 ml	
Vitamin A (2 <sup>nd</sup> to 9 <sup>th</sup> dose)	2 <sup>nd</sup> dose at 16 moths, with DPT/OP booster. 3 <sup>rd</sup> to 9 <sup>th</sup> does are given at an interval of 6 Months till 5 years of age	2 ml (2 lakh IU)	Oral
TT	10 years and 16 years	0.5 ml	Intramuscular in upper arm.

\*TT-2 or booster does is to be given before 36 weeks of pregnancy

A full immunized infant is one who has received BCG three doses of DPT three doses of OPV three does of Hepatitis (Wherever implemented) and measles before one year of age.

AJE and Hepatitis B in select state UTs / district cities

Note: The Universal Immunisation Programme is dynamic and hence, the immunization schedule needs to be updated from time to time.

## JANANI SURAKSHA YOJANA (A Government of India Scheme)

1. Janani Suraksha Yojana (JSY) is an intervention for safe motherhood under the National Rural Health Mission (NRHM). It is being implemented with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women. The scheme, launched on 12 April 2005 by the Hon'ble Prime Minister, is under implementation in all states and Union Territories (UTs), with a special focus on low-performing states (LPS).
2. JSY is an entirely centrally sponsored scheme, which integrates cash assistance with delivery and post-delivery care.
3. The scheme has identified the **Accredited Social Health Activist (ASHA)** as an effective link between the government and poor pregnant women.

### The role of ANMs (or other link health workers, including ASHAs) associated with JSY would be:

- To identify pregnant women who would be benefited by the scheme and facilitate their registration for Ante-natal check-up (ANC).
- To assist the pregnant woman in obtaining necessary certifications, wherever necessary.
- To provide the woman with and/or help her receive at least four ANC check-ups, in which she is given Tetanus Toxoid (TT) injections and Iron Folic Acid (IFA) tablets
- To identify a functional government health centre or an accredited private health institution for referral and delivery.
- To counsel the woman to opt for an institutional delivery.
- To escort the woman to the predetermined health centre and stay with her till she is discharged.
- To arrange to immunize the newborn till the age of 14 weeks.
- To inform the Auxiliary Nurse Midwives (ANM)/Medical Officer (MO) about the birth or death of the child or mother.
- To arrange for a postnatal visit within seven days of the delivery to track the mother's health and make it easier for her to obtain care, wherever necessary.
- To counsel the mother to initiate breastfeeding within one an hour to one hour of delivery and continue to breastfeed till 6 months, and promote family planning as early possible (possibly within one hour of delivery)

### Important Features of JSY

1. The scheme focuses on pregnant woman
2. **Tracking each pregnancy:** Each beneficiary registered under this scheme should have a JSY card, along with an MCH card. An identified link worker, such as an ASHA/AWW, should mandatorily prepare a micro-birth plan for each beneficiary under the overall supervision of the ANM and the MO at the Primary Health Centre (PHC). This will effectively help in monitoring antenatal check-ups and post-delivery care.
3. The eligibility for cash assistance under the JSY is as shown below. ***For state of Odisha the deliveries conducted at home, SC/ST and BPL category also get cash assistance.***

**All pregnant women delivering in government health centres, such as Sub Centres (SCs) Primary Health Centres (PHCs)/Community health Centres (CHCs)/First Referral Units (FRUs)/general wards of district or state hospitals or accredited private institutions**

### Cash Assistance for Institutional Delivery (in Rs)

Category	Rural area		Total	Urban areas		Total
	Mother's Package	ASHA's package	Mother's package	ASHA's package		
LPS	1400	600	2000	1000	200	1200

**Note 1:** In both LPS and HPS, women who choose to deliver in an accredited private health institution must produce a BPL or SC/ST certificate in order to access JSY benefits. In addition, they must carry a referral slip from the ASHA, ANM or MO, and the Mother and Child Protection Card - JSY card. In Odisha state only LPS category holds applicable.

**Note 2:** The ANM/ASHA/MO should make it clear to the beneficiary that the government is not responsible for the cost of the delivery if she chooses to go to an accredited private institution for the delivery. She will only get her entitled cash.

**Note 3:** The scheme does not provide for the ASHA's package for women who choose to deliver in an accredited private institution.

**4. Disbursement of cash assistance:** As the cash assistance to the mother is meant mainly for meeting the cost of the delivery, it should be disbursed at the institution itself.

a) The mother and the ASHA (wherever applicable) should get their entitled money at the health centre immediately on registration for delivery.

b) Generally the ANM/ASHA should carry out the entire disbursement process.

However, till the ASHA joins, an AWW or any identified link worker may also carry out the disbursement under the guidance of the ANM.

4.1 In the case of pregnant women who choose to go to a public health institution for the delivery, the entire cash entitlement should be disbursed at the health institution at one go.

**5. Compensation money:** If the mother or her husband, of their own will, undergoes sterilization, immediately after the delivery, the compensation money available under the existing Family Welfare Scheme should also be disbursed to the mother at the hospital itself.

**6. Accrediting private health institutions:** In order to increase the choice of delivery care institutions, at least two willing private institutions per block should be accredited to provide delivery services. The state and district authorities should draw up a list of criteria/protocols for such accreditation.

**7. Equipping SCs for normal delivery:** Women living in tribal and hilly districts find it difficult to access a

PHC/CHC for maternal care or delivery. A well-equipped SC is a better option in such areas. Deliveries conducted in SCs which are accredited by the state/district authorities will be considered as institutional deliveries, and women delivering in such centres would be eligible for cash assistance under JSY.

Important: All states and UTs must undertake a process of accreditation of all such SCs, located in Government buildings and have adequate facilities, including electric and water supply, and the medical requirements of basic obstetric services, such as drugs, equipment and the services of a trained midwife.

## **8. Monitoring:**

**8.1 Monthly meeting:** To assess the effectiveness of implementation of the JSY, ANMs should hold monthly meetings of all ASHAs/related link health workers under them, possibly on a fixed day (such as the third Friday) of every month, at the SC or at any anganwadi centre falling under their jurisdiction. If the scheduled day happens to be a holiday, the meeting could be held on the following working day.

**8.2 Monthly work schedule:** At each monthly meeting, the ANM, besides reviewing the current month's work vis-à-vis the envisaged activities, should prepare a work schedule for the month ahead for each ASHA/village-level health worker on the following:

### **Feedback on previous month's schedule**

- (a) The number of pregnant women who missed antenatal check-ups
- (b) The number of cases in which the ASHA/link worker did not accompany the pregnant women for delivery
- (c) The number of identified beneficiaries who had home deliveries
- (d) The number of postnatal visits missed by the ASHA
- (e) The cases referred to the FRU and review of their current health status
- (f) The number of children who missed immunization

### *Fixing next month's work schedule*

- (a) Note the names of the pregnant women identified for registration and taken to the health centre/anganwadi centre for ANC.
- (b) Note the names of the pregnant women to be taken to the health centre for delivery (wherever applicable).
- (c) Note the names of the pregnant women with possible complications to be taken to the health centre for check-up and/or delivery.
- (d) Note the names of women to be visited (within 7 days) after delivery.
- (e) Prepare a list of infants/newborns for routine immunization.
- (f) Ensure the availability of imprest cash.
- (g) Check whether referral transport has been organized.

## **Mamta Scheme**

MAMATA scheme\* launch on 5th September, 2011 in state of Odisha. It landmarked e-Transfer of funds to beneficiary account on 19th October, 2011. Extending the MAMATA scheme coverage to Urban areas on 15th August 2012. The scheme benefits have reached more *than a million* women across the state, a major milestone, in September 2013.

### **Objectives**

1. To provide partial wage compensation for pregnant and nursing mothers so that they are able to rest adequately during their pregnancy and after delivery.
2. To increase utilisation of maternal and child health services, especiall ante-natal care, postnatal care and immunization.
3. To improve mother and child care practices, especially exclusive Breast feeding and complementary feeding of infants.

### **Target Beneficiaries and Coverage**

This scheme is operational in all the 318 rural projects of the State. Pregnant & Lactating women of 19 years of age and above for the first 2 live births, except all Government/Public Sector Undertakings (Central and State) employees and their wives will be covered.

### **Special Conditions:**

- i. If the beneficiary fulfills the conditions for the 1st instalment, but undergoes a miscarriage she may be given the 1st instalment upon producing proper documentation.
- ii. If the beneficiary has a still birth, she will be eligible for the 2nd instalment subject to attending 2 counseling sessions for her own health and wellbeing. This is to be certified by the AWW based on records available.
- iii. If the beneficiary fulfills the conditions for the 2nd instalment but the infant does not survive between birth and 3 months of age, she will be given the 2nd instalment.
- iv. If the beneficiary on her first delivery gives birth to live twins she can avail the benefit of the Scheme only once (since the wage loss and rest required would be only once).
- v. If the beneficiary has one child and then in second delivery gives birth to twins she can avail the benefit of the Scheme for the second time (even though there are now 3 children).

**1<sup>st</sup>**

- Pregnancy registered at the AWC within 6 months
- Received at least one ANC (out of optimal 4).
- Received IFA tablets.
- Received at least one TT vaccination (out of optimal 2).
- Received atleast one counseling session at the AWC/ village health and Nutrition Day (VHND).

**Means of Verification**

MCP card

Scheme Register



**First (at the end of second trimester of pregnancy)**

**Rs. 1500/-**

**2<sup>nd</sup>**

- Child birth is registered.
- Child has received BCG Vaccination,
- Child has received Polio 1 and DPT – 1 vaccination.
- Child has received Polio 2 and DPT – 2 vaccinations.
- Child has been weighed at least two times after birth (out of optima) 4 times including weighing at birth).
- After delivery, mother has attended at least two IYCF conseling sessions at the AWC/VHND/Home Visit (out of aptimal 3 times,), as certified by the AWW

Means of Verification- MCP card, Scheme Register



**Second (3 months after delivery) Rs. 1500/-**

**3<sup>rd</sup>**

- Child has been exclusively breasted for first six months.
- Child has been introduced to complementary foods on completion of six months.
- Child has received Polio 3 and DPT – 3 vaccinations.
- Child has been weighed at least two times between age 3 and 6 months (out of optimal 3).
- Mother has attended at least two IYCF counseling sessions between 3 and 6 months of lactation, at the AWC/VHND/Home Visit (out of optimal 3).

**Means of Verification**

MCP card

Scheme Register

Self certification on

MCP Card



**Third (6 months after delivery) Rs. 1000/-**

**4<sup>th</sup>**

- Meales vaccine has been given before the child is one year old.
- Vitamin A first dose has been given before the child is one year old.
- Age specific appropriate complementary freeing has started and is continuing.
- Child is weighed at least two times between six months to nine months of age.

**Means of Verification**

MCP card

Scheme Register

Self certification on MCP Card

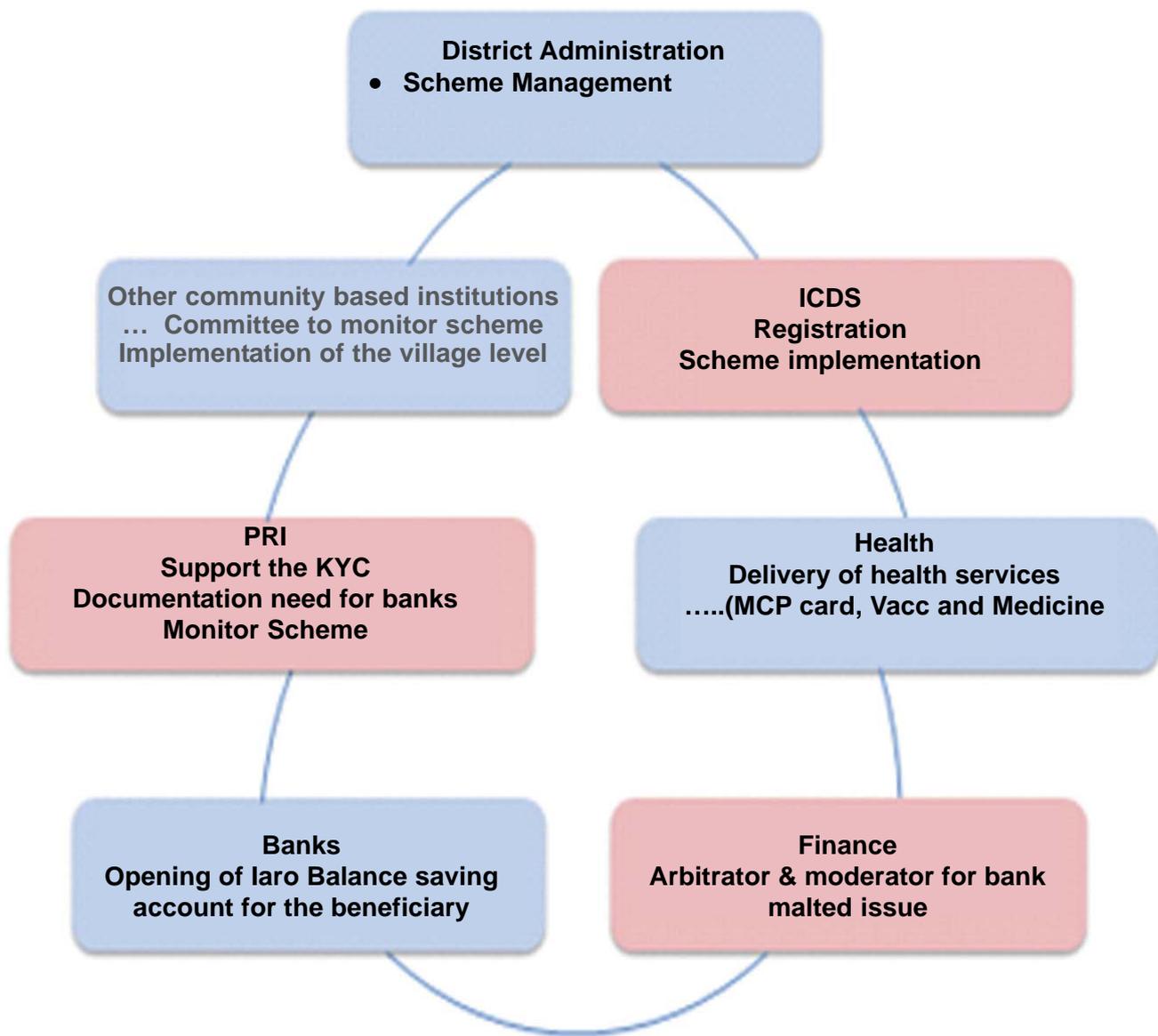


**Fourth (9 months after delivery) Rs 1000/-**

The conditionalities that determine the beneficiaries along with the payment instalments are as follows:

This scheme is a unique example of convergence between health, administration, ICDS and the community backed by political will with the ultimate goal of people's welfare as cited below:

### Convergence



The scheme has reached almost 1 million homes in Odisha alone, with the highest coverage among ST. It has helped enhance uptake of MCH services and increased attendance at VHND.

**PROCEDURES FOR PAYMENT:****a. Payment to the beneficiary:**

Transfer of amount to the beneficiary will be through bank e-transfer only. No disbursement would be in the form of “cash” or “cheque”.

Responsibility for opening a bank account lies with the beneficiary.

**b. Incentive to the AWW and AWH:**

All AWWs and AWHs have bank accounts in which their honorarium is credited. The incentive under the scheme to the AWW and AWH should also be credited in the same account on 10th of every month through e-transfer

**ROLE OF AWWs:**

- i. To ensure early registration and fulfillment of conditionalities of each beneficiary in close coordination with ASHA and ANM.
- ii. To motivate the beneficiaries for fulfillment of conditionalities.
- iii. To ensure along with health functionaries that the required supplies/services for fulfilling the conditionalities are available. In case of any difficulty, AWW should immediately report the same to the Supervisor.
- iv. To ensure that beneficiaries are regularly counseled in the VHND or through home visits.
- v. To maintain all records perfectly.
- vi. To display names of beneficiaries and amounts received in prescribed format outside the AWC.
- vii. To discuss beneficiaries and payments received in the monthly meeting of GKS.
- viii. To submit monthly report to the Supervisor at the sector meeting before the 30th of every month.
- ix. To share the details of all new pregnancy registration at the AWC, with the ASHA concerned in the prescribed format. The AWW and ASHA should compare the names of Pregnant Women in both their registers and match it every month.
- x. The AWW should give special focus to pregnant women with disability. She should ensure through home visits that they avail benefits under the Mamata Scheme.

## Janani -Shishu Suraksha Karyakram (JSSK)

The new initiative of JSSK would provide completely free and cashless services to pregnant women including normal deliveries and caesarean operations and sick infants **(up to one year after birth)** in Government health institutions in both rural and urban areas. The new JSSK initiative is estimated to benefit more than one crore pregnant women & infants who access public health institutions every year in both urban & rural areas.

### *The Free Entitlements under JSSK would include:*

- Free and Cashless Delivery, Free C-Section,
- Free treatment of sick-infants up to one year,
- Exemption from User Charges, Free Drugs and Consumables,
- Free Diagnostics,
- Free Diet during stay in the health institutions - 3 days in case of normal delivery and 7 days in case of caesarean section,
- Free Provision of Blood,
- Free Transport from Home to Health Institutions,
- Free Transport between facilities in case of referral as also Drop Back from Institutions to home after 48hrs stay.
- Free Entitlements for infants till 1 year of age similarly include free treatment, free drugs and consumables, Free diagnostics, Free provision of blood, Exemption from user charges, Free Transport from Home to Health Institutions, Free Transport between facilities in case of referral and Free drop Back from Institutions to home.

Rs 1100 crores have been provided to the States for drugs, diet and ambulances under NRHM during 2011-12. States have been asked to widely publicize the new JSSK entitlements, display them prominently in all Government facilities, put entitlements in public domain, and institute a grievance redressal mechanism for ensuring that the commitments are fulfilled in letter and spirit.

JSSK supplements the cash assistance given to a pregnant woman under Janani Suraksha Yojana and is aimed at mitigating the burden of out of pocket expenses incurred by pregnant women and sick newborns. Besides it would be a major factor in enhancing access to public health institutions and help bring down the Maternal Mortality and Infant mortality rates. Presently it is noted that, out of pocket expenses and user charges for transport, admission, diagnostic tests, medicines and consumables, caesarean operation are being incurred by pregnant women and their families even in the case of institutional deliveries.



Annexure 1 Referral slip

Name of the Referring Facility:

Address:

Telephone:

Name of Patient: \_\_\_\_\_ Age \_\_\_\_\_ Yrs: \_\_\_\_\_

Husband's Name: \_\_\_\_\_

Address \_\_\_\_\_

Referred on \_\_\_\_ / \_\_\_\_ / \_\_\_\_ (d/m/yr) at \_\_\_\_\_ (time) to \_\_\_\_\_

\_\_\_\_\_ (Name of the facility) for management.

Provisional Diagnosis:

Admitted in the referring facility on // (d/m/yr) at (time) with chief complaints of:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Summary of management (Procedures, Critical Interventions, Drugs given for Management):

- Investigations:
- Blood Group:
- Hb:
- Urine R/E:

Condition at time of Referral:

Consciousness:      Temp:                      Pluse:                      BP:

Others (Specify): \_\_\_\_\_  
\_\_\_\_\_

Information on Referral provided to the Institution Referred to: Yes/ No

If yes, then name of the person spoken to: \_\_\_\_\_

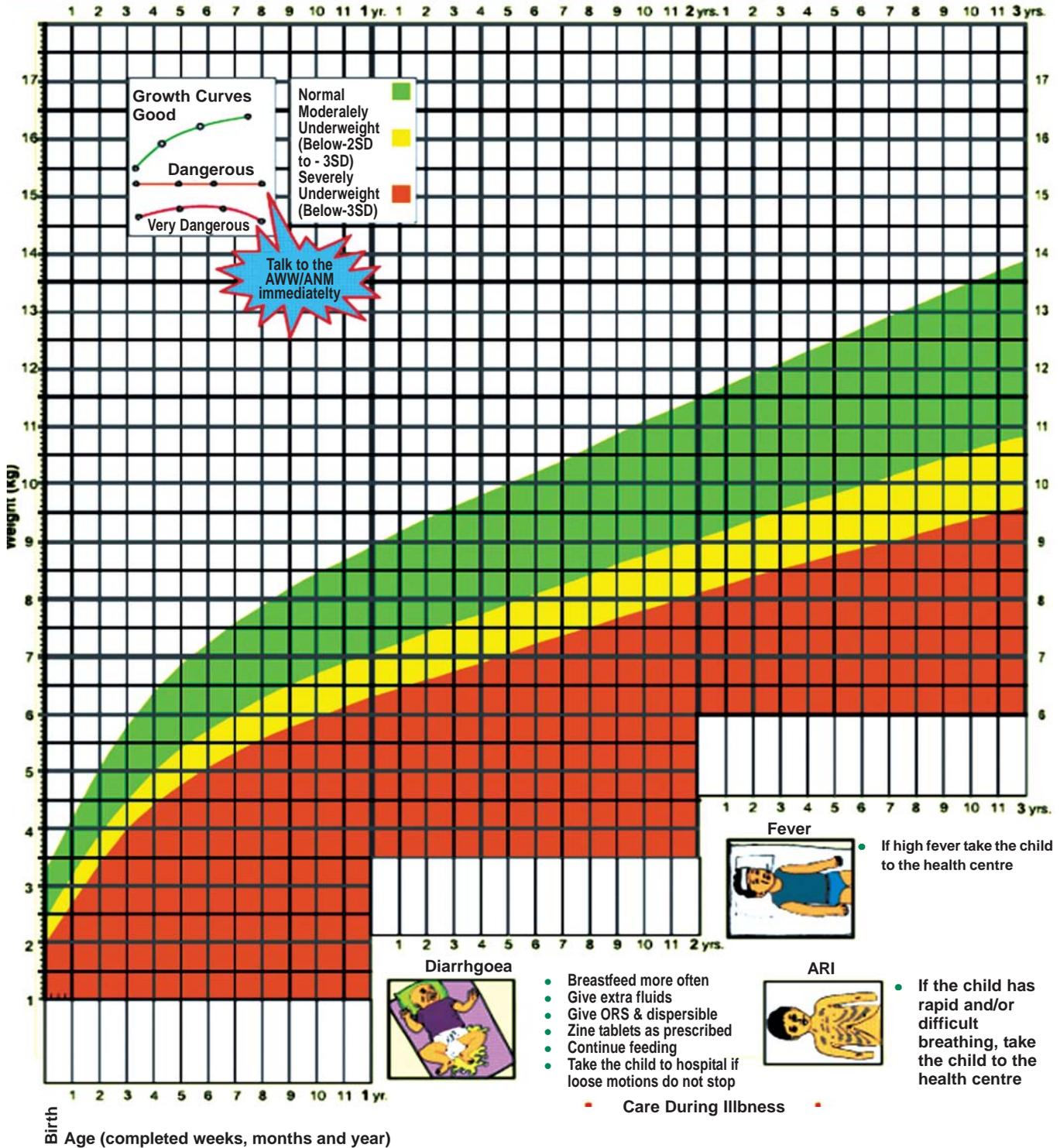
Mode of Transport for Referral: Govt/Outsourced/EMRI Personal/others/None

Signature of Referring Physician/MO  
(Name/Designation/Stamp)

Annexure 2 A. Growth Chart for assessment for malnutrition in children(0-3years of age)



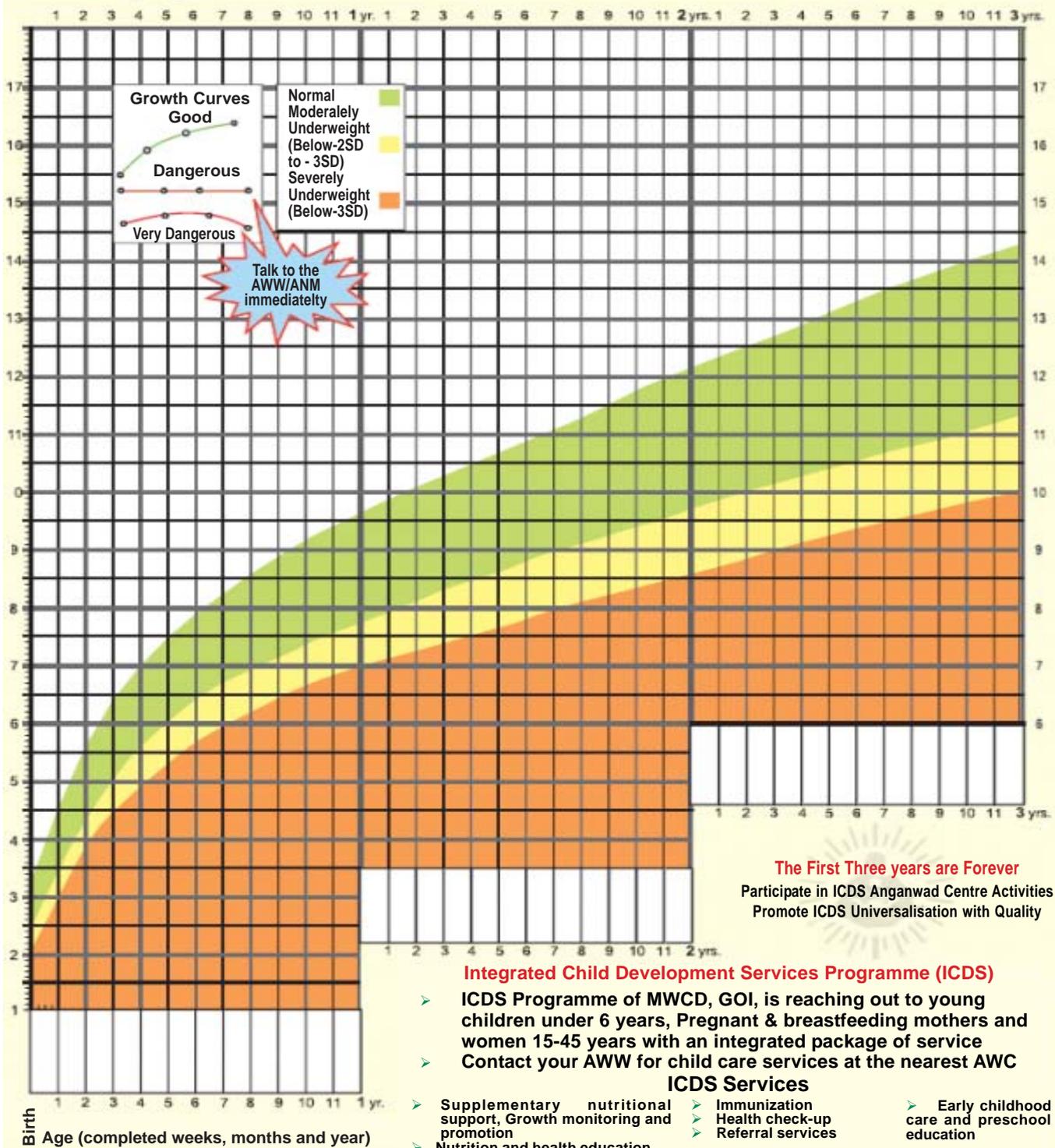
**GIRL: Weight-for-age – Birth to 3 years**  
(As per WHO Child Growth Standards)



## Annexure 2. B. Boys Growth Chart



### BOY: Weight-for-age – Birth to 3 years (As per WHO child Growth Standards)



**Have your child weighed at the AWC every month**

### Annexure 3: Mandatory Services on VHND

The module aims to ensure quality service delivery on VHND by the ANMs. Hence a brief list of services is outlined as per the beneficiaries that the ANM should be aware on the day.

#### **Pregnant women:**

##### **ANC with Quality Component**

- BP examination
- Weighing
- Abdominal examination
- Hb% estimation (testing)
- Urine Albumin/Protein estimation (testing)
- IFA 100/200
- 2 TT/TTB injections
- Counsel and Referral for PPTCT services to the nearest ICTC
- Referral of High risk pregnancies (Red Card holders) to 12/13 facility.

#### **Lactating women:**

##### **POST NATAL/POST PARTUM VISIT SCHEDULE**

- First visit: 1<sup>st</sup> day (within 24 hrs of delivery in case of Home and SC delivery. For Institutional delivery this should be done at the institution)
- Second visit: Within 3<sup>rd</sup> – 5<sup>th</sup> day after delivery
- Third visit: Within 7<sup>th</sup> – 10<sup>th</sup> day after delivery
- Fourth visit: By 6 weeks after delivery

There should be three additional home visits in case of low birth weight babies, on days 14, 21 and 28  
**(as per the IMNCI\* guidelines)**

#### **Post natal Care from 6 weeks to 6 months:**

Full PNC services would be defined as 3 plus PNC contacts at institution/home level within first 10 days.

##### **It is recommended that**

- At least 1 of the 3 PNC contacts at home level is accompanied by ANM
- At least 1 visit to VHND by all lactating women on 4<sup>th</sup> and/or 6<sup>th</sup> week postpartum

**Children between 0-5 years: A. Infants:**

- Initiate breastfeeding especially Colostrum feeding within an hour of birth
- Do not give any pre-lacteal feeds
- Ensure good attachment of the baby to the breast
- Exclusively breastfeed the baby for six months.
- Breastfeed the baby whenever she/he demands.
- If the baby is passing urine for 6 and more times and is gaining weight adequately, breast feeding is adequate.
- Follow the practice of rooming in

**C. Child 1 month to 3 years:**

- Fill up MUAC < 11.5 cm. and bipedal edema information in MCP Card
- Underweight children should be referred to Pushtikar Divas or NRC if there is any one of the following a) Bipedal edema, b) Visible Wasting, c) MUAC<11.5 cm.
- Treatment of ailments of children using IMNCI other treatment protocols.
- Refer the acutely ill child immediately to nearest health institutions
- Test the blood for Haemoglobin estimation
- Test for Malaria with DRK those having fever and treat Positive Cases

**D. Children 3-5 years:**

- SAM children should be referred to Pushtikar Divas or NRC if there is any one of the following a) bipedal edema b) severe wasting c) MUAC <11.5 cm
- Treatment of ailments of children using IMNCI / other treatment protocols
- Refer the acutely ill children immediately to nearest health institutions
- Test the blood for Haemoglobin estimation
- Test for Malaria with RDK those having fever and treat Positive Cases
- IFA (Small) supplementation for children to be given
- Biannual supplementation Albendazole (Children One year onwards)

### **References:**

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