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TWO

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Community Level Interventions For Improving Maternal, Neonatal And Child Health: A Training Tool Kit

CORE CONCEPTS OF MATERNAL NEONATAL AND CHILD HEALTH

Community Level Interventions for Improving Maternal, Neonatal and Child Health Training Tool Kit: Core Concepts of Maternal and Child Health is the second module of the tool kit in a series of seven on enhancing community engagement for improving outreach, shaping demand and strengthening accountability to improve maternal, neonatal and child health outcomes in Karnataka.

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Community Level Interventions For Improving Maternal, Neonatal And Child Health: A Training Tool Kit

CORE CONCEPTS OF MATERNAL NEONATAL AND CHILD HEALTH

KHPT Karnataka Health Promotion Trust

National Rural Health Mission

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PREFACE

The Community Level Interventions for Improving Maternal, Neonatal and Child Health Tool Kit is a series of seven modules:

Module 1: Design, Planning and Implementation of the Sukshema Project
Module 2: Core Concepts of Maternal, Neonatal and Child Health
Module 3: Sukshema's Community Level Interventions
Module 4: Communication and Collaborative Skills for Front Line Workers
Module 5: Improving the Enumeration and Tracking Process
Module 6: Home Base Maternal and Newborn Care
Module 7: Supportive Community Monitoring

Module 2: Core Concepts of Maternal Neonatal and Child Health

trains the resource persons (RPs) employed by the Sukshema project on technical information on the maternal neonatal and child health (MNCH) continuum of care. This continuum includes four stages: Antenatal care – care during pregnancy; Intra-natal care – care during the delivery and first two hours after the delivery; Post-natal care (mother and newborn) – care during the first 42 days; and Child care – care of the child up to year 5. The training sessions details critical issues in the MNCH continuum of care's four stages and lays the foundation and understanding of related concepts and medical terminologies among the front line health workers (FLWs), including the Junior Female Health Assistant (JHA), the Accredited Social Health Activist (ASHA), and the Anganwadi Worker (AWW).

CONTENTS

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante Natal Care
ARI	Acute Respiratory Infection
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BCC	Behaviour Change Communication
BEmONC	Basic Emergency Obstetric and Neonatal Care
BP	Blood Pressure
BPL	Below Poverty Line
CBO	Community Based Organization
CBR	Crude Birth Rate
CDR	Crude Death Rate
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CHC	Community Health Centre
CHW	Community Health Worker
DH	District Hospital
DOH	Department of Health
EDD	Expected Date of Delivery
EmONC	Emergency Obstetric and Newborn Care
FRU	First Referral Unit
FP	Family Planning
FWC	Family Welfare Centre
Hb	Haemoglobin
HbsAg	Hepatitis B Surface Antigen
HBNC	Home based Newborn Care
HBMNC	Home based Maternal Newborn Care
HIV	Human Immuno-deficiency Virus
ICDS	Integrated Child Development Services
ICU	Intensive Care Unit
IDD	Iodine Deficiency Disorders
IEC	Information, Education, Communication
IFA	Iron and Folic Acid
IMR	Infant Mortality Rate
IMNCI	Integrated Management of Neonatal and Childhood Illness
INC	Intra-natal Care
IPC	Inter Personal Communication
JHA	Junior Female Health Assistant
JSY	Janani Suraksha Yojana
LBW	Low Birth Weight
MDG	UN Millennium Development Goals
MMR	Maternal Mortality Rate
MNCH	Maternal, Newborn and Child Health
MNT	Maternal and Newborn Tetanus
MO	Medical Officer
NGO	Non-Government Organization
NID	National Immunization Day
NSS	National Sample Survey
NRHM	National Rural Health Mission
OPD	Out Patient Department
ORS	Oral Rehydration Salt
ORT	Oral Rehydration Therapy
PHC	Primary Health Centre
PNC	Postnatal Care
PPP	PowerPoint Presentation
PPPCT	Prevention of Parent to Child Transmission (HIV)
PPH	Post-partum Haemorrhage
PRI	Panchayat Raj Institution
RCH	Reproductive and Child Health
RKS	Rogi Kalyan Samiti
RTI	Reproductive Tract Infection
SBA	Skilled Birth Attendant
SC	Sub Centre
STI	Sexually Transmitted Infection
TBA	Trained / Traditional Birth Attendant
TH	Taluk Hospital
TT	Tetanus Toxoid
UIP	Universal Immunisation Programme
UNICEF	United Nation's Children's Fund
VHND	Village Health and Nutrition Day
VHW	Village Health Worker
VHSNC	Village Health and Sanitation Nutrition Committee
WHO	World Health Organization

GLOSSARY OF TERMS

Acute respiratory infections (ari)
The respiratory tract is an organ starting from the nose to the alveoli and organs such as the sinuses, middle ear cavity and pleura. Infection is the entry of germs or microorganisms into the human body and multiply, causing symptoms of illness and acute infection is an infection that lasts up to 14 days. Ari can be caused by viruses, bacteria or riketsia, while often a complication of bacterial infections caused by respiratory viruses, especially if there is any epidemic or pandemic. Respiratory infections are responsible for almost 20% of all under-five deaths worldwide. Any child who has a cough, is breathing faster than usual with short, quick breaths or is having difficulty in breathing, (excluding children that had only a blocked nose) should be presumed to have ari and taken to health care provider.

Amniotic cavity / sac
Amniotic cavity is the space within the uterus in which the foetus resides, bound by the amniotic membrane. The membranes which make up the sac may occasionally rupture naturally as labour begins, but usually remain intact until the end of the first stage of labour. The sac or 'bag of water' as is commonly called us filled with amniotic fluid in which the developing baby grows.

Amniotic fluid
The fluid within this amniotic cavity / sac is called the amniotic fluid. This is clear straw-coloured liquid sac helps the foetus to grow uniformly and develop bones and muscles. Babies breathe this fluid in and out of their lungs in the womb helping the lungs to grow as well. It also keeps the amnion (membrane) from sticking to the foetus.

It cushions the baby against pressure and knocks, allows the baby to move around and grow without restriction, keeps the baby at a constant temperature, and provides a barrier against infection.

Anaemia
Anaemia is the shortage of red blood cells in the body, leading to an inability of the blood to carry oxygen around the body. It is a condition rather than a disease itself. Anaemia occurs when you have a below-normal level of haemoglobin or haematocrit. Symptoms include weakness, lethargy, paleness and breathlessness. It may be caused by a lack of iron in the diet, blood loss, chronic illness, a genetic or acquired disease or defect, or it may be caused by a side effect of medication.

For any pregnant woman the haemoglobin level should be 11-16 gm hb/dl . If it is lower than this normal level it is diagnosed as anaemia. Anaemia is classified as mild, moderate or severe based on the concentrations of haemoglobin in the blood. Mild anaemia corresponds to a level of haemoglobin concentration of 09 to 10.9 g/dl for pregnant women moderate anaemia corresponds to a level of 7.0-9.9 g/dl, while severe anaemia corresponds to a level less than 7.0 g/dl.

Antenatal care
Medical care for a pregnant woman and her developing baby for the duration of the pregnancy

ASHA
An Accredited Social Health Activist (ASHA) is a community based health functionary in the rural areas. ASHAs are supposed to create awareness and provide information to the community on determinants of health such as nutrition, basic sanitation and hygienic practices, healthy living and working conditions, information on existing health services and the need for timely utilization of health and family welfare services.

Birth asphyxia
It is the medical condition resulting from deprivation of oxygen to a newborn infant that lasts long enough during the birth process to cause physical harm, usually to the brain. Hence the newborn infant fails to start breathing on its own in the minutes following birth.

Birth weight
It is the first weight of the foetus or newborn obtained after birth. For live births, birth weight should preferably be measured within the first hour of life before significant postnatal weight loss has occurred. At full term, the average baby will be about 20 inches (51 cm) long and will weigh approximately 6 to 9 pounds (2700 to 4000 grams). Any baby with a birth weight under 2500 grams is a low birth weight baby (LBW). LBW babies are usually premature as well. However, some LBW are full term, but undernourished and under-grown. LBW babies have increased risks of lung, heart and metabolic problems. They often require treatment in a special care nursery or NICU.

Caesarean section
Delivery of the baby through surgical extraction /an incision in the abdominal and uterine walls when delivery through the vagina/ birth canal is deemed unsafe is called Caesarean section.

Colostrum
A thin white opalescent fluid, the first milk secreted shortly after delivery and before mature breast milk is produced. It differs from the milk secreted later by containing more lactal-bumin and lacto-protein; colostrum is also rich in antibodies that confer passive immunity to the newborn and helps in resisting infection.

Congenital anomalies
Something that is unusual or different at birth.

Congenital malformation
A physical defect present in a baby at birth that can involve different parts of the body including the brain, heart, lungs, liver, bones, and intestinal tract is called congenital malformations. Congenital malformation can be genetic, it can result from exposure of the foetus to a mal-forming agent (such as alcohol), or it can be of unknown origin. Congenital malformations are now the leading cause of infant mortality (death) in many developed nations. Examples include heart defects, cleft lip and palate, spina bifida, limb defects, and Down syndrome.

Cord prolapsed
A condition when the umbilical cord falls through the cervix and possibly even into the vaginal canal, usually during labour or when water breaks ahead of the baby's head or other parts of the baby's body. Delivery or caesarean is usually performed immediately. A prolapsed cord is a serious emergency and can be very harmful to the baby. When the cord is compressed or squeezed (for example, between the baby and the wall of the uterus or vagina), the baby's supply of blood and oxygen is cut off. The lack of oxygen (birth asphyxia) can lead to severe damage or death if the problem is not taken care of within minutes.

Diarrhoea
Diarrhoea is a common condition that involves unusually frequent and liquid bowel movements. There are many infectious and non-infectious causes of diarrhoea. Persistent diarrhoea is both uncomfortable and dangerous to the health because it can indicate an underlying infection and may mean that the body is not able to absorb some nutrients due to a problem in the bowels. Treatment includes drinking plenty of fluids to prevent dehydration and taking over-the-counter remedies.

Diphtheria
Diphtheria is an acute infectious disease that typically strikes the upper respiratory tract including the throat. It is caused by infection with the bacteria Corynebacterium diphtheriae. Symptoms include sore throat and mild fever at first. As the disease progresses, a membranous substance forms in the throat, which makes it difficult to breathe and swallow.

Foetal distress
Foetal distress is a complication when during labour baby's heart beat becomes flat, or drops to a lower level repeatedly causing stress for the baby. Sometimes during labour and delivery the foetus may not get enough oxygen from the placenta and may become "distressed". When this happens, the foetal heart rate may show patterns consistent with oxygen deprivation.

Five cleans
A major factor contributing to neonatal and maternal infections is unhygienic delivery practices. Hence five cleans that are a must during delivery to ensure hygienic practices are:

- Clean hands - wash and wear gloves
- Clean delivery surface – take care that it is dry
- Clean cord cut – use sterile blades to cut the cord
- Clean cord ties – use sterile clips or ties and leave 2 finger length of the cord.
- Clean cord stump care – do not apply anything as there is a danger of infection / tetanus and subsequent death if proper care is not taken

Gestation
The period of foetal development from conception until birth is called gestation or pregnancy.

Total gestation period = 40 weeks

- **Full term** = 37-42 weeks
- **Pre-term** < 37 weeks
- **Post-dates** > 42 weeks

Total gestation period is divided into three trimesters –

- **1st trimester** = 0-12 weeks
- **2nd trimester** = 12-28 weeks
- **3rd trimester** = 28 to 40 weeks

Hepatitis
Inflammation of the liver from any cause is called Hepatitis. Depending on the type of virus, there are different types of Hepatitis.

Hydramnios
Hydramnios is an excess of amniotic fluid in the uterus during pregnancy.

Infant
A young baby, from birth to 12 months of age is called infant

Infant Mortality Rate
Infant Mortality Rate (IMR) is the number of deaths under one year of age occurring among live births in a given geographical area during a given year, per 1000 live births occurring among the population of the given geographical area during the same year. In other words it is the number of children dying at less than 1 year of age, divided by the number of live births that year.

Instrumental delivery
Term used to describe either a forceps or ventouse (vacuum) delivery

Kangaroo care
It means holding a baby in a skin-to-skin contact with the mother. The baby is placed on the mother's chest, dressed in a diaper and sometimes a cap. The baby's head is turned to the side so that the baby's ear is against the mother's heart. In this position the baby is able to find comfort in the mother's heartbeat and feel the mother's warmth. This procedure is limited to babies whose condition is not critical and facilitates bonding between mother and child. Kangaroo care can be done with any infant who is medically stable. Kangaroo care has been shown to have several benefits for premature babies and their mothers. It helps babies breathe and sleep better, gain weight more quickly, and have more stable temperatures. Mothers who practice kangaroo care have better milk supplies and less depression.

Labour
The process of delivering a baby and the placenta, membranes, and umbilical cord from the uterus to the vagina to the outside world is called labour.

False labour
Uterine contractions that are irregular, do not increase in frequency or severity, and do not efface or dilate the cervix are called false labour.

True labour
The labour pains are true when the contractions in the uterus cause discomfort or a dull ache in the back and/ or lower abdomen. There is pressure in the pelvis and

then the ache comes in front. Some women may also feel pain in their sides and thighs. Contractions become intense and frequent. The contractions come at regular intervals and last about 30-70 seconds.

Four stages of labour

- **1st stage** = onset of pain till full dilatation of cervix (10 cms); 12 hours in primi gravida and half time subsequently
- **2nd stage** = full dilatation of cervix to delivery of the baby; 2 hours in primi gravida and half time subsequently
- **3rd stage** = delivery of baby to delivery of placenta; 15 minutes in primi gravida and others
- **4th stage** = recovery stage (first one hour after delivery of placenta)

Live birth

According to WHO the definition of live-birth is 'Live birth refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, respiration, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered to be live birth.

Lochia discharge

The normal uterine discharge of blood, tissue, and mucus from the vagina after childbirth is called lochia discharge. Lochia contains blood, tissue from the placenta, and mucus. It's how the body gets rid of the lining of the uterus (womb) after birth. The blood may come out in gushes or flow more evenly like a heavy period. It is also known as: postpartum bleeding, postpartum vaginal discharge, bleeding after childbirth. The blood changes colour and becomes lighter as uterus heals and returns to its pre-pregnancy size. At first the flow of lochia is heavy and bright red, and may have clots in it. Gradually, it changes to pink then brownish and, eventually, to yellow-white. Lochia has an odour similar to that of normal menstrual flow. If there is an offensive or abnormal odour during lochia, it is important to contact the physician for evaluation.

Mal presentations

Normally, the presentation of a foetus about to be born refers to which anatomical part of the foetus is leading, that is, is closest to the pelvic inlet of the birth canal. According to the leading part, this is identified as a cephalic, breech, or shoulder presentation. A mal presentation is any other presentation than a vertex presentation (with the top of the head first). If any part of the baby other than the top of baby's head or the buttock enters the pelvis first, it causes a complication during a vaginal delivery.

Cephalic (head-first) presentation

Cephalic presentation is considered normal and occurs in about 97% of deliveries. There are different types of cephalic presentation, which depend on the foetal attitude. Rarely, the foetus' head is extended back, and the chin, face, or forehead will present first depending on the degree of extension. This is a more difficult delivery, because this is not the smallest part of the foetus' head. It may result in a need for caesarean delivery. A caesarean delivery may be recommended for any of the foetal positions other than cephalic.

Breech presentation

Breech presentation is considered abnormal and occurs about 3% of the time. A complete breech presentation occurs when the buttocks present first, and both the hips and knees are flexed. A frank breech occurs when the hips are flexed so the legs are straight and completely drawn up toward the chest. Other breech positions occur when either the feet or knees come out first.

Shoulder presentation

The shoulder, arm, or trunk may present first if the foetus is in a transverse lie. This type of presentation occurs less than 1% of the time. Transverse lie is more common with premature delivery or multiple pregnancies.

Maternal Mortality Rate

The maternal mortality rate (MMR) refers to the number of deaths from puerperal causes occurring among the female population of a given geographical area during a given year, per 100, 000 live births occurring among the population of the given geographical area during the same year. In other words it is the number of registered maternal deaths due to birth- or pregnancy-related complications per 100,000 registered live births.

Measles

Measles is an acute and highly contagious viral disease characterized by fever, runny nose, cough, red eyes, and a spreading skin rash. Measles, also known as rubeola, is a potentially disastrous disease. It can be complicated by ear infections, pneumonia, encephalitis (which can cause convulsions, mental retardation, and even death), the sudden onset of low blood platelet levels with severe bleeding (acute thrombocytopenic purpura), or a chronic brain disease that occurs months to years after an attack of measles.

Meconium stained liquor

Meconium is a dark green liquid normally passed by the newborn baby, containing mucus, bile and epithelial cells. Meconium stained amniotic fluid / 'liquor' is when the baby opens their bowels inside the uterus, making the waters look green, yellow or brownish in colour. Meconium stained liquor is usually associated with a response from the baby to having a temporarily reduced oxygen supply at some point in time (usually during labour) or a slowly reducing level of oxygen over a period of time.

Multiple pregnancies

Multiple pregnancies are where more than one foetus develops simultaneously in the womb. The presence of more than one foetus in the uterus increases the likelihood of birth defects as well as problems during labour and delivery.

Multi-para

A woman who has given birth previously at least twice.

Grand Multi para

A woman who has given birth previously five or more times.

Neonatal

Of/or relating to newborn children.

Neonatal period

The first 28 days of life.

Early neonatal period

It is the period between 0-7 days.

Late neonatal period

It is the period between 8-28 days.

Obstructed labour

When a foetus cannot progress into birth canal due to some type of obstruction is called obstructed labour. Prolonged and/or obstructed labour accounts for about 8% of direct maternal deaths in developing countries. If a woman with prolonged and/or obstructed labour does not receive timely and effective management, she may die from rupture of the uterus or infection. Foetal deaths are also common if prompt treatment for obstructed labour is not undertaken.

Pallor

Pallor is a clinical manifestation consisting of an unnatural paleness of the skin.

Perinatal period

The perinatal period commences at 20/ 22 completed weeks (140/ 154 days) of gestation and ends 7 to 28 completed days after birth.

Perineum

The area of the body between the anus and vulva in females and between anus and scrotum in males is called perineum.

Pertussis

It is known as whooping cough; an infectious a communicable, potentially deadly illness disease caused by the bacteria called by Bordetella pertussis, marked by catarrh of the respiratory tract and peculiar paroxysms of cough, ending in a prolonged crowing or whooping respiration. It is characterized by fits of coughing followed by a noisy, 'whooping' indrawn breath. Immunization with DPT (diphtheria-pertussis-tetanus) vaccine provides protection against the disease.

Placenta

Placenta is a flattened circular organ in the uterus of pregnant eutherian mammals which permits metabolic interchange between foetus and mother and nourishes the foetus through the umbilical cord. It develops during pregnancy and permits the absorption of oxygen and nutritive materials into the foetal blood and the release of carbon dioxide and nitrogenous waste from it, without the direct mixing of maternal and foetal blood. It is expelled following birth.

Poliomyelitis

Popularly known as polio, Poliomyelitis is an acute viral disease usually caused by a poliovirus and marked clinically by fever, sore throat, headache, vomiting, and often stiffness of the neck and back; these may be the only symptoms of the minor illness. In the major illness, which may or may not be preceded by the minor illness, there is central nervous system involvement, stiff neck, pleocytosis in spinal fluid, and perhaps paralysis; there may be subsequent atrophy of muscle groups, ending in contraction and permanent deformity.

Post-neonatal period

It refers to the period from the fourth week after birth to the end of the first year.

Post-partum

Traditionally the postpartum period ends 6 weeks after birth. However, WHO has designated the first 28 completed days after birth of the infant as the neonatal period.

Post-partum haemorrhage (PPH)

This is excessive bleeding following delivery. It is defined as blood loss greater than 500 ml or of the amount that adversely affects the maternal physiology. It is categorized as immediate (within the first 24 hours after birth) or delayed (after 24 hours postpartum).

Pre-eclampsia and eclampsia

A condition in pregnancy characterized by abrupt hypertension (a sharp rise in BP), albuminuria (leakage of large amounts of the protein albumin into the urine) and oedema (swelling) of the hands, feet, and face is called preeclampsia. It is the most common complication of pregnancy. It affects about five percent of pregnancies. It occurs in the third trimester (the last third) of pregnancy. In preeclampsia, the woman has dangerously high BP, swelling, and protein in the urine. If allowed to progress, this syndrome leads to eclampsia. The preeclampsia-eclampsia continuum (also called pregnancy-induced hypertension or PIH). In this type of hypertension, high BP is first noted sometime after week 20 of pregnancy and is accompanied by protein in the urine and swelling.

Pregnancy outcomes (dead or alive)

- Live-birth
- Neonate = newborn
- Abortion < 20 weeks
- Stillbirth > 20 weeks

Pre-lacteal feed

Preceding the establishment of milk flow in the newly delivered mother; the newborn baby used to be fed with carbohydrate-electrolyte solutions to reduce initial weight loss until breast feeding is fully established. This feed is called pre-lacteal feed.

Pregnancy induced hyper tension (PIH)

There is a chance of hyper tension in pregnancy which is called pregnancy induced hyper tension (PIH) pregnancy induced hypertension (PIH) is a condition of high BP during pregnancy. It can lead to a serious condition called preeclampsia (also sometimes referred to as toxemia). The normal BP is 120 (systolic)/ 80 diastolic Mm/hg. If it is more, it is called hyper tension.

Preterm

An infant born between the 20th to the 37th week of gestation (134 to 266 days). Normal gestation is approximately forty weeks.

Primi gravida

A woman who is pregnant for the first time. If she is over 35 she may be referred to with the term 'elderly primi gravida.'

Multi gravida
A woman who has been pregnant two or more times.

Prolonged labour (Refer to obstructed labour)
Labour more than 24 hours duration is called prolonged labour. This may be due to a prolonged latent phase i.e. more than 20 hours in a primi gravida or more than 14 hours in a multipara, or due to a 'protraction disorder' in which there is protracted cervical dilatation in the active phase of labor and protracted descent of the foetus.

Sepsis
Sepsis is an infection. It signifies the presence of bacteria (bacteremia) or other infectious organisms or their toxins in the blood (septicemia) or in other tissue of the body. Sepsis may be associated with clinical symptoms of systemic (body wide) illness, such as fever, chills, malaise (generally feeling "rotten"), low BP, and mental status changes. Sepsis can be a serious situation, a life threatening disease calling for urgent and comprehensive care.

Stillborn
If the baby dies before delivery it is called as stillbirth. It usually refers to a pregnancy loss after 20 weeks of gestation or loss of a baby weighing 350 or more grams.

Tetanus
An often fatal infectious disease caused by the bacteria Clostridium tetani. It usually enters the body through a puncture, cut, or open wound. Tetanus is characterized by profoundly painful spasms of muscles, including "locking" of the jaw so that the mouth cannot open (lockjaw). C. tetani releases a toxin that affects the motor nerves, (the nerves which stimulate the muscles). DPT immunization provides protection to a child against tetanus.

Thalassaemia
Thalassaemia is an inherited disorder of red blood cells resulting from the absence or deficiency in one or more of the constituents of hemoglobin. The protein-iron complex in RBCs facilitates oxygen transport in our body. Depending on the defect, thalassaemia symptoms vary in intensity from unnoticeable to life-threatening, and include anaemia and instability of RBCs, treatable by regular blood transfusions. Thalassaemia is only curable by bone marrow transplants from compatible donors.

Tuberculosis
Tuberculosis (TB) is a chronic and highly contagious infectious disease caused by the closely related species of the bacteria. TB is more common in people with immune system problems, such as AIDS, than in the general population.

Umbilical cord
Umbilical cord connects the developing embryo or fetus with the placenta. Umbilical arteries and vein run through the cord. The substance of the umbilical cord is known as Wharton's jelly and is a rich source of stem cells. At birth the umbilical cord measures about 20 inches (50 cm) in length. The cord is clamped and cut after birth and its residual tip forms the umbilicus (bellybutton).

Uterus
The uterus (womb) is a hollow, pear-shaped organ located in a woman's lower abdomen between the bladder and the rectum. The narrow, lower portion of the uterus is the cervix; the broader, upper part is the corpus. The corpus is made up of two layers of tissue.

Vaccination
Injection of a killed microbe in order to stimulate the immune system against the microbe, thereby preventing disease is called vaccination. Vaccinations, or immunizations, work by stimulating the immune system, the natural disease-fighting system of the body. The healthy immune system is able to recognize invading bacteria and viruses and produce substances (antibodies) to destroy or disable them. Immunizations prepare the immune system to ward off a disease. To immunize against viral diseases, the virus used in the vaccine has been weakened or killed. To only immunize against bacterial diseases, it is generally possible to use a small portion of the dead bacteria to stimulate the formation of antibodies against the whole bacteria. In addition to the initial immunization process, it has been found that the effectiveness of immunizations can be improved by periodic repeat injections or 'boosters'.

- **Infant** = birth to 1 year
- **Neonatal period** = birth to 28 days
- **Post-neonatal period** = 29 days – 1 year
- **Early neonatal period** = 0-7 days
- **Late neonatal period** = 8-28 days
- **Peri-natal period** = 28 weeks to 7 days

GETTING STARTED

The Doorway to Successful Training in **Part 11 of Module 1** should always be used to start a training workshop: initially if covering all modules at one time, or as a refresher if modules are scheduled over a period of time. The Doorway to Successful Training contains a detailed plan of sessions that sets the stage forthe workshop activities and logistics, covering welcome, introductions, objectives, hopes and fears, and ground rules.

SESSION 1: UNDERSTANDING MNCH CONTINUUM OF CARE

Objectives

To help participants understand the:

- Maternal, Neo-natal and Child Health (MNCH) continuum of care to reduce child mortality and prevent maternal deaths
- Magnitude of MNCH related morbidity and mortality
- Major causes of maternal deaths and deaths in neonates and children under five
- Gaps in MNCH service delivery and utilization in the Sukshema project's operational areas
- MNCH continuum of care
- MNCH service provision structure
- Basic facts and definitions related to MNCH

Methodology

PowerPoint Presentation (PPP) and discussion

Duration

2.5 hours

Training Materials

Laptop, LCD projector, screen and pointer, PPP: Continuum of care, Background material 1: MNCH Care Continuum

Tips for facilitators

This is a critical session to make the field workers understand the rationale and need for a focused intervention package in ensuring care throughout the continuum cycle. This session will set the tone of the training and requires a technical co-facilitator who is a senior medical doctor with experience of handling MNCH issues. Read the background material carefully, especially with reference to the statistics, and understand all issues presented.

Process

1.1 INTRODUCTION

- Ask participants, 'What is health?'
- Encourage them to come up with ideas. Ask probing questions until you get some responses.
- Note their responses on a flip chart.
- Then write the complete definition of health as suggested by the World Health Organization (WHO): "Health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity".
- Explain that health is holistic, not just the absence of illness and explain the meaning of each aspect of health - physical, mental and social.
- Ask them if they know the meaning of the acronym MNCH. If not, introduce the topic of Maternal, Neo-natal and Child Health. Tell them MNCH covers care of pregnant women, care during the delivery, care of the newborn/ child and the newly delivered mother.
- Tell them that the following topics will be covered in the session:
  - Magnitude of MNCH related morbidity and mortality
  - Major causes of maternal deaths and deaths in neonates and children under five
  - Gaps in MNCH service delivery and utilization in the Sukshema project's operational areas
  - MNCH care continuum
  - MNCH service provision structure
  - Basic facts and definitions related to MNCH

1.2 MAGNITUDE OF MNCH RELATED MORBIDITY AND MORTALITY

- Use PPP to provide the worldwide statistics on maternal and infant morbidity and mortality. Explain the scenario with reference to India and then more specifically with northern Karnataka.
- Explain the key terminology used in the session – MMR, IMR, live births, etc. and relate it with the Millennium Development Goals (MDGs). Refer to the list of acronyms in Module 2.
- Emphasize the key fact: Most deaths of infants occur during the first 24 hours after birth. A large percentage of these infant deaths are due to conditions that could be prevented or treated with access to simple, affordable interventions.
- Explain that this knowledge is used as a basis for planning MNCH services. Home visits are planned to identify any problems and to bring needed interventions to mothers, newborns and children to improve their health and chances of survival.

1.3 MAJOR CAUSES OF MATERNAL DEATHS AND DEATHS IN NEONATES AND CHILDREN UNDER FIVE

A. CAUSES FOR MATERNAL DEATHS

- Ask participants to brainstorm major causes of maternal deaths.
- Note their responses on a flip chart.
- Ask them to divide these causes into direct/immediate causes and indirect causes/factors that might influence the direct/immediate causes. Tell them that indirect causes could include social, cultural or economic factors.
- Stress that while both direct and indirect cause are important, this session will focus on direct causes as the overall objective is to work with the ASHAs and JHAs so they can take appropriate steps to address the direct causes of maternal deaths.
- Explain that while all the causes they have shared lead to maternal deaths, a number of studies and surveys have substantiated five major medical causes/factors that lead to most maternal deaths.
- Use PPP to show the primary five causes as:
  - Haemorrhage (37%)
  - Infection (Sepsis) (11%)
  - High blood pressure (BP) or hyper tension pregnancy-induced hypertension (PIH) or eclampsia (5%)
  - Obstructive labour or the failure to progress the delivery due to problems such as a mismatch between foetal size/presenting part of the foetus, and the mother's pelvis, position of foetal head, mal-presentations (5%)
  - Abortion (8%)
- Share the percentages of deaths due to each cause and note these statistics provide evidence-base decision making for policy makers when planning allocations of resources, both human and financial, to tackle this problem.

B. CAUSES OF NEONATAL AND CHILD DEATHS:

- Ask participants to brainstorm the direct causes of neonatal and child deaths.
- Note their responses on a flip chart.
- If these causes are among those which are included in the top five causes, congratulate them for their understanding.
- Otherwise tell them that all the causes they listed do lead to neonatal/ child deaths, but are not among the top causes.
- Use PPP to show the top causes are as follows:

  Causes of the neonatal deaths
  - Sepsis/pneumonia (30.4%)
  - Birth asphyxia (19.5%)
  - Prematurity (16.8%)

  Causes of the child deaths
  - Neonatal conditions (33%)
  - Pneumonia (22%)
  - Diarrhoea (14%)
- Explain the new words and concepts such as Neonatal sepsis, birth asphyxia, premature births. Explain the signs and symptoms of sepsis and birth asphyxia and inform them that if a baby is premature the vital organs may not be fully developed and hence the baby can have breathing problems, infections and physiological defects. It can have a very low birth weight (less than 2.5 kg or 2500 grams). These babies are called low birth weight (LBW).
- Explain the importance of institutional delivery to prevent problems such as oxygen deprivation and infections due to lack of hygiene.
- Tell them that Bacillus Calmette–Guérin (BCG) vaccine can be given as per schedule if institutional delivery takes place and breast feeding of colostrum can be initiated.
- Ask when most neonatal and child deaths occur?
- Note their responses on a flip chart.
- Emphasize the key fact: Most deaths occur during childbirth and within 24 hours of birth due to delivery at home or during delayed transportation as immediate access to medical care is not available.

1.4 GAPS IN MNCH SERVICE DELIVERY AND UTILIZATION IN THE SUKSHEMA PROJECT'S OPERATIONAL AREAS IN NORTHERN KARNATAKA

- Ask participants if they have seen or have heard about any cases of maternal, neonatal or child deaths?
- Give two participants the chance to share details of their experiences. Ask the group to explore the situations and the outcomes by asking questions.
- Ask them why these deaths are still occurring when they can be prevented?
- Note their responses on a flip chart.
- Group these responses under the following headings:
  - Gaps in the community
  - Gaps in the service providers
- Use PPP to show the reasons for poor MNCH outcomes and discuss the gaps in the service delivery

and utilization in northern Karnataka.

- Explain that the gaps are evident from:
  - The demand side (i.e. gaps seen in the community in awareness about the MNCH care, danger signs, benefits of institutional delivery and availability of services, practices in accessing institutional care, accountability and community monitoring of services to bring about improvement).
  - The supply side (i.e. availability, accessibility and quality of services).
  - The interaction between health care providers (FLWs such as ASHA and JHA) and the community.
- Explain that these gaps impact in community losing trust in the health care sector, not accessing health services and thus increasing the maternal and infant mortality rates.
- Tell the participants that the Sukshema project aims to address these gaps by supporting the FLWs and VHSNCs, to rebuild the trust of pregnant women and their family members in the MNCH services and to access them.

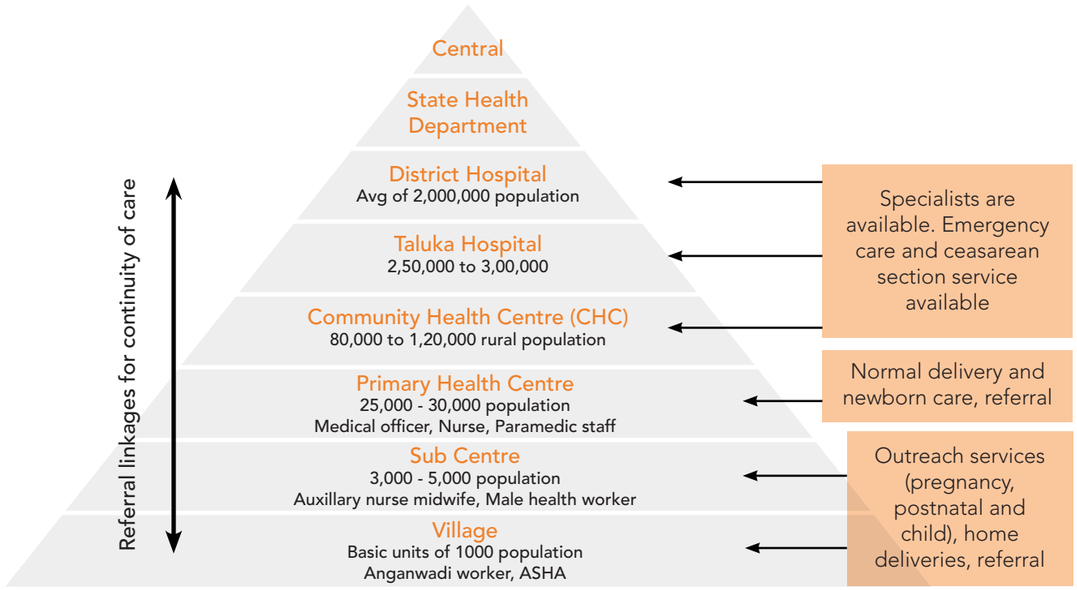
1.5 MNCH CARE CONTINUUM

- Introduce the important concept of the MNCH continuum of care.
- Ask them what they think the term MNCH continuum of care means.
- Note their responses on a flip chart.
- Use PPP to explain that the MNCH continuum of care starts from the inset of adolescence to pregnancy to delivery to post natal care to children under five and goes a full circle again.
- Brainstorm the different stages of woman's life.
- Note their responses on a flip chart.
- Discuss the different issues that women/ girls from rural areas face during each of these life stages and the dynamics behind these.
- Give examples from rural areas where girls do not get proper nutrition in childhood and adolescence and are forced into marriage at a young age. Elaborate how these conditions affect their reproductive health including closely spaced pregnancies, poor access to information about family planning and pressure to adhere to traditional practices.
- Emphasize that if a woman can receive MNCH services during each of her life stages, many reproductive disorders/health issues could be averted.
- Explain that MNCH services appropriate to each stage of a women's life cycle, such as nutrition, pregnancy guidance and care, delivery and post-partum care, immunization and proper family planning advice, could result into fewer complications and prevent most maternal, neo-natal and child deaths.
- Stress that the integrated MNCH continuum of care approach, instead of the piece-meal approach, is essential for mothers and children from pre-pregnancy to delivery, the immediate postnatal period, and childhood.
- Use PPP to explain how the access to effective interventions across the MNCH continuum of care can prevent maternal, neo-natal and child deaths.
- Explain that poor health, malnutrition and inadequate care of the pregnant woman results into premature deaths, sick newborns and low birth weight newborns. It also results in more infections and developmental problems in children.
- Highlight that as each component in the MNCH is linked with the other, they demand an integrated approach.
- Explain the MNCH continuum of care as
  - Antenatal care – care during pregnancy
  - Intra-natal care – care during the delivery and first two hours after the delivery
  - Postnatal care (Mother and newborn) – care during the first 42 days
  - Child care – care of the child up to age 5.

1.6 MNCH SERVICE PROVISION STRUCTURE

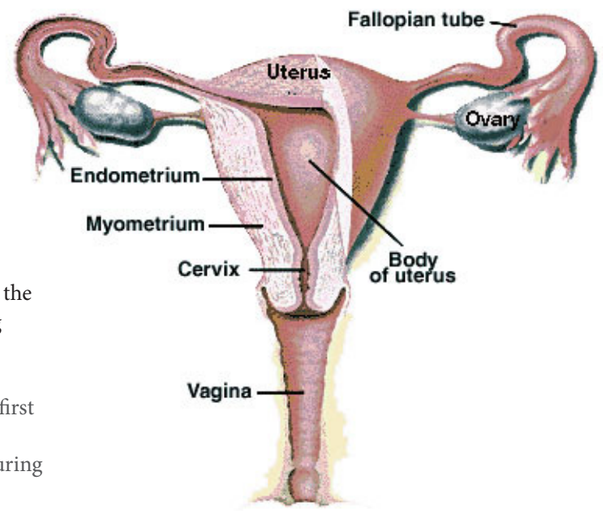
- Use PPP to explain the MNCH service provision structure from bottom level outreach services, which are available at the basic unit of 1,000 people by the ASHAs and AWWs, and for 3000 to 5000 people in SCs where JHAs and male health workers provide health care.
- Explain the other levels including: PHCs for 25,000 to 30,000 people where Medical Officers, Nurses and paramedical staff are on duty and normal delivery and newborn care, and referral services are provided; Community Health Centre (CHC) for 80,000 to 1,20,000 rural people; the Taluka Hospitals (TH) for 2,50,000 to 3,00,000 people; and District Hospitals for more than 20,00,000 people where specialists and emergency care and caesarean section services are available.
- Explain how the referral services/linkages ensure a MNCH continuum of care as the woman is able to get the complete package through any facility that is appropriate.

MNCH SERVICE PROVISION



1.7 BASIC FACTS AND DEFINITIONS RELATED TO MNCH

- Tell them that it is important to understand the anatomical and medical terms related to pregnancy and child birth.
- Ask participants to explain the anatomy of uterus and the broad functions of the system.
- Use PPP to add/correct/explain and consolidate the learning to fully explain the anatomy of the reproductive organs of a women including:
  - Pregnancy (Gestation)
  - Total gestation period
  - Full term, pre-term and post-dates
  - Three trimesters
  - Labour and its four stages
  - Pregnancy outcomes and
  - Definitions of some terminologies



- Consolidate the information by highlighting that the MNCH continuum of care includes the following services:
  - **Antenatal care** – care during pregnancy
  - **Intra-natal care** – care during the delivery and first two hours after the delivery
  - **Postnatal care** (Mother and newborn) – care during the first 42 days
  - **Child care** – care of the child up to age 5

SESSION 2: ANTENATAL CARE (ANC)

Objectives

To understand:
- ANC at all stages
- Importance of ANC
- Essential components of ANC
- High risk pregnancy
- Danger signs in pregnancy
- Birth preparedness for a safe delivery
- Key messages
- ASHA's role in ANC

Methodology

Case study, small group discussions and presentations in plenary, PPP and discussion

Duration

2.5 hours

Training Materials

Laptop, LCD projector, screen and pointer, photocopies of Tool 1: Case studies for ANC; PPP: ANC, Background Material 2: ANC

Tips for facilitators

This is an important session that provides a holistic understanding of the ANC stage, the care required at this stage, possible risks and dangers and signals that indicate urgent referrals to doctors. A senior medical doctor that has experience of handling MNCH issues should act as a technical co-facilitator. While consolidating the discussion on key issues ensure that all the points given in the background material are included in the discussion.

Process

2.1 IMPORTANCE OF ANC

- Divide the participants into five groups. Give one of the case studies to each of the groups.

Case 1: Savitha
Savitha is seven months pregnant and has never visited a hospital before. She had come to the hospital complaining of a severe headache for three days and blurred vision. When the nurse at the PHC checked her BP it was very high. She advised Savita's husband to take her to the District Hospital immediately.

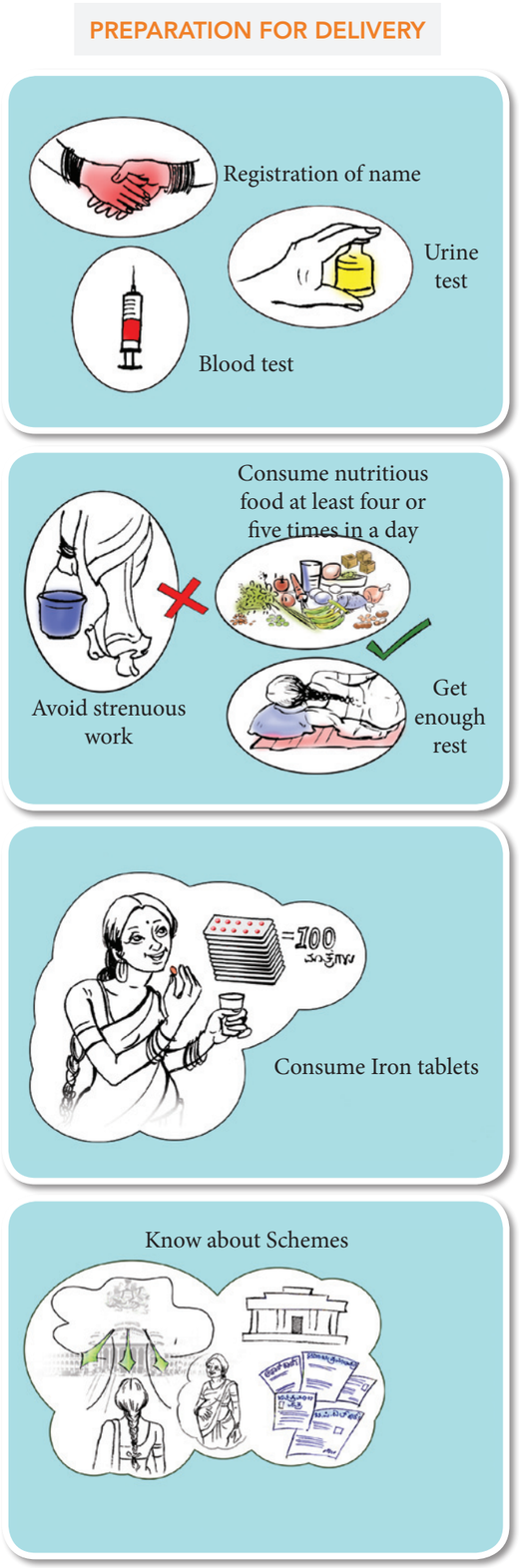
Case 2: Uma
Uma and her husband both work as agricultural labourers. Uma had not been having sufficient rest or food at regular intervals for the last two months because of the heavy work load. She had visited the SC when she was in her 5th month of pregnancy and was given a TT injection and iron tablets. Uma did not take half of the iron tablets as her aunt warned her that if she did, the baby would grow too big for her to have a normal delivery and it would result in a caesarean operation.

Case 3: Radha
24-year-old Radha was 9 months pregnant with his first child. She started having labour pains around midnight. After two hours her water bag broke and the water was clear. Suresh, Radha's father was not able to arrange for a 108 vehicle (Government ambulance) or a private vehicle to go to hospital for delivery. As the labour pains started getting strong, they called in the ASHA at 3:00 a.m. Radha's pressure started dropping and the ASHA had to fetch a JHA from home. With great difficulty they saved the lives of the mother and child.

Case 4: Vindhya
Vindhya was 6 months pregnant. She started bleeding unexpectedly. Her husband Srinivas had gone to visit a temple and would return only after 3 days. Although she was worried, she kept quiet and planned to go to the hospital when her husband returned. When her husband came back, he took her to the hospital. But it was too late, the baby had already died.

Case 5: Rani
Rani was a mother of three children and had two abortions in the past. She contributed to the family income by rolling papads. Her husband is a daily wage labourer. She ate only what was left after feeding her husband and children, which was not very much food. When she got pregnant again, she had no money to have any additional food or get any other help. She was very weak, but was still smiling when she was admitted at the hospital, but died during delivery.

- Ask group members to read their case study in the group, discuss and answer the questions below:
  - What do you think had gone wrong or right in this case study?
  - Why do you think this happened?
  - How do you think this could have been averted?
  - Is there anything more that should have been done?
- Allow 15 minutes for discussion. Ask a representative from each group to take 5 minutes to read out their case study and share their responses to the discussion questions.
- Ask other groups to share any other key information about the case study.
- Probe further and ask all participants these additional questions:
  - Were there any danger signals?
  - Were they ignored?
  - What could have been the appropriate action in each case?
- Continue with the next 4 case studies in the same manner.
- Consolidate the presentations and tell the groups that ANC stage requires careful care and adherence to good practices. If ignored, the life of the mother and child could be in danger.
- Explain that ANC is the particular form of medical care given to a pregnant woman and her baby starting from the time of conception up to the delivery of the baby.
- Tell them that every woman in her ANC stage needs to remember to:
  - Register for ANC services, preferably in the first trimester.



- Keep the ASHA informed about problems encountered at an early stage
- Take support from neighbours / VHSNC at an early stage
- Do birth planning and preparation in advance, including arrangement of money and vehicle to get to the hospital if necessary.
- Eat nutritious food, get adequate rest, receive required immunizations at the right time, and take any medicine as prescribed by doctor.
- Clarify all doubts/preconceived notions about pregnancy and actual delivery.
- Ensure the ASHA registers them, visits them regularly and advises the family on issues such as government schemes, family planning, birth planning, nutrition, and ANC services
- Recognize danger signs which require immediate and appropriate action such as:
  ~ Headache and blurred vision
  ~ Bleeding
  ~ Breakage of water bag
  ~ Convulsion / fits
  ~ Loss of foetal movement

- Use PPP to explain that the ANC prepares the pregnant women for successful labour and delivery process by helping the mother maintain good health during pregnancy, informing the family members about pregnancy, labour and child care. More importantly, it provides a means of detecting problems with the pregnancy at an early stage when they are easily treatable and can avert maternal complications at delivery.

2.2 ESSENTIAL COMPONENTS OF ANC

- Use PPP to continue the presentation on essential components of ANC
- Explain the necessity of:
  - Early registration (after confirmation of pregnancy)
  - ANC visits – Minimum 4 (including registration)
- Ask them what could be the advantages of early registration.
- Note their response on a flip chart.
- Add any missing information and modify/correct their responses if required.
- Consolidate the benefits of early registration.
- Ask them what could be the importance of ANC visits by ASHA/JHA.
- Note their response on a flip chart.
- Add any missing information and modify/correct their responses if required.
- Explain that ANC visits should be a minimum of four (including registration) or once a month in the case of high risk pregnancies.
- Tell them that ideally these visits should be during the following period:
  - **First visit:** 8-12 weeks
  - **Second visit:** 24-26 week,
  - **Third visit:** 32 weeks
  - **Fourth visit:** 36-38 weeks
- Explain the rationale behind the schedule of the ANC visits and regular and specific services given by the ASHA during the ANC visits.
- Consolidate the benefits of early registration and follow-through on all visits.
- Focus on preventive measures highlighted by health education, advice, and counselling on:
  - Nutrition - iron and folic acid tablets for 3 months
  - Vaccination - two doses of TT vaccine
  - Birth planning
  - Safe abortion
  - Family planning
  - Institutional delivery
  - Information about government schemes such as JSY, Madilu Kit, Prasooti Araike.
- Discuss:
  - Anaemia
  - Pregnancy induced Hyper tension (PIH)
  - Need for blood grouping[1]
- Ensure that participants know where ANC services are usually provided. Give specific locations if necessary.
  - **Community level**: ASHA, AWW, VHSNC and SCs.
  - **Facility level:**
    ~ Level 1 – SC and non-24*7 PHC
    ~ Level 2 – 24*7 PHC[2] and non FRU CHC
    ~ Level 3 – FRU CHC, TH, DH

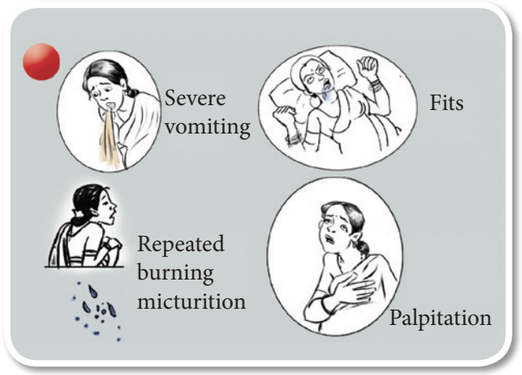
2.3 HIGH RISK PREGNANCY

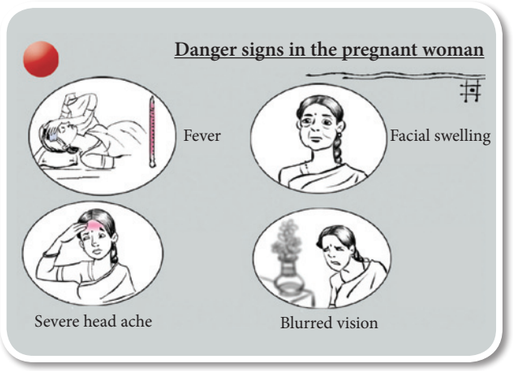
- Ask the participants what is meant by the term high risk pregnancy.
- Note their response on a flip chart.
- Define high risk pregnancy as one in which some conditions puts the mother or the developing foetus, or both at a higher-than-normal risk of developing complications during or after the pregnancy and delivery.
- Explain that a pregnancy can be considered a high-risk pregnancy for a variety of reasons and complications can be divided into maternal and foetal.
- Highlight that high risk cases should be regularly monitored by the ASHA by planning monthly visits, encouraging regular check-ups where ANC services are available, watching for danger signals, and opting for institutional delivery.

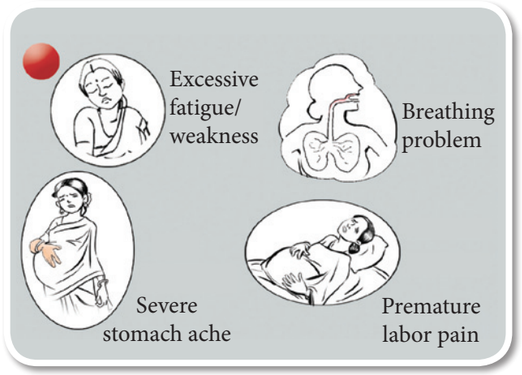
2.4 DANGER SIGNS IN PREGNANCY

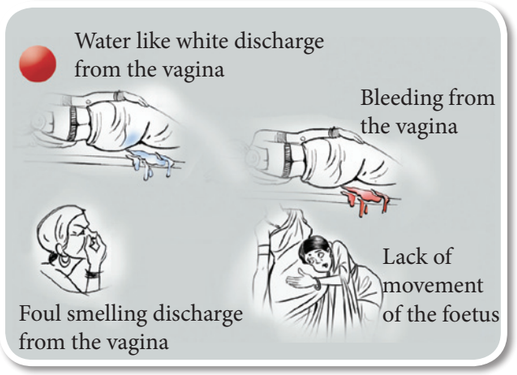
- Explain that one of the important steps in reducing the maternal and infant morbidity and mortality is to recognize the danger signals during the antenatal period.
- When danger signs are recognized it is crucial to immediately refer the case to the nearest ANC service facility.
- Emphasize that this is the responsibility of the RPs to be aware of these signs and to support the ASHAs and JHAs in their work to do the needful when necessary.
- Use PPP to list the important danger signals that require immediate hospitalization.
- Explain there are other signals that should be referred to ANC service facilities, but which are not emergencies that must be hospitalized immediately. These are:
  - Severe anaemia – shows iron deficiency
  - Night blindness – shows vitamin A deficiency
  - Fever – a sign of infection
  - White discharge - a sign of infection
  - Multiple pregnancies - requires special attention during delivery
  - Mal-presentations - requires special attention during delivery
  - Pain/burning when urinating – a sign of urinary infection

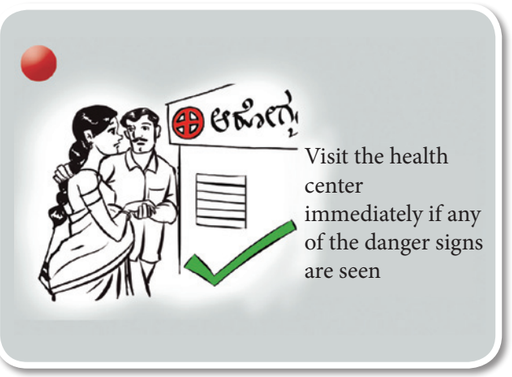
DANGER SIGNS IN THE PREGNANT WOMAN











1 The blood groups are , A, AB, B, O and RH negative and positive
2 Services are available at the PHC on all seven days of the week and on all 24 hours of each day

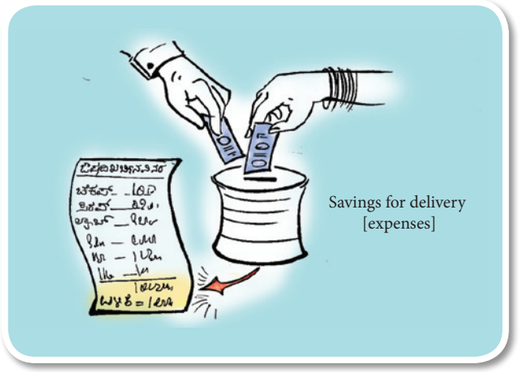
2.5 BIRTH PREPAREDNESS FOR A SAFE DELIVERY

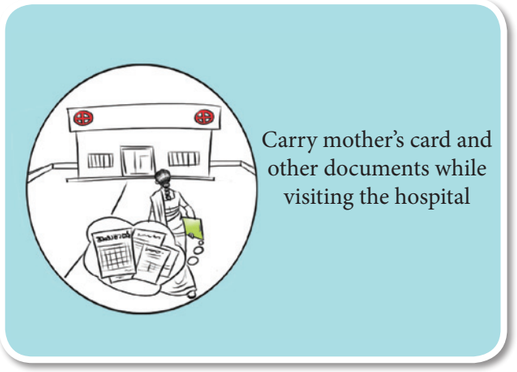
- Ask participants how women should begin to prepare for a safe delivery.
- Note their response on a flip chart.
- Use PPP to discuss birth preparedness.
- Explain that identifying the estimated delivery date (EDD) is important and includes both medical and non-medical aspects.
- The non-medical aspects include:
  - Arranging for the finances for the delivery process.
  - Identifying an accompanying person either among family or friends who can stay during delivery.
  - Knowing the contact numbers of ambulance / 108 van or any other available vehicle.
  - Knowing the contact numbers of the ASHA and JHA.
- The medical aspects include:
  - Checking for availability of correct blood type from a nearby blood bank, if it would be required.
  - Checking for availability of doctors/specialists and referral to FRU if there was any complications during delivery.

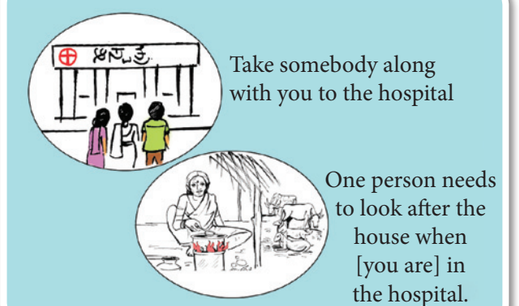
2.6 KEY MESSAGES

- Ask participants to sum up their learning to ensure that they remember all the information presented in Session 2.
  - Consolidate the key messages as:
  - Pregnant women need to register early for ANC services, preferably within the first trimester.
  - Pregnant women must have regular ANC check-ups – minimum four at regular intervals.
  - Pregnant women should eat a nutritious diet throughout their pregnancy, with a focus on iron-rich and high protein foods.
  - Birth planning should be done in advance to avoid last minute emergencies, including arranging for money, ambulance, blood transfusion, and specialist care.
  - Watch-out for danger signals if the pregnancy is high risk.
  - Pregnant women should be in regular contact with the ASHA who can give her appropriate advice.

PREPARATIONS FOR HOSPITAL DELIVERY







SESSION 3: DELIVERY / INTRA-NATAL CARE

Objectives

To help participants:
- Understand the importance of an institutional delivery
- Know how an institutional delivery can save the lives of mothers and babies
- Know the stages of delivery
- Know the danger signals during delivery
- Know the '5' cleans

Methodology

Case study, small group discussions and presentations in plenary, PPP, film and discussion

Duration

3 hours

Training Materials

Laptop, LCD projector, screen and pointer, photocopies of Tool 2: Case studies for Intra-natal care, PPP: Intra-natal care, Film 1: Stages of delivering a baby (There are several videos available on the internet).

Tips for facilitators

As this is a technical session, a senior medical doctor that has experience of handling MNCH issues should act as a technical co-facilitator. This session emphasizes the importance of institutional delivery to ensure that the RPs understand their responsibility to motivate the ASHAs to convince the pregnant women and their family members to access institutions for their deliveries.

Process

3.1 IMPORTANCE OF AN INSTITUTIONAL DELIVERY

- Divide the participants into five groups. Give one of the case studies to each of the groups.

Case 1: Smita
When Smita started labour pains at night, her grandmother conducted the delivery at home. They were all happy as both the mother and newborn were in good condition. After 1 hour, however, Smita started bleeding heavily. But her grandmother was not worried as she felt that such amount of bleeding is normal after delivery. At midnight, Smita became unconscious. Somebody from the community called 108 for ambulance. The PHC was 10 km away from Smita's house. Unfortunately Smita died in the ambulance.

Case 2: Lalitha
It was Lalitha's second pregnancy and her parents wanted her to deliver at home, and since there were no complications it would be OK. They had asked a traditional birth attendant to attend to her. Lalitha started having her labour pains at 8 p.m. The contractions were good, but the baby's head was not moving down. When they realised that there was a problem, they called for the local ASHA. The ASHA told them to take Lalitha to the hospital, but the family members did not take her immediately. Instead they waited until morning. Later that next morning, Lalitha delivered a dead baby.

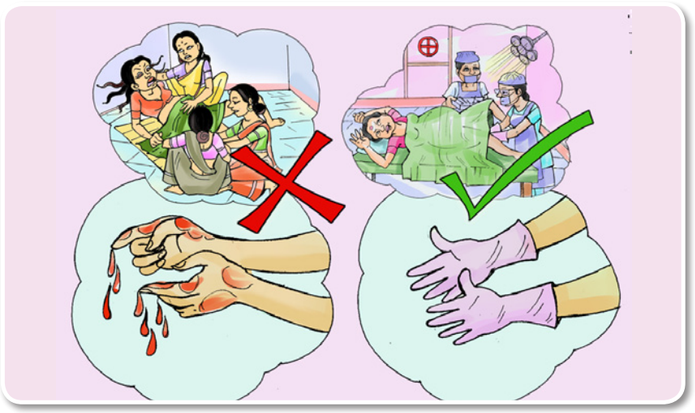
Case 3: Shalini
Shalini delivered a female baby at night at her home. She had never gone to a JHA or any other health care provider during her pregnancy. The JHA who conducted her delivery saw that Shalini was bleeding heavily and called 108 for the ambulance to send her to the nearby PHC. The medical officer at the PHC looked at Shalini in the ambulance and sent her to the District Hospital. When Shalini reached there the doctor said that she required blood immediately. But Shalini did not know her blood group. It took around an hour to check her blood group. Her blood group was B negative, but unfortunately there was no stock of B negative blood at the hospital. Shalini died before the family could find another source of her blood type.

Case 4: Geeta
Geeta delivered a male baby at the PHC and the Medical Officer advised her to stay in the PHC for two days (48 hours). Her husband Gopal took her home two hours after the delivery saying that she was OK and didn't need to stay there. The next morning Geeta's family members gave honey and water to the baby and branded it on the chest and abdomen. In the evening the baby developed a high fever and had to be taken to a nearby private hospital. The baby was admitted for three days. The family had to spend about 5 000 rupees for the treatment.

Case 5: Vandana
Vandana started having labour pains early in the morning. The pains gradually increased. She went to the SC in the afternoon. The JHA said that the contractions were good, but she said that she was not able to hear the foetal heartbeat. She advised them to consult the doctor at the PHC. The Medical Officer examined Vandana and found that the foetus was lying transversely and she needed a caesarean section. He referred Vandana to the Taluka hospital, but the specialist was not on duty, so Vandana was referred to the District Hospital, which was very far away. Despite being very late in the evening they set out. The baby was at very high risk and died.

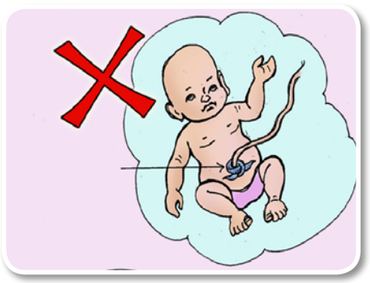
- Ask group members to read the case study in the group, discuss and answer the questions below:
  - What do you think had gone wrong or right in this case?
  - Why do you think this happened?
  - How do you think this could have been averted?
  - Is there anything more that should have been done?
- Allow 15 minutes for discussion. Ask a representative from each group to take 5 minutes to read out their case study and share their responses to the discussion questions.
- Ask other groups to share any other key information about the case study.
- Continue with the next 4 case studies in the same manner.
- Consolidate the following points:
  - A large number of maternal and neo-natal deaths are avoidable or preventable.
  - If the delivery is done at home, chances are that no preparation is done prior to the delivery and the birth attendant (either from the family or from the community) is not well-trained.
  - Delivery at home may not always result in morbidity, but that does not mean that home delivery is a good option. In case of any danger sign or prolonged labour, it would be difficult to manage at home.
  - It is better to avoid the rush of a last-minute transfer to the hospital if medical problems arise and choose the option of institutional delivery.
  - Institutions have round-the-clock help for the mother and baby, for example, food, medical assistance, and are able to quickly respond during emergencies.
  - Institutional delivery is one of the safest options for the mothers-at-risk to address medical complications and avert the possibilities of maternal and infant deaths. Procedures such as caesarean sections and forceps deliveries offer solutions to dangerous situations that are available only at the institutions.
    - ~ It is important to convince the families to get every delivery done at an institution, but especially for high-risk cases, institutional delivery is the only option.
    - ~ Any danger sign requires immediate and appropriate action.
    - ~ To ensure availability at the time of delivery, finding out what blood group the pregnant woman is needs to be done in advance.
    - ~ It is very important for the woman to stay at the hospital/health facility for 48 hours to avail care for herself and for the newborn baby.
    - ~ This is a crucial period and ignorance/lack of adequate knowledge about handling the newborn can prove fatal.
- Use PPP to reiterate that at the institutions intra-natal services are provided by trained and Skilled Birth Attendants (SBA) that include the JHA, staff nurse and medical officer.
- Inform them that the intra-natal care is available at the same place where ANC is.
- Ask the participants to recall the facilities where intra-natal services are available.
- Ensure that participants know the specific locations where intra-natal services are available at all three levels:
  - **Level 1** –SBA (SC, non 24/7 PHC)
  - **Level 2** – BEmONC (24/7 PHC, non-FRU CHC)
  - **Level 3** –CEmONC (FRU-CHC, TH, DH)

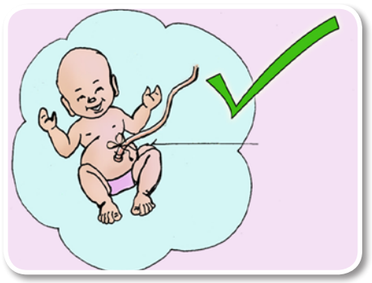
IMPORTANCE OF HOSPITAL DELIVERY



Hands could be dirty in home delivery In a hospital delivery hands are covered with gloves

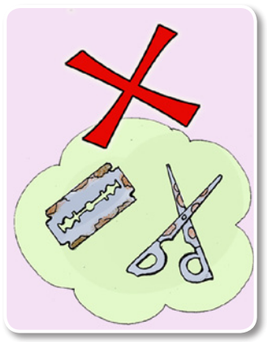
Dirty cloth *Tying the umbilical cord with dirty thread*

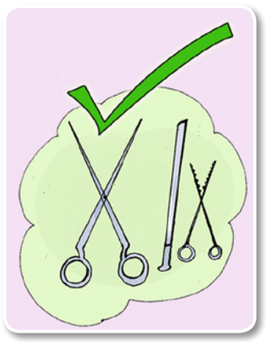




Clean Thread *Tying the umbilical cord with clean thread*

Rusted blade or scissors

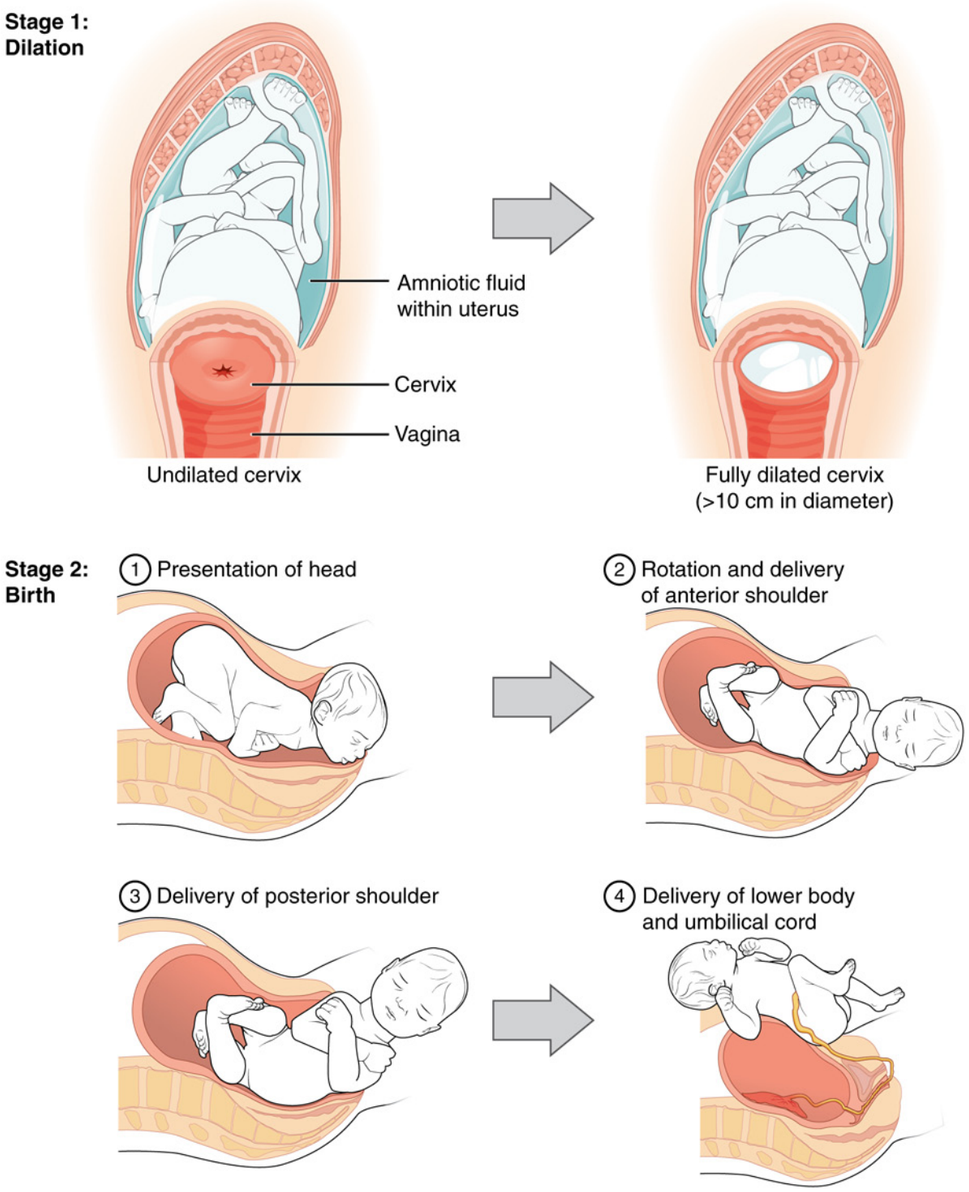


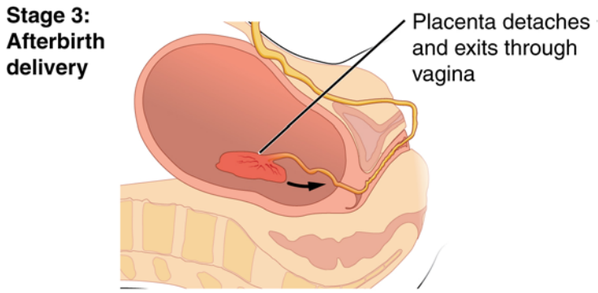


Sanitized blade and scissors

3.2 STAGES OF LABOUR

- Inform the participants that there are four stages in the delivery process.
- Show the film on 'Stages of delivering a baby' which is available online. http://www.babycenter.in/v1027490/inside-pregnancy-labour-and-birth and/or https://www.youtube.com/watch?v=YlISC6KsYcc (National Geographic Documentary, 'In The Womb')
- Pause after each stage and explain the changed position of the baby and the process that is taking place.
- Explain that child birth is a very natural process and happens normally in most cases.
- However, some pregnant women in rural areas face several challenges during the entire phase of pregnancy/delivery due to malnutrition and psychological pressures.
- Medical assistance by trained / skilled birth attendants can improve their chances of a normal/safe delivery.
- Use PPP to give an in-depth overview of a normal/safe delivery.





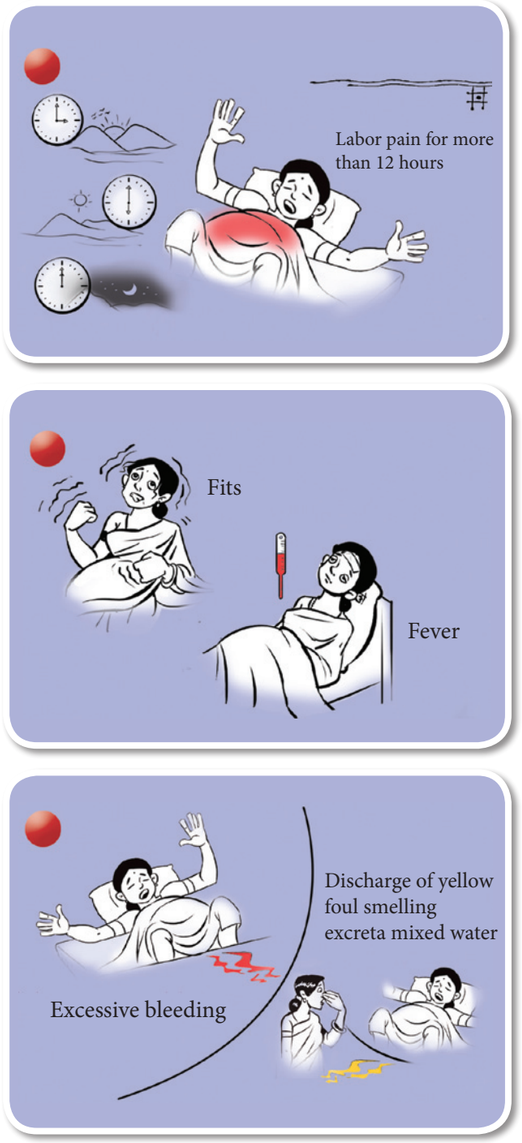
3.3 DANGER SIGNALS DURING THE DELIVERY PERIOD

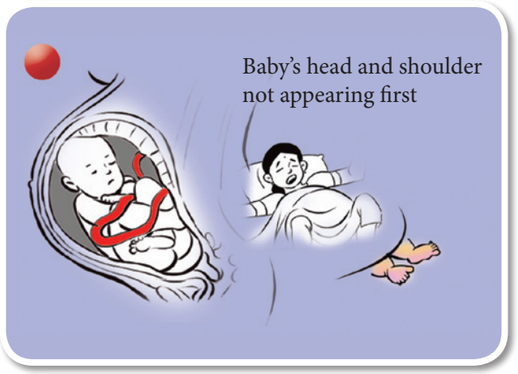
- Tell the participants that just as there are danger signs that classify pregnancies to be high risk, there are also danger signs during the delivery period.
- Ask the participants to brainstorm some danger signs during delivery.
- Note their response on a flip chart.
- Use PPP to explain the danger signals during delivery:
  - Irregular/fast/very slow fetal heart beats[1] (Fetal distress)
  - Labour taking more than normal time in any stage (Prolonged labour)
  - Head or shoulders not coming out[2] (Obstructed labour)
  - Umbilical cord coming out before the baby (Cord prolapse)
  - Yellow or foul smelling liquor[3] (Meconium stained liquor)
  - Placenta not expelled completely[4] (Incomplete / retained placenta)
  - Fever
  - Fits

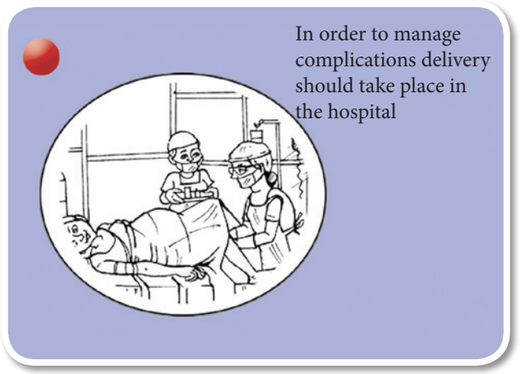
- Use PPP to explain the technical terms that were used in the film.
- Highlight that if any one of these signals is present during the delivery period, it is important not to wait for normal delivery. It is important for a doctor to decide if the pregnant woman should have the delivery by caesarean section and to take the doctor's advice.
- Tell them that waiting for normal delivery may distress the baby and lead to physical/psychological problems.

1 The normal range is 120 to 160 heart beats per minute
2 This could be result of different factors such as transverse position or bigger size if the baby or small size of the pelvis/ cervix not opening.
3 The foul smell indicates infections
4 If the placenta does not come and effort is made to remove it forcibly, there is a danger to lead to hemorrhage

COMPLICATIONS DURING DELIVERY







3.4 THE '5' CLEANS

- Ask the participants if they can state the one key thing that is critical for ensuring a successful delivery.
- Note their response on a flip chart.
- Focus on the term cleanliness.
- Tell them that cleanliness during the delivery process is one of the most critical components for a safe delivery process.
- Ask participants to identify most critical five things that need to be clean for the safe delivery.
- Note their response on a flip chart.
- Consolidate the understanding by highlighting the '5' cleans.
  - Clean hands
  - Clean delivery surface
  - Clean cord cut
  - Clean cord ties
  - Clean cord stump care
- If the participant list other component that should be clean during delivery, agree, but tell them the above '5' cleans are most critical.

- Consolidate the main points of Session 3:
  - Knowing the advantages of institutional delivery
  - Knowing the stages of labour
  - Recognizing danger signs during delivery
  - Importance of maintaining cleanliness

SESSION 3: POST-NATAL CARE (PNC)

Objective

- To help the participants understand post-natal care (PNC) and its importance
  - Importance of PNC
  - Essential components of PNC

Methodology

Case study, small group discussions and presentations in plenary, PPP and discussion

Duration

3 hours

Training Materials

Laptop, LCD projector, screen and pointer, photocopies of Tool 3: Case studies for Post-natal care and PPP: Post-natal care

Tips for facilitators

The PNC period is one of the most critical periods in the maternal and neo-natal care continuum. Many maternal and infant deaths occur during this period. There are lot of misconceptions around how, when and what to feed a newborn, how to keep it warm, clean and safe. This session needs a technical co-facilitator who is a senior medical doctor who has MNCH experience and can emphasize the importance of post-partum care. The RPs must understand their responsibility to motivate the ASHAs to guide the nursing mothers and their families to access health care at the nearest institution if there are any danger signs.

Process

4.1 IMPORTANCE OF PNC

- Give one of the case studies to each of the six groups.

Case 1
A five day old newborn had bleeding from his umbilical cord. The grandmother applied some cow dung, a tradition in many villages as people believe it has antiseptic properties, to prevent the bleeding. But it did not stop. Then she tied a piece of cloth around the cord and the bleeding stopped. After few days, the baby developed high fever and there was pus on his umbilical cord.

Case 2
A newly delivered mother started breast feeding her baby after two days of delivery and therefore the baby was not fed with the colostrum. She also did not feed the baby regularly. After ten days, the new mother began to complain of pain in her breasts. She also started running a fever. She stopped feeding the baby as she felt that feeding would increase her pain.

Case 3
A grandmother started feeding a ten-day-old baby with sugar water, honey and cow milk along with the breast feeding as she felt that exclusive breast feeding would not help proper growth. A few days later the baby developed loose stools and vomited profusely. The mother stopped breast feeding thinking that it would increase the loose motions and the baby was given only sugar water.

Case 4
Kamala returned from her mother's house to her husband's house five days after her delivery. Soon after she started complaining of headache and blurred vision. Her husband got her some tablets for headache from a medical shop. Her headache subsided that day but came back the next day. Her husband then took her to a local quack who did not examine her but gave her some tablets and ointment for headache, advising them to not to worry. The next day, Kamala had convulsions and became unconscious.

Case 5
Parvathi delivered their 3rd daughter. The first two daughters were aged 4 and 2 years. The newborn baby only weighed 2 kg. Both Parvathi and her husband were disappointed at having another girl child, but decided that they will try again and maybe have a male baby next time.

Case 6
Bharati delivered at a PHC and returned home. After four days the JHA and the ASHA came to visit her at home. She reported heavy bleeding. Both JHA and ASHA tried to stop her bleeding, but when it was not under control, they called the ambulance (108) to take her to the nearby facility. Bharati was taken to the PHC where the Medical Officer gave her injections and tablets and the bleeding soon stopped.

- Ask group members to read the case study in the group, discuss and answer the questions below:
  - What do you think had gone wrong or right in this case?
  - Why do you think this happened?
  - How do you think this could have been averted?
  - If everything is all right, then suggest what advice you would give a new mother?
- Allow 15 minutes for discussion. Ask a representative from each group to take 5 minutes to read out their case study and share their responses to the discussion questions.
- Ask other groups to share any other key information about the case study.
- Continue with the next 5 case studies in the same manner.

- Consolidate the following points:
  - Soon after child birth it is very important for the mother to adhere to healthy and medically appropriate practices for herself and her newborn baby.
  - The umbilical cord should be cut with a sterile blade and tied with a clean cloth/clamp. The cord stump must be kept clean and dry. It should be allowed to dry naturally to prevent it from getting infected. Nothing should be applied to the cord stump, especially not cow dung. This could result into infection/pus and further complications.
  - The newborn and the mother should stay at the institution for 48 hours. If they cannot stay, the JHA and the ASHA should give them all the information about caring for the mother and the newborn. They must be told to contact the JHA or ASHA if there are any problems, even seemingly simple/small problems.

- Exclusive breast feeding is best for the infant. As the mother continues to breast feed, more milk is produced. The mother should not stop breast feeding the baby even if there are signs of loose stools. If the mother or family members feel that breast milk is not sufficient, they should consult the JHA or the ASHA to get help.
- If supplementary feeding is required, the mother needs to know what, when and how the baby should be fed and should contact the JHA or the ASHA immediately to prevent infant from getting sick or dying.

- Use PPP to explain that PNC refers to care of the mother and the baby after the delivery, up to 6 weeks (i.e. 42 days).
- PNC care is an important component of MNCH as a high proportion of deaths of mothers and newborns take place during this period.
- Repeat some of the statistics about IMR data from Session 1 and explain that good PNC can produce better outcomes.
- Explain the importance of PNC visits and adhering to the schedule. Home visits of the JHA and the ASHA are scheduled on the 3rd, 7th and 42nd day after birth for evaluation of the mother's health, and on the 14th, 21st and 28th day for the newborn. These visits are important to help the mothers understand the importance of breast feeding, keeping the baby warm, maintaining cleanliness and ensuring the completion of the immunization cycle for the baby.
- These home visits also help to assess the overall health conditions of mother and newborn and identify if there are any danger signs or problems such as heavy bleeding/infection. If there are problems, the ASHA or JHA can recommend that the mother or newborn is hospitalized.
- The home visits can also be used to provide appropriate counselling and advice and referral to appropriate clinics in case of any complications.

4.2 ESSENTIAL COMPONENTS OF PNC VISITS

- Use PPP to explain that the PNC visits should focus on the following components:
  - **Assessment of mother and newborn**
  - The baby has to be given thermal protection and ensure that the baby does not become either too cold (Hypothermia) or too hot (hyperthermia).
  - Explain the rationale behind keeping the baby warm.
  - If the newborn is low birth weight (LBW) it should not be bathed until it weighs at least 2.5kg as babies below this weight are prone to hypothermia.

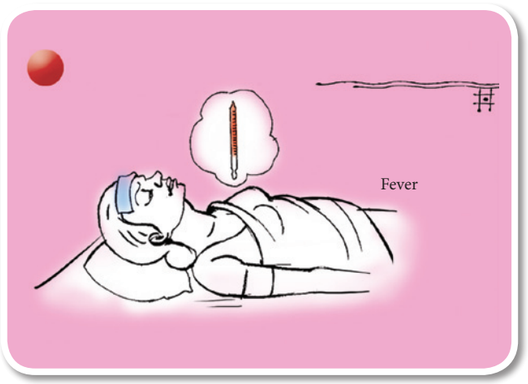
  - **Identification of danger signs in mother and newborn**
  - Identifying danger signs during the post-natal period is the responsibility of the JHA and the ASHA. They should check if any danger signs are present and if so, call for immediate medical assistance to prevent mortality and morbidity in both mother and infant.
  - Use PPP to present the important danger signs in mother and newborn.
  - Highlight that LBW infants have low immunity and their lungs are not fully developed. These infants need special care, such as 'kangaroo' care.
  - Use PPP to explain the advantages of 'kangaroo' care.

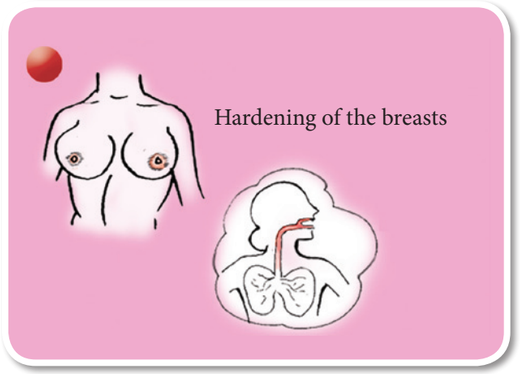
  - **Advice and counselling**
  - The new mother and her family need guidance on general health practices because there are misconceptions about nutrition, cleanliness and breastfeeding.
  - Information is also needed about types of immunizations, the prescribed schedule and birth registration.
  - Ask the participants to brainstorm topics on which the ASHAs should provide advice and counselling.
  - Note their response on a flip chart.
  - Use PPP to ensure that all the topics are fully explained.

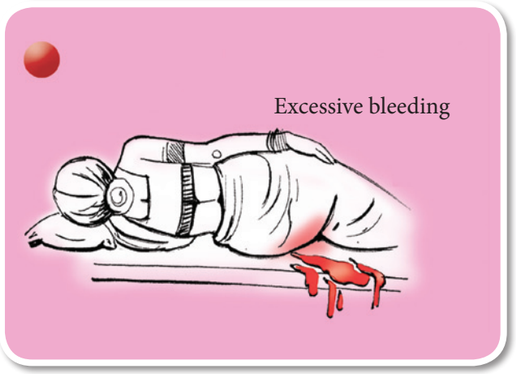
  - **Referral for complications**
  - If there are any danger signs/ complication the case needs to be referred to the nearest health care facility that offers an appropriate service.

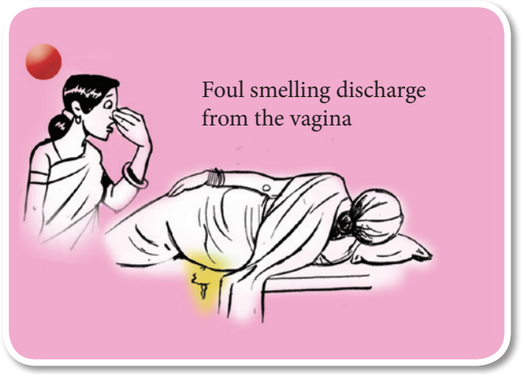
- Consolidate the main points of Session 4:
  - Importance of PNC
  - Essential components of PNC

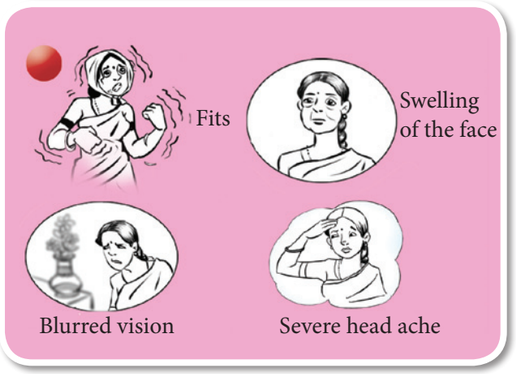
DANGER SIGNS IN THE POSTNATAL WOMAN

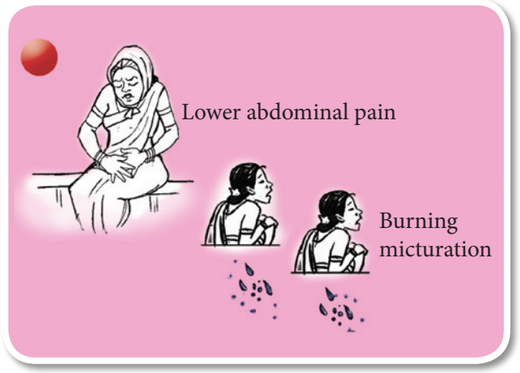




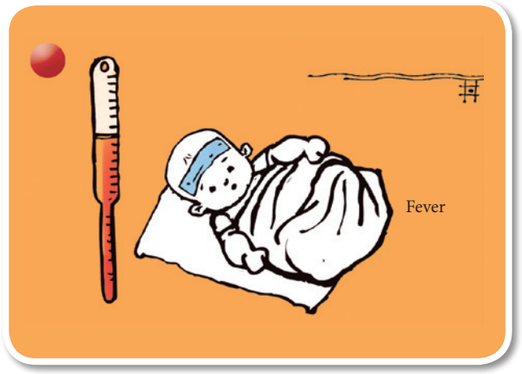


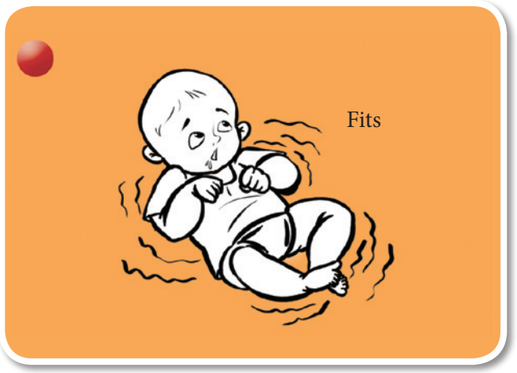


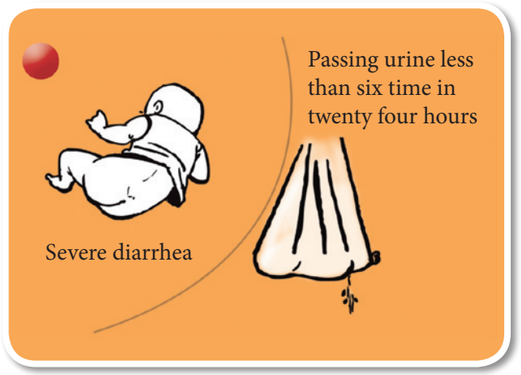


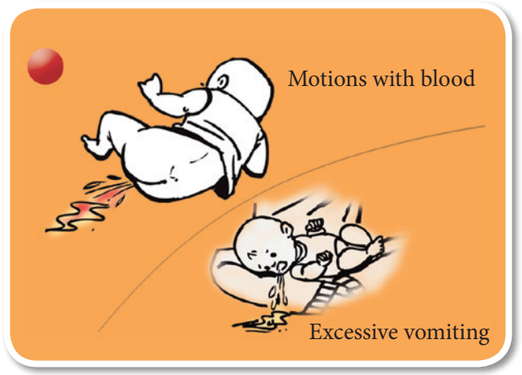


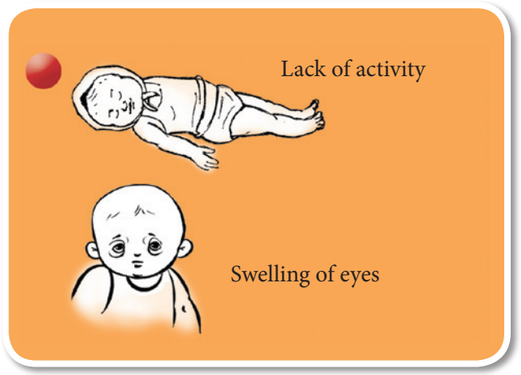
DANGER SIGNS IN THE NEW BORN

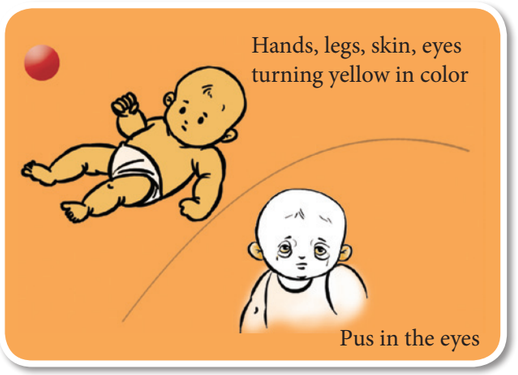


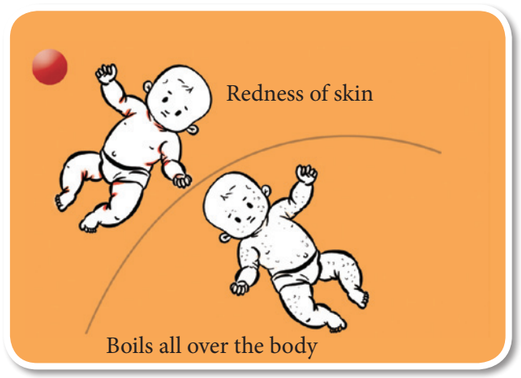


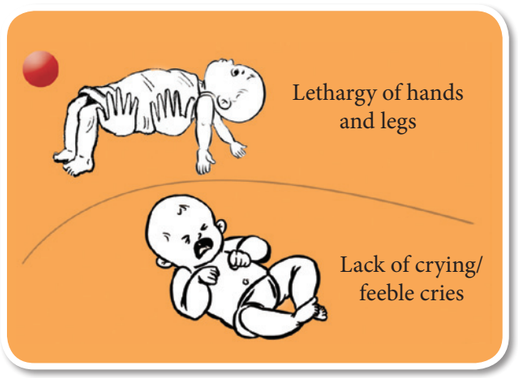


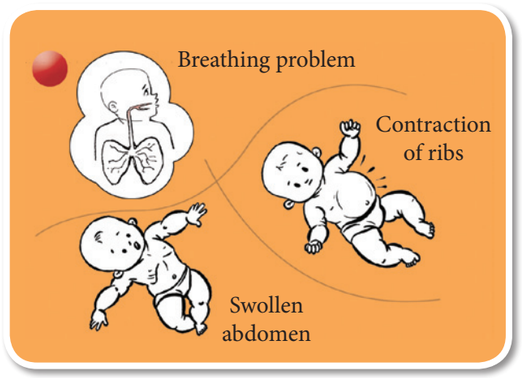


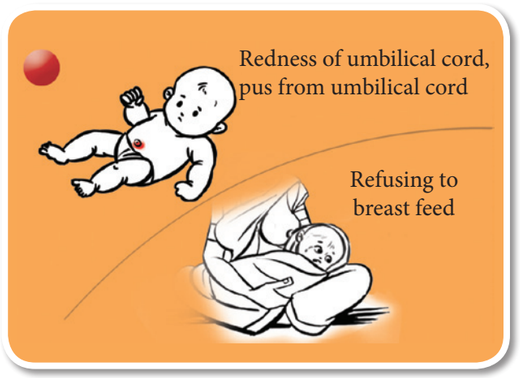












SESSION 5: CHILD CARE

Methodology

Case study, small group discussions and presentations in plenary, PPP and discussion

Duration

3 hours

Training Materials

Laptop, LCD projector, screen and pointer, photocopies of Tool 4: Case studies; and PPP: Child care

Objectives

To help participants understand:

- The last stage in the MNCH continuum of care.
- The importance of proper child care.
- The importance and method of monitoring the growth and development of a child.
- The causes of malnutrition and ways to prevent it.
- The causes of diseases and illness and how to prevent and manage.

Tips for facilitators

Child care is the last stage in the MNCH continuum of care. Child care is crucial as most infant deaths occur during the first 24 hours after birth and most children die within the first year of their life. Wrong practices, misconceptions and poor awareness about breast feeding, external feeding, immunization and preventing/managing illness at this stage can damage a child's health in the long run and need to be corrected.

Process

5.1 IMPORTANCE OF CHILD CARE

- Define the last stage in the MNCH continuum of care as child care.
- Tell the participants that a baby who is 0 to 1 year old is referred to as an infant and from the first to five years is referred to as a child.
- Explain that the period from year 1 to year 5 is very important for the child's future health. During these years the growth and development of the child needs to be monitored closely to prevent long term health problems.
- Give one of the case studies to each of the five groups.

Case 1
Channu is an 8-year-old child studying in the 2nd standard. He had mild fever and weakness for few days. One day when he was playing, he suddenly fell down and could not stand on his feet. He started crying. Some friends carried him back to his home. When his parents saw him they took him to the Taluk hospital. The doctor said it might be polio.

Case 2
Shilpa and Aishwarya were sisters married into the same family. After one year, both of them gave birth to one child. The elder sister, Shilpa was beauty conscious and so she stopped breastfeeding the baby very early and fed her child with a bottle. Aishwarya, the younger sister preferred to breast feed her baby. As the children grew, Aishwarya's baby, which was breast fed longer, was healthier than Shilpa's bottle-fed baby, who frequently suffered infections.

Case 3
A 2-year-old baby was suffering with cough, fever and difficult breathing. His grandmother tried to treat him with home remedies using basil leaves and honey. After fifteen days, the cough and fever worsened, but they still continued with the remedies at home without consulting a doctor. When the baby became very ill they rushed him to a doctor. The doctor said the baby's condition was very serious and they should have brought him much earlier.

Case 4
Gayathri, a 2-month-old baby, had been having watery stools for 3 days. She was not fed properly due to the illness. When the baby didn't pass urine the whole night, the next morning the family approached the JHA at the SC. Seeing the baby's condition, the JHA referred the baby immediately to the FRU as she decided that the baby required glucose (IV fluids).

Case 5
Rafay is an 18 month old boy who was severely underweight. Rafay was not being breastfed, but given roti, dal and vegetables. He eats about half to one roti thrice a day. His mother complains that he does not eat a lot and has very poor appetite. He has frequent episodes of respiratory infections, but no other illness. His immunization schedule is complete.

- Ask group members to read the case study in the group, discuss and answer the questions below:
  - What is the health problem affecting the child?
  - What do you think caused the problem?
  - What could be done to improve the child's condition?
- Allow 15 minutes for discussion. Ask a representative from each group to take 5 minutes to read out their case study and share their responses to the discussion questions.
- Ask other groups to share any other key information about the case study.
- Continue with the next 4 case studies in the same manner.
- Use PPP to explain all issues raised in detail:
  - Dehydration is a serious condition and the child needs immediate medical care. To prevent the child being dehydrated, it is important that it is given enough liquids, especially when the child loses fluid due to vomiting/diarrhoea.
  - Continuing breastfeeding for as long as possible is very important for a young child. Breast milk is the ideal food as it contains a mix of enzymes and antibodies, making breastfed children less likely to have diarrhoea, ear infections, respiratory illness, allergies, intestinal worms, and colds. Extended breastfeeding can also reduce the risk of breast cancer.[1]
  - Some home remedies can be helpful, such as a mitigating measure for minor illnesses, but only using home remedies in the case of severe infections can be dangerous. Consulting a qualified medical doctor at the earliest time can reduce serious illness.
  - Mothers need to have correct information and knowledge about basic nutrition and how the right foods can ensure proper growth during all the developmental stages of the child. Mothers need to know who to contact so they can access this information.
  - The mother and family should also know that the child care health services are expensive in private hospitals, while in government hospitals MNCH child care services are available at a cheaper rate.
  - It is important to immunize the child according to the prescribed schedule of required vaccinations. Otherwise the health of the child, and the community, could be compromised.
  - When a child has episodes of diarrhoea it is important to continue to provide food and liquids. Give boiled and cooled water, warm and fresh foods, but avoid fatty foods.

1 Collaborative Group on Hormonal Factors in Breast Cancer; Lancet, 2002 Jul 20; 360 (9328): 187-95

- Highlight the fact that if there are any problems, MNCH child care services can control illnesses and diseases.
- Ask the participants to recall the facilities where child care services are available.
- Ensure that participants know the specific locations where child care services are available at all three levels:
  - **Level 1** –SBA (SC, non 24/7 PHC)
  - **Level 2** – BEmONC (24/7 PHC, non-FRU CHC)
  - **Level 3** –CEmONC (FRU-CHC, TH, DH)

5.2 CAUSES OF CHILD DEATHS

- Ask participants to brainstorm the direct causes of child deaths.
- Note their responses on a flip chart.
- If these causes are among those which are included in the top three causes, congratulate them for their understanding.
- Otherwise tell them that all the causes they listed do lead to child deaths, but are not among the top causes.
- Use PPP to show to highlight the top causes are as follows:
  - Neonatal conditions (33%)
  - Pneumonia (22%)
  - Diarrhoea (14%)
  - Highlight that pneumonia and diarrhoea are both common causes of child morbidity and mortality, but are avoidable with appropriate hygiene (washing hands with soap and water before eating and after defecation).

5.3 GROWTH AND DEVELOPMENT

- Use PPP to explain that regular growth monitoring helps in checking whether the child's growth and developmental milestones are appropriate for its age. It also helps in early detection and subsequent mitigation of any physical handicaps found in children, such as vision and hearing loss.
- Explain that the growth and development depends upon several inherent as well as external factors.
- Ask participants to brainstorm what factors could affect growth and development.
- Note their responses on a flip chart.
- Use PPP to emphasize that when delayed growth and development indicators are identified, then early referral to an appropriate health care provider can prevent more serious or future complications.
- Tell them that the AWW plots the growth of the child on a graph chart which helps diagram and illustrate a child's developmental progress.
- Display the proto type of the growth chart (See background material) and outline the parameters of growth and the normal values at different ages.
- Explain what the green, yellow and red bands on the growth chart mean. The red band shows severe malnourishment, yellow moderate malnourishment and green shows no malnourishment.

5.4 PREVENTING MALNUTRITION IN CHILDREN

- Show a picture of malnourished children to help participants understand how malnutrition affects a child's growth and development indicators.
- Use PPP to explain the key messages to prevent malnutrition.
- Highlight the importance of exclusive breast feeding, complementary feeding, feeding during illness, prevention of illness and access to health care and AWW services.

5.5 PREVENTION AND CONTROL OF DISEASES

- Ask the participants if they agree that children are more prone to diseases than adults.
- Note their responses on a flip chart.
- Some illnesses, which are not usually fatal if diagnosed early and treated properly, are diarrhoea, the common cold and acute respiratory infections caused by a number of respiratory viruses.
- Tell them that low immunity levels are the major cause of diseases. Immunity levels can be affected by different factors and practices. Though many of these diseases are dangerous they can be prevented to a large extent if the child is immunized. These diseases are called 'Vaccine preventable diseases' (VPDs).
- Explain that immunization is one of the most well-known and cost effective methods of preventing diseases. However, immunization has to be sustained to prevent VPDs.
- Ask the participants to brainstorm common vaccine preventable diseases.
- Note their responses on a flip chart.
- Share the list of the six most common vaccine preventable diseases:
  - Tetanus
  - Poliomyelitis
  - Diphtheria
  - Pertussis (whooping cough)
  - Measles
  - Childhood tuberculosis
- Stress that the vaccines must be given at the right age, right dose, right interval and the full course must be completed to ensure the best possible protection to the child against these diseases. The schedule that tells us when and how many doses of each vaccine are to be given is an immunization schedule. If a child is not given the right vaccines in time, it is necessary to get them started whenever possible and complete the primary immunization before the child reaches its first birthday.
- Present the national immunization schedule and emphasize that the booster doses are essential.
- Highlight that for school admission a certificate of complete immunization is required.

SESSION 6: CRITICAL MNCH ISSUES

Objectives

- To review the MNCH continuum of care
- To identify seven issues that are critical to a MNCH intervention

Methodology

Small group discussion and plenary presentation and discussion

Duration

1 hour

Training Materials

Markers and brown sheets/ card sheets

Tips for facilitators

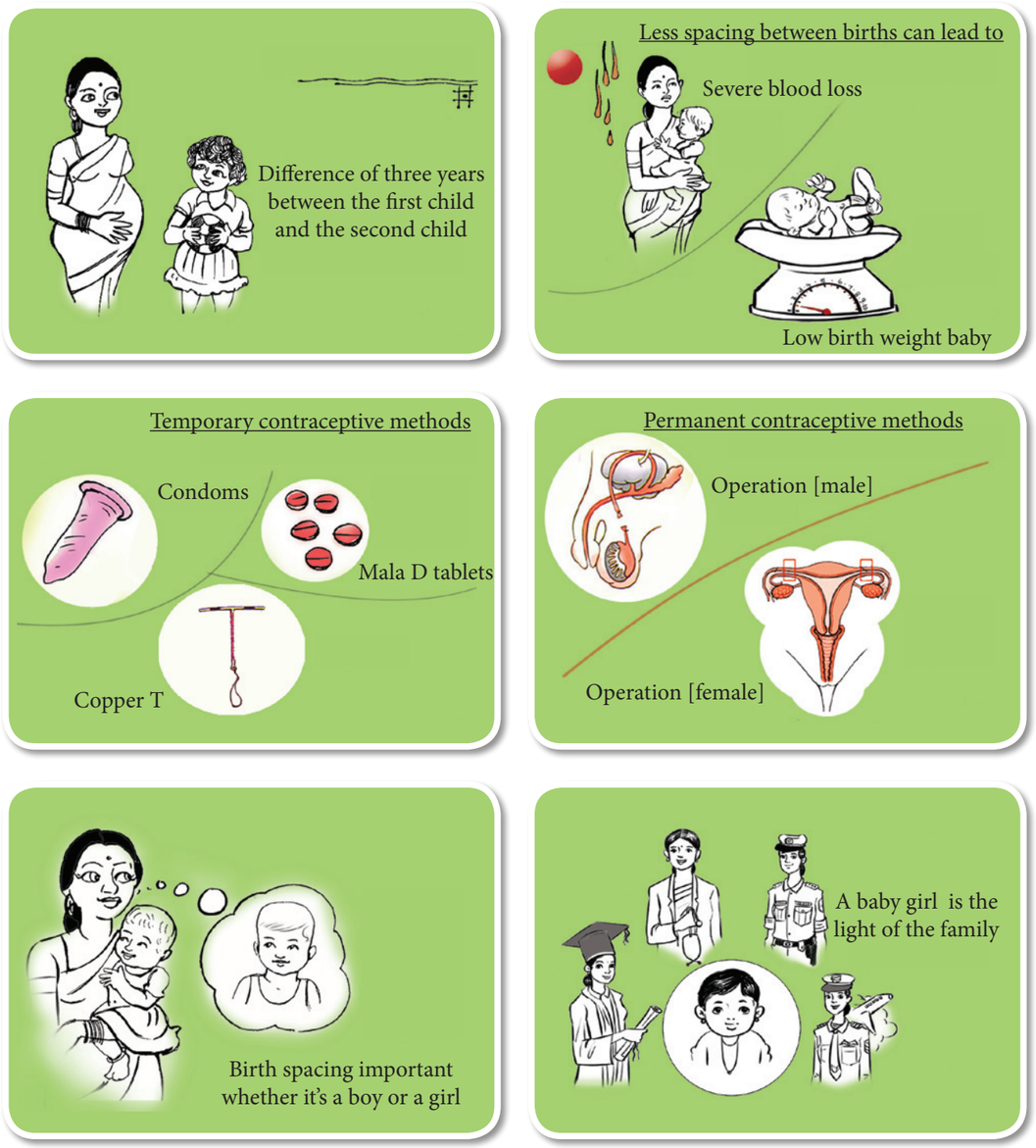
In this session the participants will review the different stages of the continuum of care and shortlist key themes that are critical to ensure the health of the mother and child. These key themes will form the key messages for a MNCH intervention. Although all issues are important, the participants will need to prioritize the most crucial issues for the intervention. The facilitator needs to help participants through this process of analysis.

Process

6.1 SEVEN CRITICAL ISSUES

- Ask participants to recall the stages in the continuum of care:
  - **Antenatal care** – care during pregnancy
  - **Intra-natal care** – care during the delivery and first two hours after the delivery
  - **Postnatal care** (Mother and newborn) – care during the first 42 days
  - **Child care** – care of the child till year 5.
- Divide participants into these four groups.
- Ask each group to list the major issues in each stage on a flip chart.
- Allow 15 minutes for discussion.
- Ask a representative from each group to display their flip chart on the walls of the training room and to take 5 minutes to share their answers.
- Continue with the next 3 groups in the same manner.
- Ask all the groups to now consolidate all of the issues that have been identified by all the four groups and to pick the 7 most critical issues for the Sukshema project's MNCH intervention.
- Allow 10 minutes for each group to list the 7 most critical issues on a flip chart and then to display their flip chart on the walls of the training room.
- On a clean flip chart the facilitator should list the common most critical issues from each group. Use tally marks to decide in what order they are ranked.
- If there are disagreements about some issues, discuss with the group. Come to an agreement on 7 issues.
- Now display the list of 7 critical issues that have been identified by MNCH experts.

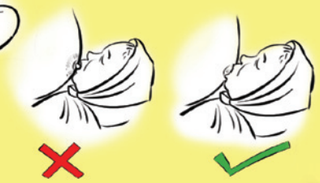
- Ask the group to compare their list with the list compiled by experts as follows:
  - ***Birth planning:*** This includes ensuring registration, receiving information about importance of institutional delivery, having JHA and ASHA contact numbers, arranging money and transport to go to the health care facilities, knowing blood group and arranging for blood before delivery, arranging clothes for the baby and preparing a care taker to accompany and care for the pregnant woman.
  - ***Nutrition:*** Importance of having nutritious food that include vegetables, fruits, sunflower or sesame seeds, supplemented by iron and folic acid tablets (normally 100 but 200 in case of severe anaemia), avoiding drinking too much tea or coffee, and maintaining basic hygiene at key times (washing hands before eating, after defecation and washing fruit/vegetables before eating).
  - ***Family Planning:*** Includes counselling on birth spacing and family planning methods appropriate to the profile and need of the pregnant woman.
  - ***Danger signs:*** Recognizing danger signs for mother and newborn during ANC, INC and PNC and knowing what to do/who to refer to.
  - ***Newborn care:*** Includes kangaroo care, breast feeding, thermal protection, the 5 'cleans', umbilical cord care, and giving the needed support to adjust to the new environment.
  - ***Government schemes:*** Information on government schemes, both state and central government that are MNCH related, with focus on *Madilu Kit, Bal Sanjivini, Thai Bhagya, JSY* and *Prasooti Arayike*.
  - ***Patients' Rights:*** Information about available health services and instilling a rights perspective among women in accessing the health care services in line with their needs.
- Tell the participants that these identified 7 critical issues will form the activities of the Sukshema project's MNCH intervention.



Newborn care

The first colustrum should be fed to the baby

Feed only breast milk for first six months feed



Clean the breast before breast feeding

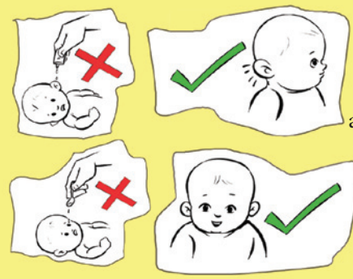
Breastfeed 8 to 10 times in 24 hours

Right positions to breast feed

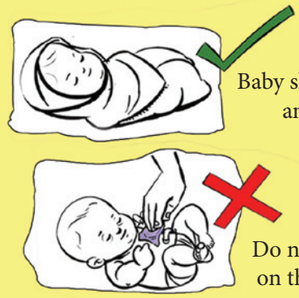
Follow the right way of breast feeding

Kangaroo care

Baby should sleep next to mother

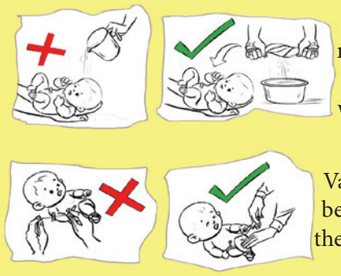


Do not put anything into the eyes and ears of the baby



Baby should be wrapped and kept warm

Do not apply anything on the umbilical cord



Cleaning the new born with a clean cloth without giving a bath

Vaccination to be given as per the advice of the doctor

Vaccinations

With appropriate care the infant can be saved from risk

SESSION 7: POST-TEST AND TRAINING EVALUATION AND FEEDBACK

Objectives

- To assess the extent to which the participants have understood the sessions' key messages.
- To assess what affect the module had on the participants' attitudes, knowledge and practice levels.
- To obtain feedback from the participants on the usefulness of the training and suggestions for enhancing future effectiveness.

Methodology

Reflection

Duration

30 minutes

Training Materials

Annexure 6 Post-test and Training evaluation and feedback form

Tips for facilitators

The post-test: will assess the extent to which the participants have understood the sessions' key messages. The seating arrangements can be changed to ensure that each participant does their own work so as to gauge how well they have understood the technical components and terms described through the module's sessions. This post-test can be modified based on the local training context. The post-test feedback can be either through sharing the marked tests, or through a group discussion about the best possible answers for each questions.

The training evaluation and feedback form: will assess what affect the module had on the participants' attitudes, knowledge and practice levels and obtain feedback on the usefulness of the training and suggestions for enhancing future effectiveness.

Process

- Assign a new 'classroom-like' seating arrangement for the participants, having them sit in rows that allow a space wide enough for the facilitator to walk through.
- Reassure them that this post-test is not for grading purposes, but to gauge the extent to which the training has been successful in highlighting the key themes and technical content.
- Give each participant a post-test and ask them to put their name at the top.
- Allow 20 minutes to complete it by choosing one correct answer from the multiple choices.
- After they finish, collect the filled questionnaires.
- Distribute the training evaluation and feedback form. Go over all the areas that they will need to think about while filling it in.
- Allow 20 minutes to complete it.
- While participants are completing the training evaluation and feedback form, the facilitators of the module should check the post-test papers and total the marks for each participant.
- Decide if the post-test results will be shared with the participants, or if a group discussion will be held on the correct answers.
- Collect the training evaluation and feedback forms from the participants.
- Either give back the post-tests and go over the correct answers, or hold the group discussion on the correct answers.
- Before the closing ceremony, ask the participants to share their feelings about the training: encourage anyone who is keen to orally share two positive aspects and two areas that need improvement.
- At the closing ceremony thank all the participants for their enthusiastic participation, congratulate them and wish hem the best as they go back to their own work areas and begin to initiate the intervention on the ground.
- Thank everyone else who contributed to the training program. This might have included administrative staff, venue owners, facilitators, guest speakers and the organizers.

TRAINING EVALUATION AND FEEDBACK FORM:

KARNATAKA HEALTH PROMOTION TRUST
Training Evaluation and Feedback Form

Name: _____ Designation: _____ Place of training: _____
Training dates: _____ Name of the PHC: _____

S.No.	Subject	Excellent	Good	Poor
1	Training content and sessions			
2	Training methodology and activities used			
3	Training skills of the facilitators			
4	Logistics at the training (Food, stay and comfort)			
5	Relevance and usefulness of training			

List the three aspects of the training that you found most useful.

1.
2.
3.

Name any session during the training that you did not understand properly/ or that was not communicated well.

1.
2.
3.

What are the three most important lessons that you can take back to your work place from this training?

1.
2.
3.

Please list suggestions for improved facilitation in future trainings.

1.
2.
3.

ANNEXURE 1 - Reading material on MNCH continuum of care

INTRODUCTION

Adopted by world leaders in the year 2000 and set to be achieved by 2015, the MDGs provide concrete, numerical benchmarks for tackling extreme poverty in its many dimensions and provide a framework for the entire international community to work together towards a common end – making sure that human development reaches everyone, everywhere.

Two of the health-related MDGs focus on reducing child mortality and improving maternal health. The global data substantiates provides the rationale for its inclusion in the MDGs. It says Worldwide:

- 530,000 women die from pregnancy related complications
- 4 million babies die within first month of life
- More than 10 million children die under age 5
- Nearly 99% of mother, newborn and child deaths occur in low and middle income countries

Most of these deaths are preventable if proper and timely care is made available. If we further analyse the data it shows that most of the deaths occur during the first five years: of which most happens in the first 24 hours.

Therefore, the MNCH programme under the NRHM, is envisaged to address complications during pregnancy and delivery and during neonatal and first five years, as universal coverage with key effective, affordable interventions: care for newborns and their mothers; infant and young children.

WHAT IS CONTINUUM OF CARE?

Continuum of care is a concept involving an integrated system of care that guides and tracks patient over a period through an intensive and comprehensive array of health services spanning the entire lifecycle from 'start to finish' in a seamless manner rather than a specific and unvarying list of services.

WHAT IS MNCH CONTINUUM OF CARE?

The 'MNCH Continuum of Care' includes integrated service delivery for mothers and children from pregnancy to delivery, the immediate postnatal period, and childhood. It recognizes that safe childbirth is critical to the health of both the woman and the newborn child and is based on the assumption that the health and well-being of women, newborns, and children are closely linked and should be managed in a unified way.

WHY THE APPROACH IS ESSENTIAL?

In the absence of the continuum of care approach, the policies and programs in the fields of maternal, newborn, and child health, would generally focus on one issue alone and address it with reference to only one of these groups. This approach would result into obscuring important linkages. When approached together and incorporated into integrated programs, these interventions can offer continuity of care and save millions of lives by building linkages, reducing missed opportunities, minimizing delays in care and treating the components as a continuum rather than separate parts.

This approach that groups the interconnected fields of maternal, newborn, and child health can help families access the benefits more easily. Linking interventions and delivering it as a package within the continuum of care can also avoid the duplication and make it more cost-effective. It thus can have a stronger impact and accelerate progress to improve the lives of families.

WHAT DOES IT INCLUDE?

The MNCH services under NRHM have adopted the continuum of care as one of its guiding principles to bring needed interventions to mothers, newborns, and children to improve their health and survival by saving children who die every year from preventable diseases.

This model demands the availability and accessibility to essential healthcare services and includes a package of:

- **Antenatal Care** – care during pregnancy
- **Intra-natal Care** – care during delivery of the baby
- **Post-natal Care** – care during the period starting from delivery up to 6 weeks
- **Child Care** – care of the child up to 5 years

ANNEXURE 2 - Reading material on antenatal care (ANC)

ANC is the medical care given to a pregnant woman and her baby starting from the time of conception up to the delivery of the baby and even goes beyond it. It plays an important role in achieving the aim of MNCH by preparing the pregnant women for a successful labour and delivery process by helping the mother maintain good health during pregnancy, informing the family members about pregnancy, labour and child care.

Pregnancy is a natural event in the life of women of reproductive age group. However, during pregnancy and childbirth some problems may arise which can threaten the life of the mother, baby or both. It is possible to identify women with some problems quite early if they have routine ante-natal check-up. This will enable them to access specialist care. Care during pregnancy is important to monitor progress and growth of the baby, detect complications at the earliest and treat them accordingly. During the visit the woman and her family should be advised proper nutrition, rest, exercise. They can make plans about where to deliver. This will help both the woman and baby to have a happy and healthy outcome. Minor ailments of pregnancy (e.g. vomiting, heart burn, constipation, backache etc.) are looked after during ANC period.

SCHEDULE OF ANC

- The first visit is recommended as soon as the woman feels that she is pregnant. This is called registration of pregnancy, which ensures that all pregnant women receive care throughout pregnancy.
- In villages/districts where female foetuses are being eliminated before birth, it is further important that pregnancy is registered early.
- The second visit should be made between the fourth and sixth month.
- The third visit should be planned in the eighth month.
- An additional visit in the ninth month would help provide better care.

If the health worker identifies health problems during these visits, a visit to a doctor will become necessary.

Advantages of early registration:

- Helps in assessing the health status of the mother and obtaining baseline information on BP, weight, etc.
- Helps in screening for complications/danger signals at an early stage and managing them appropriately by referral as and where required.
- Helps the woman recall the date of her last menstrual period for deciding EDD
- Helps in giving the woman the first dose of Tetanus Toxoid (TT) injection well within time (after 12 weeks of pregnancy).
- Helps the pregnant woman access facilities for an early and safe abortion if she does not want to continue with her pregnancy.
- Helps in building a good rapport with the pregnant woman and her family.
- Helps in starting the woman on a regular dose of folic acid during the first trimester.
- Helps in maintaining complete records in the Thayi card and for follow up.

What is done during pregnancy check-up and care?

A complete pregnancy check-up is carried out to detect problems and decide whether referral to doctor is required.

During the first check-up

- Take complete history of this pregnancy and previous pregnancies, if any and whether the woman has had any medical/surgical problem in the past.
- Weigh pregnant woman to see whether she is gaining adequate weight during pregnancy.
- Check BP to see if it is normal, high or low.
- Exam breasts/nipples to check whether they are normal.
- Exam abdomen to check growth/position of the baby.
- Test blood for anaemia (lacks blood/haemoglobin). If anaemic, how severe? If the woman has anaemia, prompt treatment helps prevent complications.
- Examine urine.
- Give first dose of TT injection.

During subsequent visits

- Details of any problem appearing since last visits are reassessed.
- BP, weight, and abdominal examination are repeated.
- Hundred iron and folic acid tablets (IFA) are given to all pregnant women.
- Treatment for anaemia depending upon the blood

test results.
- Health education, advice, and counselling on
  - Nutrition
  - Birth planning
  - Safe abortion
  - Family planning
  - Institutional delivery
  - Information about government schemes such as JSY, Madilu Kit, Prasooti Araike.

HIGH RISK PREGNANCIES

It is important to identify the high risk pregnancies, with risk either to the mother and baby, and monitor them regularly by visiting them every month, watching for danger signals and convincing them to go for regular check-ups at the hospital and have an institutional delivery.

The following are considered high-risk pregnancies:

- Severe anaemia –possible need for blood transfusion during delivery.
- Young primi[1] (below 18 years) – possibilities of complications if the reproductive system is not fully developed (obstructed labour, ante-partum haemorrhage).
- Elderly primi (above 30 year) – there is risk of diabetes / High BP, chance of handicapped children.
- Elderly grand multiparas[2] - possibility of increased incidences of complications during pregnancy, labour and puerperium are likely to occur in these women.
- Short structured primi (140 cm) –There can be higher incidences of preterm birth and underweight babies. Also, these women are more likely to have a small pelvis, which can result in such complications during childbirth.
- Mal-presentations, (breech, transverse lie) etc. – Mal-presentation or mal-position of the foetus at full term increases the risk of obstructed labour and other birth complications.
- Ante partum haemorrhage, threatened abortion (bleeding) - chance of pre-term delivery.
- Pre-eclampsia & eclampsia.
- Twins, hydramnios.
- Previous C section or instrumental delivery/ prolonged labour/ stillborn/ intrauterine death/ manual removal of placenta/PPH.
- Excessive weight gain or not gaining enough weight.
- Family history of systemic illness - hypertensive, diabetes, h/o thalassaemia, delivery of twins and delivery of an infant with congenital malformation.
- Pregnancy associated with general disease.
- History of intake of habit-forming or harmful substances, such as alcohol, cigarettes.

Pregnant women with any of the following conditions has to be referred to a doctor

- Repeated neo-natal deaths, stillbirths, premature births or repeated abortions.
- Vaginal bleeding during present pregnancy.
- High BP or abnormal urine test indicating pregnancy induced hyper-tension (PIH).
- If the pregnant woman's previous delivery was through abdominal operation or she has had some other abdominal operation in the past.
- The pregnant woman has heart disease, anaemia, high BP, jaundice etc.
- If the pregnant woman has very big abdomen.
- If the woman is pregnant with twins.
- If the baby is upside down or in abnormal position inside the uterus.

Home care during pregnancy

- The woman's family and community have the key responsibility for making sure that the woman gets more food, takes rest and does not have to do heavy manual work during pregnancy.
- The pregnant woman needs extra energy from food, for the sake of her own health, for the growing foetus and for effective breastfeeding later on.
- During pregnancy a nutritious diet which is rich in iron, calcium and protein is required. For this, a pregnant woman should eat green, leafy vegetables, dal, milk, jaggery, eggs, fish, meat, etc.
- Taboos and restrictions on a pregnant woman's diet, such as not allowing certain vegetables, fruits, milk and ghee, might in fact harm her and the baby.
- Pregnant women are entitled to get food from the AWW centre.
- A pregnant woman should not fast. This deprives her and the growing baby inside the uterus of essential food.
- Pregnant women should not carry out heavy manual labour, like working on construction sites, famine relief, brick kilns, etc. Other members of the family and community should help to reduce her work burden.
- Pregnant, adolescent girls are especially likely to be under-nourished and are more likely to suffer problems during delivery. They need extra nutritious food and help for safe delivery at a health facility.
- Sometimes there are overweight pregnant women who need to avoid eating fat-rich food like oil, ghee, sugar, etc), but they should continue to eat vegetables, fruits, nuts and milk which are rich in iron, calcium, vitamins and minerals. They should also take regular exercise and consult a doctor.

1 Primi is a woman who is going to be delivering the baby for the first time

2 The term "multipara" applies to any woman who has given birth 2 or more times. A woman who has given birth 5 or more times is called a grand multipara.

EMERGENCY REFERRAL DURING PREGNANCY

Danger signs in women	How to recognize	Action to be taken
Bleeding from the vagina	Bleeding- Any amount (bright red bleeding, or clots or tissue)	Refer to FRU/ Dist/ tertiary hospital
Loss of foetal movement	Absence of movement or kicking	Refer to FRU/ Dist/ tertiary hospital
Headache/ dizziness/ blurred vision	Severe headache and blurred vision or severe headache and spots before the eyes	Refer to FRU/ Dist/ tertiary hospital
Swollen face/ hands	Pitting oedema over back of the palm	Refer to FRU/ Dist/ tertiary hospital
Convulsions/ fits	Eyes roll, face and limbs twitch, body gets stiff and shakes, fists clinched	Refer to FRU/ Dist/ tertiary hospital

NON- EMERGENCY REFERRAL DURING PREGNANCY

Problem	How to recognize	Action to be taken
Severe anaemia	Tongue very pale, weakness, general swelling on body	Refer to PHC/ dist/ tertiary hospital
Night blindness	Pregnant woman finds it difficult to see at dusk	Refer to JHA or PHC
Fever	Skin warm to touch. Temp > 100'C	Give paracetamol tab. If no relief after 48 hours, refer to PHC
Pain/ burning during urinating	Frequent urination & urgency, or pain/ burning when passing urine	Have mother drink two glasses of water in the morning, afternoon and evening. If no relief after 24 hours, refer to PHC
White discharge	Passage of white discharge by Vagina, itching in private parts	Teach mother to use genital violet; placed high in her vagina daily. If no relief after 5 days, refer to PHC
Itching/ scabies/ boil with pus on skin	Skin rashes with itching- could be present in other family members as well • Scabies • Presence of pus filled boils	For boils, advise woman to apply hot fomentations to the area thrice daily. If no improvement after 2 days refer to PHC
Bad obstetric history	Past history of abortion, still birth, neonatal death	Refer to FRU/ dist/ tertiary hospital
Multiple pregnancy	Suspicion/ knowledge	Refer to FRU/ dist/ tertiary
Malpresentation	Suspicion/ knowledge	Refer to FRU/ dist/ tertiary

Anaemia in pregnancy

- Lack of blood in the body is known as anaemia and is common in northern Karnataka. Anaemia in pregnancy leads to complications in pregnant women and can result in the death of mother and baby. A pregnant woman with anaemia looks pale, feels tired, complains of breathlessness on carrying out routine work, and might have swelling of the face and body. Anaemia can be prevented and treated completely if the woman follows the advice of JHA/doctor.
- Anaemia is treated with iron tablets, which have to be taken daily for many months during pregnancy or by giving injections. If the anaemia is severe, hospitalization and blood transfusion may be required.
- All pregnant women need to take one iron tablet daily, starting after three months of pregnancy to prevent anaemia.
- While giving iron tablets, the woman should be advised that some side effects might occur. However, they can be managed. These include:
  - Nausea or occasional vomiting – this can be prevented/avoided by taking the tablet after meals.
  - Constipation – this can be managed if the woman drinks more water and eats fruit.
  - Black stools or mild diarrhoea.
- The pregnant women should be advised that iron tablets should not be taken along with tea as that reduces its absorption.
- Pregnant women who have anaemia must have deliveries in hospital.

KEY MESSAGES

- All pregnant women should have early registration (12-16 weeks)
- All pregnant women should have a minimum of three ANC check-ups and hospital delivery in a health centre or hospital.

ROLES AND RESPONSIBILITIES OF ASHA:

- Visit every house in the community to make a list of all women who are eligible to become pregnant and children under the age of 5 years.
- Keeps records, registers and stock of supplies, equipment and medicines.
- Identify all pregnant women in the respective villages
- Help pregnant women in getting registered between 12-16 weeks of pregnancy and in getting the next three ante-natal check-ups.
- Ensure all requisite examinations/investigations are done for all pregnant women.
- Know the date and time of availability of JHA in Anganwadi Centre (AWC) in your village and inform all pregnant women about the same.
- Advise pregnant women regarding importance of balanced diet and ensure that undernourished pregnant women receive supplementary food from AWC.
- Attend to home deliveries and observe each woman during labour and delivery
- Recognizes early signs of newborn's sickness and manages it at home.
- Ensures that the baby gets necessary immunization on time.
- Actively collaborates with traditional birth attendant, JHA and supervisor.
- Track the drop-out pregnant women especially those who live in remote areas, are below poverty line, schedule caste/schedule tribe/migrants, etc. and help them in accessing health services.
- Help eligible pregnant women to get benefits under JSY.
- Advise the pregnant woman and her family about potential danger signs during pregnancy, delivery and after delivery, the post-partum period. If she has any of the following problems, she should be taken immediately to the nearest functional FRU directly. These include:
  - Any vaginal bleeding during pregnancy
  - Heavy vaginal bleeding during and following delivery, especially if the woman is feeling weak and faint
  - Severe headache/blurring of vision
  - Convulsions or loss of consciousness
  - Labour pains lasting more than 12 hours
  - Labour pains before eight months or 32-36 weeks of pregnancy.
  - Premature rupture of the bag of waters or leakage of water from uterus membranes, leaking
  - Failure of the placenta to come out within 30 minutes after delivery
  - Baby stops kicking inside the womb

ASHA should have the following information:

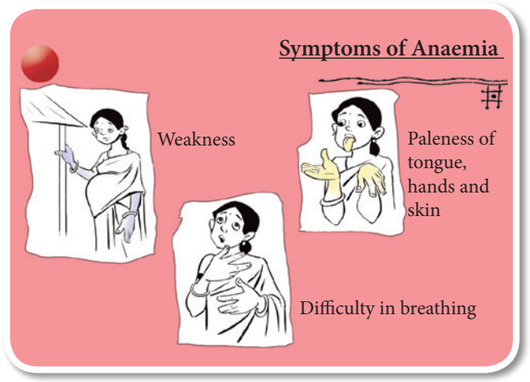
- The location of nearest FRU/hospital with obstetrician, anaesthetist, paediatrician, nursery, O.T. and blood bank.
- The mode of transport to reach facility should there be an emergency
- Approximate cost for Caesarean Section, blood transfusion and hospital stay, if it is a private hospital.

Note:
In case, it is a second pregnancy, when a couple already has a daughter, ASHA needs to be alert to the possibility that the family may reject another daughter and counsel accordingly.

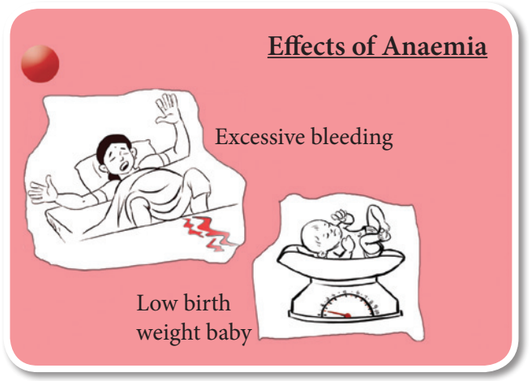
ROLES AND RESPONSIBILITIES OF JHA:

- Cooperates with ASHA and informs her when women go into labour
- Attends to mothers during labour and delivers babies
- Practices clean and safe delivery methods
- Reinforces health education messages given by ASHA

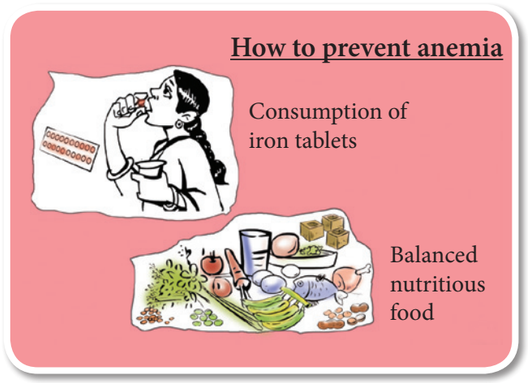
SYMPTOMS OF ANAEMIA



EFFECTS OF ANAEMIA



HOW TO PREVENT ANAEMIA



ANNEXURE 3 - Reading material on delivery/ intra-natal care

WHAT IS INTRA-NATAL CARE?

Intra-natal care refers to the process of child birth. It is an extremely important process in every pregnancy. Quality intra-natal care can be the key to control the maternal mortality problem in India.

Delivery occurs normally after nine months of pregnancy. If delivery is before time special care for baby may be needed. As far as possible a pregnant woman should have the delivery in a health centre or hospital even if pregnancy is normal. This is mainly because during delivery, labour complications may suddenly occur which can threaten the life of mother, baby or both.

During delivery the time between starting of a problem to death of mother, baby or both is so short that it may not be possible to save the life of mother or baby if the pregnant woman is not already in a well-equipped health centre or hospital.

OBJECTIVE OF INTRA-NATAL CARE

Intra-natal care aims to provide

- Maintain the health and well-being of pregnant women and their offspring during the intra-natal period
- Closely observe the women in labour and avoid interference with natural process of delivery unless there is a valid reason to do so.
- Encourage and support women in labour and extend personal attention to them.
- Identify promptly any complications during the delivery process and institute immediate remedial measures including referral care.
- Ensure a safe delivery outcome in the form of healthy mothers and healthy babies.

During the intra-natal period it is important to maintain

- Clean and hygienic delivery conditions – five cleans that include
  - Clean hands
  - Clean delivery surface
  - Clean cord cut
  - Clean cord ties
  - Clean cord stump care.
- Safe delivery with minimum injury to the infant and mother
- Preparedness to deal with complications such as prolonged labour, ante-partum haemorrhage, convulsions, mal-presentations and prolapsed of umbilical cord etc.
- Care of the newborn baby

The intra-natal care includes

- Observation and assessment of the woman in labour, observation of the foetus, monitoring of labour, observation of the newborn in terms of appearance, pulse/ heart rate, reflexes, activity and muscle tone and respiration and weight recording.
- Care and attention in terms of prevention of infection, establishment of respiration of the newborn, prevention of heat loss and cutting of umbilical cord of the newborn.
- Education and counsel to feed colostrums, and develop an immediate bond between the mother and the newborn

STAGES OF LABOUR

1st stage- Starts from the beginning of pain until the mouth of the womb is fully open. This happens inside and cannot be seen. The bag of water also breaks. The fluid is usually clear but could also be yellow, green or red. This stage of labour usually lasts for about 8 to 12 hours.

2nd stage- Contractions push the baby out of the womb: the delivery of the baby. This stage of labour lasts usually for about an hour.

3rd stage- The contractions cause the placenta to peel off: delivery of the placenta. This lasts for about 20-30 minutes.

DANGER SIGNALS DURING INTRA-NATAL PERIOD

It is important to identify danger signals and refer the woman in labour to the appropriate health care facility especially in case of the home deliveries. These danger signals include:

- Irregular / fast / very slow fetal heart[1] **(Fetal distress)**
- Labour taking more than normal time[2] **(Prolonged labour)**
- Head or shoulders not coming out **(Obstructed labour)**
- Cord comes out before baby **(Cord prolapse)**
- Yellow or foul smelling liquor **(Meconium stained liquor)**
- Placenta not expelled completely **(Incomplete / retained placenta)**
- Fever
- Fits

1 The normal range of baby's heartbeats is 120 to 160 heart beats per minute

2 An 'average' length of labour for a woman having her first child is 12 to 18 hours. An "average" length of labour for a woman having her second or more children is considered to be about 7 hours. If the labour period extends to more than 24 hours, it is called a prolonged labour.

ROLES AND RESPONSIBILITIES OF ASHA:

- Counsel/advise the pregnant women and their families for institutional delivery.
- Identify the location of the hospitals, health centres, institutions near your village which provide delivery services round the clock, where delivery can take place and the cost for the same, if any and how to reach the hospital.
- Escort/ accompany the pregnant woman to the hospital for institutional delivery.
- Ensure the availability of transport to the FRU/ transport money available for the same, and how to access it in case of emergency and escort her.
- Find out the money/other provisions available under JSY for the area/ and what is the procedure to get it.
- If there is no functioning health centre or hospital within reach, or the family prefers a home delivery, advise the pregnant woman and her family to have the delivery conducted at home by a skilled birth attendant (SBA) such as JHA, staff nurse or doctor.
- In case a skilled birth attendant is not available, the delivery can be conducted by a trained TBA.
- Five cleans must be practiced during delivery: i.e. Clean hands, Clean surface, Clean new blade, Clean cord tie and Clean cord stump (do not apply anything on the stump).
- Place of delivery to be kept warm and free from draught.
- Help the mother in initiation of breast-feeding after delivery.

ANNEXURE 4 - Reading material on post-natal care (PNC)

WHAT IS PNC?

Post-natal period is the period of six weeks immediately after delivery, which is important both for the mother and the newborn. In this period, the changes, which have taken place in the organs/system during pregnancy in the woman, come back to normal, except the breasts. Mother and the newborn are susceptible to some problems which you should be aware of, so that they can be guided for treatment/referral. Postpartum care encompasses management of the mother, newborn, and infant during the postpartum period.

The time when effective PNC can make the most difference to the health and life chances of mothers and newborns is in the **early neonatal period**, the time just after the delivery and through the first seven days of life. However, the whole of the **neonatal period**, from birth to the 28th day after the birth, is a time of increased risk.

Deaths during the first 28 days of babies who were born alive is reported by all countries in the world as the neonatal mortality rate (the number of babies who die in the first 28 days) per 1,000 live births. Similarly, reports of maternal mortality include deaths of women from complications associated with postnatal problems, not just problems arising during the birth. Both these rates are important indicators of the effectiveness of postnatal care.

During the postpartum period the mother is at risk for such problems as infection, haemorrhage, pregnancy induced hypertension (PIH), blood clot formation, the opening up of incisions, breast problems, and postpartum depression.
Hence it is important for ASHAs/ JHAs to pay frequent home visits during the PNC to ensure that the newborn and mother are safe and check if there are any danger signals.

PRESCRIBED SCHEDULE FOR PNC VISITS

Home visits of ASHA and JHA are scheduled on

- 3rd, 7th and 42nd day for evaluation of mother's health
- 14th, 21st and 28th days for the newborn care

If birth occurs at home, the first visit should target the crucial first 24 hours after birth. In addition to the routine PNC visits the ASHAs and JHAs needs to do two / three extra visits to LBW babies.

Essential routine for PNCs

- Assessment of mother and newborn
- Identification of danger signs in mother and newborn
- Advice and counselling
- Referral for complications

Assessment for all mothers should include checking the following:

- Bleeding
- Convulsions or loss of consciousness
- Abdominal pain and fever
- Presence of any cyst/ swelling
- Tightness of stomach
- Cracked / inverted nipples
- Pulse, BP, temperature, pallor, breasts, abdomen, perineum, bleeding/foul smell /infection indicated by lochia discharge etc.
- Pus in the stitches
- Burning sensation while passing urine
- Anaemia

Assessment for all newborn should include checking the following:

- Loose motions/ fever
- Umbilical cord
- Breast feeding
- Comfortable breathing
- Weight
- Head protected and kept warm
- Eye movements
- Passing urine and stool

Extra care for low birth weight babies (LBW) or small babies and other vulnerable babies

- Identification of small babies / babies who need extra care.
- Assessment for danger signs and management or referral as appropriate.
- Extra support for breastfeeding, including expressing milk and cup feeding, if needed.
- Extra attention to warmth promotion, such as skin-to-skin care, or Kangaroo Care.
- Early identification and rapid referral of babies who are unable to breastfeed or accept expressed breast milk.
- Early identification and referral/management of emergencies for mother and baby.
- Appropriate detection, management, or referrals are necessary to save mothers and babies in the event of life-threatening complications.

Danger signs for the mother

- Excessive bleeding (Post-partum haemorrhage)
- Foul smelling vaginal discharge/ lochia (sign of sepsis)
- Fever with or without chills
- Severe abdominal pain
- Pus formation
- Excessive tiredness or breathlessness
- Swollen hands, face and legs with severe headaches or blurred vision
- Painful, engorged breasts (breast abscess) or sore, cracked, bleeding nipples
- Headache, blurring of vision
- Convulsions (Eclampsia)
- Difficulty in passing urine (Urinary Tract Infection)

Danger signs for the baby

- Convulsions
- Movement only when stimulated or no movement, even when stimulated (lethargy)
- Poor breastfeeding
- Fast breathing (more than 60 breaths per minute), grunting or severe chest in-drawing
- Fever (above 38°C) / Low body temperature (below 35.5°C),
- Very small baby (less than 1500 grams or born more than two months early)
- Bleeding
- Difficulty in breathing (chest in-drawing / grunting)
- Blood in stool
- Yellow palms and soles

BIRTH ASPHYXIA

One of the common causes of death among newborns is birth asphyxia. The foetus inside the mother's womb gets air from the mother's blood through the umbilical cord. Once the baby is out of the womb, it gets air by breathing. The cry is the first powerful breath. Most babies are born with a good cry and start to breathe vigorously on their own. A few babies do not. Babies who do not cry or breathe or have a weak cry or breath need help. This happens when the baby does not have enough air during the process of delivery and it suffocates. This affects the baby's brain and makes it appear dull at birth. When an asphyxiated baby is born, it appears limp and does not cry.

Definition

A baby who has at birth any one of the following symptoms is asphyxiated:

- No cry
- Weak cry
- No breathing
- Gasping
- Weak breathing

Consequences of asphyxia

Immediate (at birth):

- Still birth
- Drowsiness
- Unable to suckle
- Baby may die within the first few days

Long term:

If the baby survives it may have:

- Mental retardation
- Epilepsy (seizures and fits)
- Spasticity (Difficulty with walking or moving arms and hands)

Warning of Asphyxia during labour:

- Prolonged or difficult labour
- Ruptured membranes with little fluid (dry delivery)
- Green or yellow colour thick amniotic fluid
- Prolapsed cord or tight cord around the neck
- Preterm labour (less than 8 months 14 days gestation)
- Breech presentation (or other abnormal presentation)

Addressing birth Asphyxia

If the baby does not cry or breathe or has a weak cry or breath, immediately dry and wrap the baby. Use a mucus extractor to clear the secretions in the airways (mouth, throat and nose) so that the baby can inhale freely. The cord need not be cut before the mucus extractor is used. If the mucus extractor does not result in the baby crying or breathing, start using the bag & mask immediately. ASHAs are trained to do this.

Mucus extractor

Bag and Mask

NEONATAL SEPSIS

Definition

In newborns the word 'sepsis' refers to any serious infection in the baby, whether in the lungs, brain or blood.

How big is the problem?

In India, nearly 1 out of every 10 newborns develops conditions suggestive of sepsis. Sepsis in the first month is very serious and can cause the baby's death. Without treatment many babies with sepsis die. With treatment, most live and grow up normally.

Causes of neonatal sepsis

- Mother has infection during pregnancy or delivery.
- During delivery, unclean techniques (poor hand washing, TBA putting hands inside the mother, using dirty blade and cord ties).
- Cord becomes infected from unclean cutting or putting dirty things on cord.
- Baby is weak; born pre term or with low birth weight (less than 2,000 gms).
- Baby becomes weak from poor feeding practices, including not giving breast milk early and exclusively.
- Baby comes in contact with an already infected person: mother, family members, visitors, TBA or ASHA.

How can sepsis be prevented?

- Good hygiene during and after delivery - frequent hand washing, clean clothes for the baby, clean blade during delivery.
- Keeping the baby warm.
- Breast feeding (early initiation and on demand).
- Keeping the umbilical cord clean and dry.

Advice and counselling

This is one of the important components of the PNC visits. The new mother and her family need guidance on several subjects, especially because there are number of misconceptions regarding the food to be given to the new mother, breastfeeding, and cord care, etc. More importantly, they need to know about the types and scheduling of required immunizations, and birth registration. The advice and counselling should include information on the following:

- Nutrition for mother
- Hygienic and warm environment (including personal hygiene for mother)
- Rooming in
- Registration of birth
- Cord care
- Colostrum feeding and exclusive breast feeding
- Immunisation
- Family planning (including spacing)
- Danger signs
- Follow up

General precautions the family must take with the newborn

The newborn is delicate and can easily fall sick if the family and mother are not careful. Some general precautions that the family should take are:

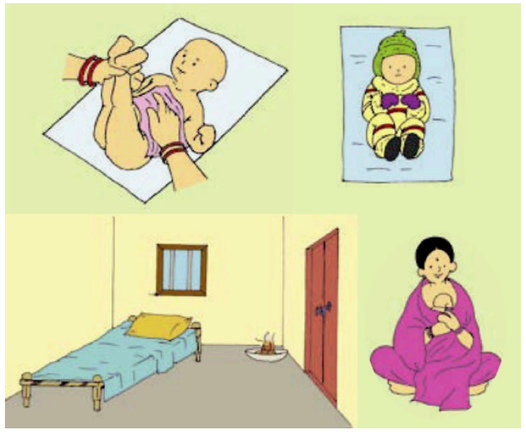
- **Bathing the baby:** Although it is recommended that the baby should not be bathed until the first seven days, many families bathe the baby on the first or second day. For a normal baby, if the family insists, the baby could be bathed after the second day. But in the case of LBW baby, you must insist on waiting for at least seven days. You should explain that bathing the baby and leaving it wet or exposed may cause it to get cold and fall sick. Thus, it is better to wipe the baby with a warm wet cloth and dry the baby immediately.
- People who are sick with cold, cough, fever, skin infection, diarrhoea, etc. should not hold the baby or come in close contact with the baby.
- The newborn baby should not be taken to places where there are other sick children.
- The newborn baby should also not be taken to places where there are large gatherings of people.

ROLES AND RESPONSIBILITIES OF ASHA

- Advise the woman at least one check-up within two weeks of delivery.
- Advise the women to visit the JHA for minor complaints e.g. sore breasts, cracked nipples, foul smelling discharge, pain in legs etc.
- Assist JHAs in conducting post-natal clinic and screening women and children with danger signals.
- Advise registration of birth.
- Counselling on exclusive breast-feeding for the newborn which:
  - Helps in better involution of the uterus.
  - Can produce lactational amenorrhea and thus act as natural contraceptive
- Counselling on contraceptive needs (temporary/ permanent) as required and help women/family to access them
- Ask mother to report if there is:
  - Excessive vaginal bleeding
  - Loss of consciousness
  - Fast or difficult breathing
  - Fever
  - Severe abdominal pain

Steps for you to take "just after" the baby is born

- Ask the mother about/observe the fluid after the waters break.
- If the fluid is yellow/green, as soon as the head is seen (even before delivery of complete baby), clean the mouth of the baby with gauze piece.
- As soon as the baby is born, note the time of birth and start counting time.
- Observation of baby at birth or within the first 30 seconds and at 5 after birth for movement of limbs, breathing and crying. The figure below will enable the assessment of whether the newborn should be recorded as a live or still birth. All six have to be "No" to declare a still birth. Even if one is "yes" the baby should be declared as live birth.
- If there is no cry or a weak cry, if there is no breathing or weak breathing or gasping, this condition is called Asphyxia. If the baby is asphyxiated (does not breathe at birth), and there is no doctor or nurse, you should try to help. This skill will be taught to you in Module 7. However, in many such newborns, your efforts may not make enough difference and you should not feel bad or blame yourself if the baby does not respond.
- Provide normal care at birth.
  - **Dry the baby:** Immediately after delivery, the newborn should be cleaned with a soft moist cloth and then the body and the head wiped dry with a soft dry cloth. The soft white substance with which the newborn is covered is actually protective and should not be rubbed off.
  - The baby should be kept close to mother's chest and abdomen.
  - The baby should be wrapped in several layers of clothing/ woollen clothing depending upon the season.
  - The room should be warm enough for an adult to feel just uncomfortable. The room should be free from strong wind.
- Weigh the newborn and decide whether the baby is normal or LBW.
- Determine whether the baby is term or pre-term.
- Measure newborn's temperature.



KEEPING NEWBORN WARM AND THE PROBLEM OF HYPOTHERMIA

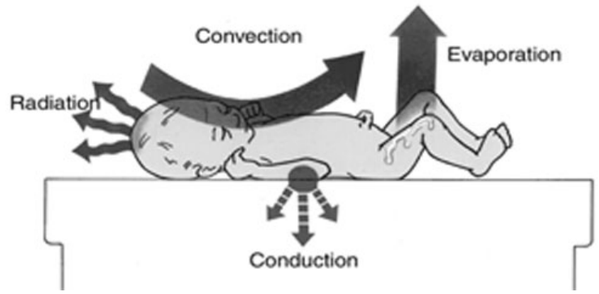
Why is it important to keep baby warm after delivery?

Babies have difficulty maintaining their temperature at birth and in the first day of life. They come out wet, and lose heat quickly. If they get cold, they use up energy, and can become sick. LBW and pre-term babies are at greater risk of getting cold.

When and why do most newborns get cold?

Most newborns lose heat in first minute after delivery. They are born wet. If they are left wet and naked, they lose a lot of heat to the air. A newborn baby's skin is very thin and its head is big in size compared to its body. It loses heat very quickly from its head. Babies do not have the capacity to keep themselves warm. If the newborn baby is not properly dried, wrapped, and its head is not kept covered, it can lose 2 to 4 degree Celsius within 10-20 minutes.

Example: If the baby's temperature was 97.7 degree Fahrenheit (36.5 degree Celsius [normal temperature]) at the time of birth and if there was a loss of 2.7 degree Fahrenheit because the baby was not properly dried and covered, the body temperature will become 95 degree Fahrenheit (35.0 degree Celsius [below normal temperature]).



What is the term for a situation when a baby's temperature falls below normal?

When a baby has a temperature below normal, it suffers from hypothermia.

What happens to a baby with hypothermia?

A baby who is cold, and has a low temperature (hypothermia) suffers from:

- Decreased ability to suckle at the breast, leading to poor feeding and weakness.
- Increased risk of death, especially in LBW and pre-term babies.

How can you tell if a baby is hypothermic?

- The early sign is cold feet.
- Then, the body becomes cold.

The best method is to measure the baby's body temperature. (This skill has already been taught to you)

How to keep newborns warm

- Before delivery, warm up the room (warm enough for adults).
- Immediately after delivery, dry the baby.
- Put a cap on the baby since a lot of heat could be lost though its head.
- Place in skin-to-skin contact with mother.
- Cover or put clothes on the baby, wrap it up with clean cloth, and place it close to its mother.
- Initiate early breastfeeding.
- Bathing for newborns:
  - It is best to wait until the second day to bathe the baby. One should wait seven days in case of LBW baby.
  - If the family insists on bathing the first day, please ask them to delay for at least six hours to give the baby time to adjust with its new environment.
  - For small and pre-term babies, do not give a bath until the baby gains weight (this could be few weeks) and weight of baby become 2,000 gm.
- To keep a small baby clean, you can give a light oil massage but making sure that the room is warm and the baby is not left uncovered for more than 10 minutes. DO NOT pour oil into any orifice, like the nose or ears at any time.
- Keep baby loosely clothed and wrapped.
- If it is very warm outside, make sure the baby is not too heavily clothed and wrapped; the baby can also get too hot.

BREAST FEEDING

Benefits for the baby

- Early skin-to-skin contact keeps the baby warm.
- It helps in early secretion of breast milk.
- Feeding first milk (colostrum) protects the baby from diseases.
- Helps mother and baby to develop a close and loving relationship.

Benefits for the mother

- Helps womb to contract and the placenta is expelled easily.
- Reduce the risk of excessive bleeding after delivery.

Important facts about breastfeeding

- Start breastfeeding immediately or at least within one hour after birth. Give nothing else, not even water.
- Baby should be put to the mother's breast even before placenta is delivered. It is useful for both the baby as well as the mother.
- Breastfeed as often as the baby wants and for as long as the baby wants. Baby should be breastfed day and night at least 8-10 times in 24 hours.
- Feeding more often helps in production of more milk. The more the baby sucks, more milk is produced.
- Baby should not be given any other liquid or foods such as sugar water, honey, goat's/cow's milk and not even water.

Why only breastfeeding?

Giving other food or fluid may harm the baby in following ways

- It reduces the amount of breast milk taken by the baby.
- It may contain germs from water or on feeding bowls or utensils. These germs can cause diarrhoea.
- It may be too dilute, so the baby becomes malnourished.
- Baby does not get enough iron from cow's and goat's milk and may thus develop anaemia.
- Baby may develop allergies.
- Baby may have difficulty digesting animal milk; the milk can cause diarrhoea, rashes or other symptoms. Diarrhoea may become persistent.
- Breast milk provides all the water a baby needs. Babies do not need extra water, even during the summer months.

BREASTFEEDING OBSERVATION TIPS

Signs of breastfeeding going well	Signs of possible difficulty
Mother's body relaxed, comfortable, confident, eye contact with baby, touching	Refer to FRU/ Dist/ tertiary hospital
Baby's mouth well attached, covering most of the areola, opened wide, lower lip turned outwards	Mouth not opened wide, not covering areola Lips around nipple
Suckling well, deep sucks, bursts with pauses Cheeks round, swallowing heard or seen	Rapid sucks, cheeks tense or sucked in smacking or clicking sounds
Baby calm and alert at breast, stays attached, mother may feel uterus cramping, some milk may be leaking (showing that milk is flowing)	Baby restless or crying, slips off breast; Mother not feeling cramping, no milk is leaking (showing that milk is not flowing)
After feed, breast soft, nipples protruding	After feed, breast full or enlarged, nipples may be red, cracked, flat or inverted

BREASTFEEDING

- Breastfeeding postpones mother's menstrual cycle, hence prevents pregnancy.
- Often a baby is breastfed only after the third day. This starves the baby and affects the milk flow.
- Immediate breast feeding within half an hour after birth is vital for the baby. It gives baby nutrition and immunity against illnesses. It shrinks the mother's womb and reduces bleeding. Milk flow is better with frequent suckling.
- Breast milk is the best food for the baby up to 6 months. No other food, including water, is necessary.
- Mother's breasts get prepared for producing milk during pregnancy. On delivery the breasts are ready to secrete thick milk called colostrum. The baby should be fed with colostrum as it protects the baby from germ-attacks. The colostrum should not be thrown away.
- Breast milk provides for all the needs of the baby. It also contains sufficient water for the baby's needs. No need for feeding water separately. More the baby suckles, the more milk is produced.
- Breastfeeding protects the baby from getting diarrhoea and pneumonia.
- Breastfed babies normally feed every two hours. Well-fed babies sleep quietly for 2-3 hours, and gain weight normally.

Breastfeeding Positions

Underarm Position *Side-lying Position* *Cradle Position* *Alternate Underarm Position*

MANAGING COMMON BREASTFEEDING PROBLEMS

Sore nipples

Causes:

- Poor latch-on or positioning at breast

Management:

- Improve attachment and/or position.
- Continue breastfeeding (reduce engorgement if present).
- Build mother's confidence.
- Advise her to wash breasts once a day with water, no soap.
- Put a little breast milk on nipples after feeding is finished (to lubricate the nipple) and air-dry.
- Wear loose clothing.
- If nipples are very red, shiny, flaky, itchy, and their condition does not get better with above treatment, it may be fungus infection. Apply gentian violet paint to nipples after each breastfeed for five days. If the condition does not improve, refer to a doctor.

Problem of not enough milk

Causes:

- Delayed initiation of breastfeeding; infrequent feeding; giving fluids other than breast milk; mother's anxiety, exhaustion, insecurity; inadequate family support.

Management:

- Decide whether there is enough milk or not:
  - Does the baby pass urine six times or more each day?
  - Has the baby gained sufficient weight? (During the 1st week there is usually a small weight loss, after that a newborn should gain 150-200 gm per week.)
  - Is the baby satisfied after feeds?
- Reassure the mother.
- If there is not enough milk, have the baby feed more often.
- Check breastfeeding process to observe mother attachment and positioning of the baby.
- Encourage rest. Encourage the mother to drink and eat more.

Signs that the baby is not getting enough milk

Poor weight gain

- Weight gain of less than 500 grams in a month
- Less than birth weight after two weeks

Passing small amounts of concentrated urine

- Less than six times a day
- Yellow and strong smelling

Other signs are:

- Baby not satisfied after breastfeed and often cries
- Very frequent breastfeeds
- Very long breastfeeds
- Baby refuses to breastfeed
- Baby has hard, dry or green stools
- No milk comes when mother tries to express
- Breast did not enlarge
- Milk did not come in.

Mothers and families think that in the following situations, their milk is not enough, but in fact, these conditions do not affect the breast milk supply:

- Age of mother
- Sexual intercourse
- Return of menstruation
- Disapproval of relatives and neighbours
- Age of baby
- Caesarean section delivery
- Many siblings
- Simple, ordinary diet

ANNEXURE 5 - Reading material on child care

As most of the child deaths occur during the first five years of life, care of children below five years is one of the most crucial components in the MNCH continuum of care. The child care intervention has four important components:

- Monitoring growth and development
- Nutrition interventions
- Prevention and management of childhood illnesses
- Immunization

MONITORING GROWTH AND DEVELOPMENT:

The terms growth and development though used interchangeably, many times are two different concepts. Growth is the increase in size of the body – in height, weight, mid-arm circumference and other measurable areas. Development is the gaining of skills in all aspects of the child's life such as physical development, social and emotional development, intellectual development and communication and speech development.

The growth and development are both interlinked. Growth is the best general index of the health of an individual child, and regular measurements of growth permit the early detection of malnutrition, frequently associated with diarrhoea, and other illnesses/ developmental problems and take remedial action at the earliest. Monitoring growth and development helps in screening and diagnosing nutritional, chronic systemic lacunae and endocrine disease at an early stage and has the potential for significant impact on mortality. The remedial actions could include supplementary feeding, prophylaxis against vitamin A deficiency, control of nutritional anaemia and referral to medical services etc. to severely malnourished children.

Monitoring the growth of a child requires taking the same measurements at regular intervals, approximately at the same time of the day, and seeing how they change by plotting it on a growth chart.[1] If the child is not growing properly, it means the child is malnourished, i.e. under nourished.

NUTRITION INTERVENTIONS

Nutrition is required for a child to grow, develop, and remain active and to reach adulthood without illness. Nutrients such as carbohydrates, fats, proteins are required in large amounts (macro nutrients), while some nutrients e.g. Vitamins, Iron, Calcium, Iodine etc. are required in minimum amounts (micro nutrients).

Children should be give appropriate nutrition according to ages below:

0-6 months

During this period they should be given exclusive breastfeeding by feeding them at least eight times a day. Mothers should be encouraged to breast-feed on demand. Bottle-feeding should be discouraged and anxious mothers should be reassured by informing them that breast milk is the ideal food for young infants and it contains all nutrients. Chances of malnutrition in breast-fed infants are less and it prevents infection, as it is clean and free from bacteria. Breastfeeding enhances brain development Breastfeeding increases mother and child bonding and helps in better development of the child.

6-12 months

During this period, complementary feeding needs to start. Home based complementary foods after six months, given four or five times a day, in addition to continuing breastfeeding as often as the child wants is best. If the child is not breastfed, it may be given undiluted milk by a cup and complementary food five times a day. Food should be mashed and it should be freshly prepared. Washing hands before feeding is extremely important.

12 months-two years

Continue breastfeeding for two years or beyond. Give home based food four-five times a day

Two years onwards

Children should be given home-cooked food five-six times a day as they eat in small quantities.

1 Refer to Thayi Card to see the growth chart

MICRO NUTRIENTS (VITAMIN A, IRON, IODINE)

Vitamin 'A' Deficiency

Vitamin A is important for normal vision. Vitamin A deficiency is most common between six months and three years. It can even cause even blindness, with night blindness the earliest symptom. The government's policy on supplementation of micronutrient Vitamin A is:

- Regular consumption of dark green leafy vegetables or yellow fruits and vegetables
- Breastfeeding feeding with colostrums
- Oral prophylactic doses:
  - One dose of 100,000 IU to infants 6 – 11 months old
  - One dose of 200,000 IU to children 1 – 5 years old repeated every six months
- A child must receive a total of 9 oral doses of Vitamin A by the age of five years old.

For treatment of Vitamin A deficient cases:

- One dose of 200,000 IU immediately at diagnosis
- Follow-up dose of 200,ooo IU four weeks later

IRON DEFICIENCY ANAEMIA

Iron deficiency is the most common cause of anaemia. Iron deficiency anaemia occurs when the body doesn't have enough iron. Iron is important because it helps a person get enough oxygen throughout your body. The body uses iron to make haemoglobin. Haemoglobin is a part of the red blood cells. Haemoglobin carries oxygen through your body. If you do not have enough iron, your body makes fewer and smaller red blood cells. Then your body has less haemoglobin, and you cannot get enough oxygen. A person might have low iron levels because of not getting enough iron in food. This can happen in people who need a lot of iron, such as small children and adolescents. Anaemia in children is very common because of inadequate diet and recurrent infections and worm infestations. It is also common in pregnant women and those who have heavy menstrual bleeding.

FOLIC ACID DEFICIENCY ANAEMIA

Folic acid deficiency anaemia happens when your body does not have enough folic acid. Folic acid is one of the B vitamins, and it helps the body make new cells, including new red blood cells . The body needs red blood cells to carry oxygen. If you don't have enough red blood cells, you have anaemia, which can make a person feel weak and tired. So it's important that you get enough folic acid every day. Most people get enough folic acid in the food they eat. But some people either don't get enough in their diet if they don't eat enough foods that contain folic acid. These include citrus fruits, leafy green vegetables, and fortified cereals. Other people have trouble absorbing it from the foods they eat. Pregnant women who do not get enough folic acid are more likely to have babies with very serious birth defects.

The Ministry of Health and Family Welfare has revised the guidelines on IFA supplementation related to the National Nutritional Anaemia Prophylaxis programme. This is the outcome of a long process, initiated with different consultations on anaemia in adolescent girls. In 2003, the National Consultation on Micronutrients with the ICMR/MHFW began working with a committee chaired by the DG of the ICMR. They subsequently worked with the NRHM and various other groups on the 11th plan that includes:

- Infants between 6-12 months should also be included in the programme as there is sufficient evidence that iron deficiency affects this age also.
- Children between 6 months to 60 months should be given 20mg elemental iron and 100 mcg folic acid per day per child as this regimen is considered safe and effective.

National IMNCI guidelines for this supplementation to be followed.

- For children (6-60 months), ferrous sulphate and folic acid should be provided in a liquid formulation containing 20 mg elemental iron and 100mcg folic acid per ml of the liquid formulation. For safety reason, the liquid formulation should be dispensed in bottles so designed that only 1 ml cab be dispensed each time.
- Dispersible tablets have an advantage over liquid formulations in programmatic conditions. These have been used effectively in other parts of the world and in large scale Indian studies. The logistics of introducing dispersible formulation of Iron and Folic Acid should be expedited under the programme.

The current programme recommendations for pregnant and lactating women should be continued.
School children, 6-10 year old, and adolescents, 11-18 year olds, should also be included in the National Nutritional Anaemia Prophylaxis Programme (NNAPP).

- School children, 6-10 year old, and adolescents, 11-18 year olds, should also be included in the National Nutritional Anaemia Prophylaxis Programme (NNAPP).
- Children 6-10 year old will be provided 30 mg elemental iron and 250 mcg folic acid per child per day for 100 days in a year.
- Adolescents, 11-18 years will be supplemented at the same doses and duration as adults. The adolescent girls will be given priority.

IODINE DEFICIENCY

Iodine is a very important trace element. It is required for the normal growth and development of human beings. Its deficiency during pregnancy can lead to spontaneous abortion/still birth and cretinism/mental retardation in children.

Children should be given an iron and protein rich diet consisting of jaggery, milk, eggs, pulses, green leafy vegetables, guavas, apples, etc. Children have access to AWW Services where supplementary food is provided for the child up to the age of 5. Malnourished children are to be given additional food supplements.

PREVENTION AND MANAGEMENT OF CHILDHOOD ILLNESSES:

Major childhood illnesses include diarrhoea and Acute Respiratory Infection (ARI).

Diarrhoea is marked by liquid or watery stools passed more than three times in a day. Normally there are three types of diarrhoea:

- Acute watery diarrhoea which lasts not more than 14 days
- Dysentery is diarrhoea with visible blood in stools
- Persistent diarrhoea begins acutely but is of unusually long duration i.e. lasting more than 14 days.

Diarrheal diseases are a major cause of death and disease among children under five years. The majority of the diarrhoeal deaths are due to dehydration (loss of water and minerals). Golden rules to observe if a child has diarrhoea are:

- If the child is breastfed, continue breast-feeding more frequently.
- If the child has started consuming other foods, continue feeding small quantities of these items
- Give extra fluids
- Give ORS (Oral Rehydration Solution)
- Refer in case of danger signs
- After the child recovers and normal appetite
- reappears, the child may be given more food than normal to regain lost weight.

Diarrhoea can be prevented by:

- Exclusively breastfeeding for the first six months.
- Washing hands thoroughly before cooking food and feeding the child and keeping containers clean for preparing the food and for feeding the baby.
- Keeping the food and drinking water covered.
- Consuming freshly prepared food within one hour.
- Keeping the house and neighbouring area clean and proper disposal of waste so that houseflies don't breed.
- Constructing sanitary latrines for each household.

Acute Respiratory Infection

Acute Respiratory Infection (ARI) is an important cause of mortality and morbidity in children. Most children up to the age of five years are susceptible to ARI. If not treated in time, some of children develop pneumonia, which can result in death. Good nutrition, timely administration of Vitamin A, and avoiding exposure to cold, dust and smoke helps in preventing pneumonia. The child might have ARI if it has some or all of the following symptoms:

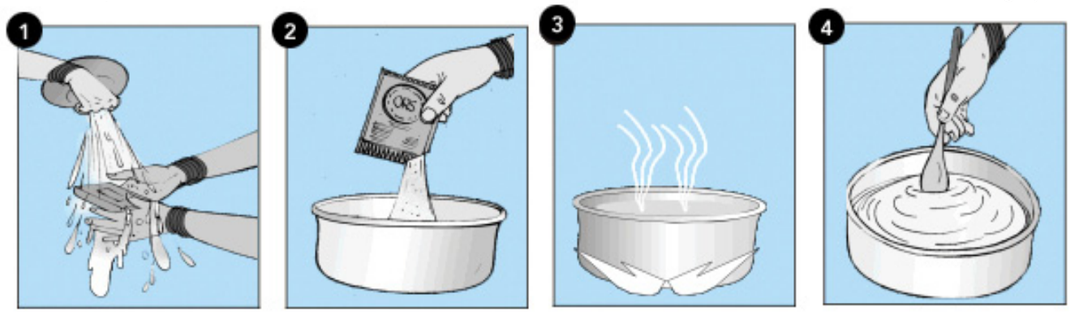
- Cough
- Running nose
- Fever
- Difficulty in breathing

Serious morbidity and death are preventable if it is identified early and treated/referred in time. When a child has suspected ARI do the following:

- Keep the child warm.
- Give plenty of fluids and continue breast-feeding.
- Give home remedies – ginger, honey, lemon, kadha, etc.
- Increase feeds after the child recovers.
- Help the child rest.
- Access NMCH services and get prompt treatment.

MANAGING MILD CASES OF DIARRHOEA AT HOME: PREPARATION OF ORS

1. Wash your hands with soap
2. Pour all the ORS powder into 1 litre
3. Pour 1 litre of drinking water (boiled and cooled)
4. Stir well until the powder is mixed thoroughly



Preparation of home made ORS:
Take one glass (200ml) of water, add a pinch of salt and a spoon of sugar

SIX IMPORTANT MESSAGES FOR PREVENTING CHILD MALNUTRITION

- **Exclusive Breastfeeding:** Up to the age of six months, give only breast milk; no water should be added.

- **Complementary Feeding:** At the age of six months, add other foods. Breastfeeding alone is not enough, though it is good to continue breastfeeding for at least one to two years more. There are five things to remember about complementary feeding:
  - **Consistency:** Initially the food has to be soft and mashed. But later, anything that adults eat can be given to the child, with fewer spices. Do not dilute food. Keep it as thick as possible, for e.g. 'give daal not daal ka pani'.
  - **Quantity:** Gradually increase the amount of such foods. Till at about one year, the child gets almost half as much nutrition as the mother.
  - **Frequency:** The amount of complementary foods given should be equal to about half what the adult needs in terms of nutrients. But since the child's stomach is small, this amount has to be distributed into four to five, even six feeds per day.
  - **Density:** The food also has to be energy dense, low in volume, high in energy, therefore, add some oil or fats to the food. Family could add a spoon of it to every roti/every meal. Whatever edible oil is available in the house is sufficient.
  - **Variety:** Add protective foods – green leafy vegetables. The rule is that the greener it is, or the redder it is, the more its protective quality. Similarly meat, eggs, fish are liked by children and very nutritive and protective.

- **Feeding during the illness:** Give as much as the child will eat; do not reduce the quantity of food. After the illness, to catch up with growth, add an extra-feed. Recurrent illness is a major cause of malnutrition

- **Prevent illness:** Recurrent illness is a major cause of malnutrition. There are six important things to remember which could prevent illness:
  - **Hand washing:** before feeding the child, before preparing the child's food, and after cleaning up the child who has passed stools. This is the single most useful measure to prevent recurrent diarrhoea.
  - **Drinking water** to be boiled. Though useful for everyone, it is of particular importance to the malnourished child with recurrent diarrhoea.
  - **Full immunization of the child:** Tuberculosis, diphtheria, pertussis and measles are all prevented by immunization and are the diseases that cause severe malnutrition. In malnourished children, these diseases are more common and life threatening, than in normal children.
  - **Vitamin A:** To be given along with measles vaccine in the ninth month and then repeated once every six months till five years of age. This too reduces infections and night blindness, all of which is more common in malnourished children.
  - Avoid persons with infections, especially with a cough and cold picking up the child, and handling the child, or even coming near the child during the illness. This does not apply to mother, but even she should be more rigorous in handwashing and more careful in handling the baby.
  - **Preventing Malaria:** In districts with malaria the baby should sleep under an insecticide treated bed net. Malaria too is a major cause of malnutrition.

- **Access to health services**
  - Seek prompt MNCH services. On the very first day of the illness, if you help the mother decide on whether it is a minor illness for which home remedy would be adequate, or to be referred to a doctor, such a decision could save lives. Early treatment would prevent malnutrition.
  - Access to contraceptive services is important. If the age of mother is less than 19, or the gap between two children is less than three years, there is a much higher chance of the children being malnourished

- **Access to AWW services that include:**
  - Food supplement for the child up to the age of 5. This could be a cooked meal, or in the form of take – home rations. Malnourished children are to be given additional food supplements. For children below the age of two, take – home rations are to be given. Pregnant women and lactating mothers up to six months are entitled to get food supplements.
  - Weighing the baby and informing the family of the level of malnutrition.
  - Conducting Village Health and Nutrition Day (VHND) activities. The JHA visits every month and the child is immunized, given Vitamin A supplements, paediatric iron supplements, Oral Rehydration Salts (ORS) packets or drugs as needed for illness management.

ANAEMIA IN CHILDREN UNDER FIVE YEARS OF AGE

Anaemia is important to diagnose because it commonly comes along with malnutrition. It may be a cause of poor appetite. Blood testing is essential, but even in its absence based on observation of pallor alone, treatment can be started.

Unusual paleness (pallor) of the skin of the soles or palms is a sign of anaemia. To see if the child has anaemia, look at the skin of the child's palm Children between 6 months to 60 months should be given 20mg elemental iron and 100 mcg folic acid per day per child as this regimen is considered safe and effective.
. Hold the child's palm open by grasping it gently from side to side. Do not stretch the fingers backward. This may cause pallor. Compare the child's palm with your own palm and the palm of other children. If the skin is paler than of others, the child has pallor.

Treatment for anaemia in children between 6 months to 60 months should be 20mg elemental iron and 100 mcg folic acid per day. For a child 2 years and above, also give one tablet of Albendazole for deworming once every six months. For a child less than two years, give half a tablet of Albendazole (Refer to Annexure 6). Iron rich foods are needed for the young child. If anaemia does not improve, the child must be referred to a doctor for more complete blood tests and treatment

HOW TO ASSESS A SICK CHILD FOR DANGER SIGNS?

Step 1: ASK: Is the child able to drink or breastfeed?
A child has the sign "not able to drink or breastfeed" if the child is not able to suck or swallow when offered a drink or breast milk. If the mother says that the child is not able to drink or breastfeed, ask her to describe what happens when she offers the child something to drink. For example, is the child able to take fluid into his mouth and swallow it? If you are not sure about the mother's answer, ask her to offer the child a drink of clean water or breast milk. Look to see if the child is swallowing the water or breast milk. A child who is breastfed may have difficulty sucking when his nose is blocked. If the child's nose is blocked, clear it. If the child can breastfeed after his nose is cleared, the child does not have the danger sign.

Step 2: ASK: Does the child vomit everything?
A child who is not able to hold anything down at all has the sign "vomits everything." What goes down comes back up. A child who vomits everything will not be able to hold down food, fluids or oral drugs. A child who vomits several times, but can hold down some fluids, does not have this general danger sign.

Step 3: ASK: Has the child had convulsions?
Ask the mother questions on whether the child has suffered from convulsions (local term) or not.

Step 4: LOOK: See if the child is lethargic or unconscious.
The lethargic child is sleepy when the child should be awake. A child who stares blankly and does not appear to notice what is happening around is also lethargic. The unconscious child does not waken at all. This child does not respond to touch, loud noise or pain.

Step 5: Ensure that the child is referred to a PHC/CHC immediately.

NATIONAL IMMUNIZATION SCHEDULE

Immunization is one of the most well-known and cost effective methods of preventing diseases.
Many serious germ diseases in children can be prevented by immunization. These vaccines are given free to all children by the JHA and at the sub-centers and the PHC. Some vaccines need cold storage during transportation to retain their power. Although most of the Vaccine Preventable Diseases (VPDs) are now under controll, immunization has to be sustained, not only to prevent VPDs, but also to:

- Eliminate Tetanus,
- Reduce the incidence of Measles and
- Eradicate Poliomyelitis.

The six vaccine preventable diseases are

- Poliomyelitis (can be prevented by OPV)
- Tetanus (can be prevented by DPT)
- Diphtheria (can be prevented by DPT)
- Pertussis (whooping cough) (can be prevented by DPT)
- Measles (can be prevented by measles vaccine)
- Childhood tuberculosis / lung TB (can be prevented by BCG)

The vaccines must be given at the right age, right dose, right interval and the full course must be completed to ensure the best possible protection to the child against these diseases. The schedule that tells us when and how many doses of each vaccine are to be given is called immunization schedule.

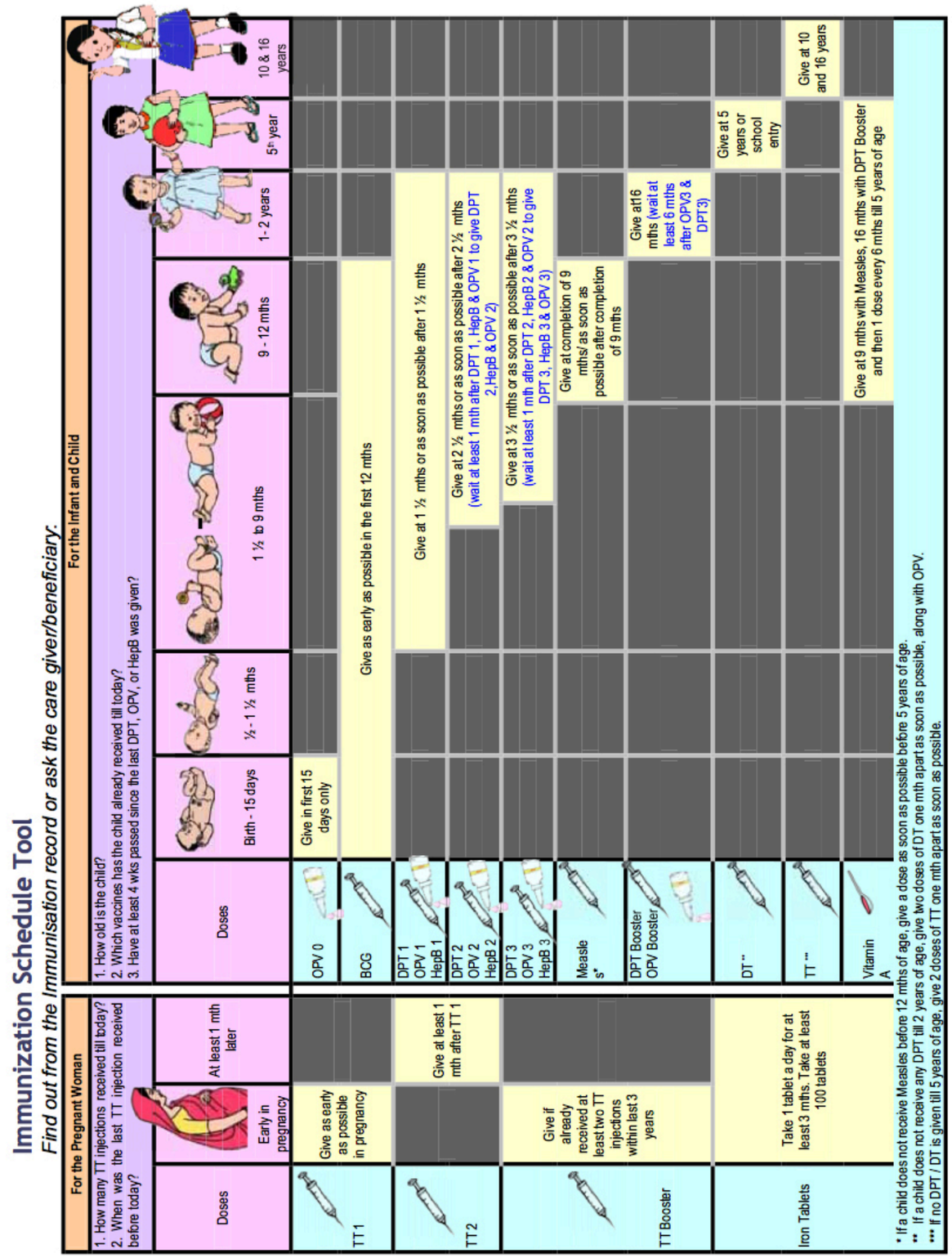
NATIONAL IMMUNIZATION SCHEDULE (NIS) FOR INFANTS, CHILDREN AND PREGNANT WOMEN

Vaccine	When to give	Dose	Route	Site
For Pregnant Women				
TT-1	Early in pregnancy	0.5 ml	Intra-muscular	Upper Arm
TT-2	4 weeks after TT-1*	0.5 ml	Intra-muscular	Upper Arm
TT- Booster	If received 2 TT doses in a pregnancy within the last 3 yrs*	0.5 ml	Intra-muscular	Upper Arm
For Infants				
BCG	At birth or as early as possible till one year of age	0.1ml (0.05ml until 1 month age	Intra-dermal	Left Upper Arm
Hepatitis B	At birth or as early as possible within 24 hours	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
OPV-0	At birth or as early as possible within the first 15 days	2 drops	Oral	Oral
OPV 1,2 & 3	At 6 weeks, 10 weeks & 14 weeks	2 drops	Oral	Oral
DPT1,2 & 3	At 6 weeks, 10 weeks & 14 weeks	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
Hepatitis B 1, 2 & 3****	At 6 weeks, 10 weeks & 14 weeks	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
Measles	9 completed months-12 months. (give up to 5 years if not received at 9-12 months age)	0.5 ml	Sub-cutaneous	Right Upper Arm
Vitamin A (1stdose)	At 9 months with measles	1 ml (1 lakh IU)	Oral	Oral
For Children				
DPT booster	16-24 months	0.5 ml	Intra-muscular	Antero-lateral side of mid-thigh
OPV Booster	16-24 months	2 drops	Oral	Oral
Japanese Encephalitis**	16-24 months with DPT/OPV booster	0.5 ml	Sub-cutaneous	Left Upper Arm
Vitamin A*** (2nd to 9th dose)	16 months with DPT/OPV booster Then, one dose every 6 months up to the age of 5 years.	2 ml (2 lakh IU)	Oral	Oral
DT Booster	5-6 years	0.5 ml	Intra-muscular	Upper Arm
TT	10 years & 16 years	0.5 ml	Intra-muscular	Upper Arm

*Give TT-2 or Booster doses before 36 weeks of pregnancy. However, give these even if more than 36 weeks have passed. Give TT to a woman in labour, if she has not previously received TT.
** SA 14-14-2 Vaccine, in select endemic districts after the campaign.
*** The 2nd to 9th doses of Vitamin A can be administered to children 1-5 years old during biannual rounds, in collaboration with ICDS.
**** In select states, districts and cities.

Proposed Changes in the National Immunization Schedule: 2009-10

- DT Booster to be replaced by DPT Booster at 5-6 years of age.
- In select well-performing states, MR to be given with DPT Booster at 16-24 months (Dose: 0.5 ml; Route: Sub-cutaneous; Site: Right Upper Arm)
- DPT and HepB vaccines at 6, 10 and 14 weeks to be replaced by DPT-HepB-Hib (Pentavalent) vaccine.



ANNEXURE 6 - Post-exam for Module 1*

* Facilitator will need to update all questions that relate to population/census data or statistical measures for a given time period.

Name:

Place:

Date:

PHC name:

1. Based on current census data, what is the worldwide annual infant mortality rate (IMR) for children below the age of 5 years?
   a. 1 million
   b. 5 million
   c. 10 million

2. Based on current census data, what is the worldwide mortality rate of women who are pregnant and mortality rates of women due to complications during child birth and post natal complications?
   a. 5 lacs
   b. 5.3 lacs
   c. 4 lacs

3. How is MMR (maternal mortality rate) measured?
   a. No. of deaths per 100 pregnant women
   b. No. of deaths per 100000 pregnant women
   c. No. of deaths per 1000 pregnant women

4. What is the IMR (Infant mortality rate) according to current census data?
   a. 60/1000 live births
   b. 50/1000 live births
   c. 40/1000 live births

5. This is one of the most important reasons for the mortality of a mother. Choose the correct one from the below mentioned options
   a. Excessive Bleeding
   b. Malaria
   c. Typhoid

6. Who is called a newborn baby? Choose the answer from the below mentioned options
   a. 0 – 25 days of birth (actually 0-28 days)
   b. 0 – 6 months of birth
   c. 0 – 1 year of birth

7. In how many districts of Karnataka has the Sukshema program been implemented?
   a. 6
   b. 8
   c. 10

8. What will be the percentage of HB in cases of acute blood deficiency?
   a. <10%
   b. <7%

9. During pregnancy, in which trimester do the weeks 12 – 28 appear?
   a. 1
   b. 2
   c. 3

10. When does ANC begin?
    a. 3 months
    b. 5 months
    c. Immediately after sexual intercourse (As soon as the pregnancy is suspected)

11. How many times do mothers usually visit the health centre after registering for ANC?
    a. 3
    b. 4
    c. 5

12. What is the normal BP for a human being?
    a. 110/80
    b. 120/80

13. How many doses of TT injection should be administered to a first time pregnant woman (Primi)?
    a. 2
    b. 3
    c. 4

14. What symptoms can be pinpointed from a urine protein test?
    a. Blood deficiency
    b. Pre eclampsia (high BP)
    c. Heart condition

15. Which among the below mentioned options is the best permanent family planning option?
    a. Mala.D
    b. Condom
    c. Tubectomy

16. At the facility level, in which level do 24/7 PHC and non. FRU CHC appear?
    a. 1st level
    b. 2nd level
    c. 3rd level

17. For a woman who is in her first pregnancy, what height of this woman will indicate that she will have a risky pregnancy?
    a. 140 centimeters
    b. 160 centimeters
    c. 170 centimeters

18. How many iron supplement tablets are given to a pregnant woman as a precaution to guard against blood deficiency?
    a. 100
    b. 200
    c. 300

19. For a pregnant woman what is the time line for a full term pregnancy?
    a. 32 – 36 weeks
    b. 37 – 42 weeks
    c. 42 – 45 weeks

20. What is the duration of post natal care?
    a. 42
    b. 40

21. In which trimester of the pregnancy will a still birth occur?
    a. After 28 weeks
    b. After 20 weeks

22. What is intra partum care?
    a. Pre natal care
    b. Post natal care
    c. Care during child delivery

23. Most mother mortality cases happen during the below mentioned instances?
    a. PNC
    b. INC
    c. ANC

24. How many stages are there in a pregnancy?
    a. 3
    b. 4

25. For a first time pregnancy, what is the duration of the first stage of child birth?
    a. 0 – 12 hours
    b. 0 – 15 hours

26. How many times must a newborn baby be breast fed in a day?
    a. 8 – 10 times
    b. 3 – 4 times

27. The below mentioned options are the reasons for infant mortality – Tick the correct options
    a. Diarrhea
    b. ARI (Acute Respiratory Infection)
    c. Measles
    d. Typhoid
    e. malaria
    f. HIV/AIDS

28. How many times is DPT prescribed?
    a. 5 times
    b. 3 times

29. Which disease does BCG control?
    a. Tuberculosis (TB)
    b. Throat inflammation

30. At which stage is ETT implemented?
a. At the village level
b. At the sub centre level
c. At the PHC level
d. At the district level

31. We can reach the below mentioned sections through ETT?
a. Those living below the poverty line
b. Dalits
c. Migrants
d. All of the above

32. Whose information does the mother card contain?
a. Mother
b. Child
c. Pregnant woman
d. All of the above

33. Who enters details into the mother card?
a. JHA and RP
b. RP and doctor
c. ASHA and JHA
d. JHA and doctor

34. Who is the target audience for FFC?
a. Neighbours
b. Pregnant woman
c. Family members

35. How many important communication topics make up the FFC?
a. 12
b. 7
c. 8

36. Who enters information into the HBMNC (Home Based Maternal & Newborn Care) tool?
a. JHA and RP
b. RP and doctor
c. ASHA
d. JHA and doctor

37. What is ARS?
a. Health safe guard committee
b. Health safe guard organization
c. Health safe guard armour

38. What is the main aim of community monitoring?
a. Guarantee services due to the community
b. Guarantee that the pregnant woman's family is accessing all health related services
c. All of the above

39. Which among the below mentioned options is a mid media activity?
a. Home visit
b. Street play
c. Counselling
d. All of the above

40. Which among the below mentioned options is the primary responsibility of an RP?
a. Entering information into the mother card
b. Support for ASHA workers
c. Home visits
d. All of the above


P Q R S T U V W X Y

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