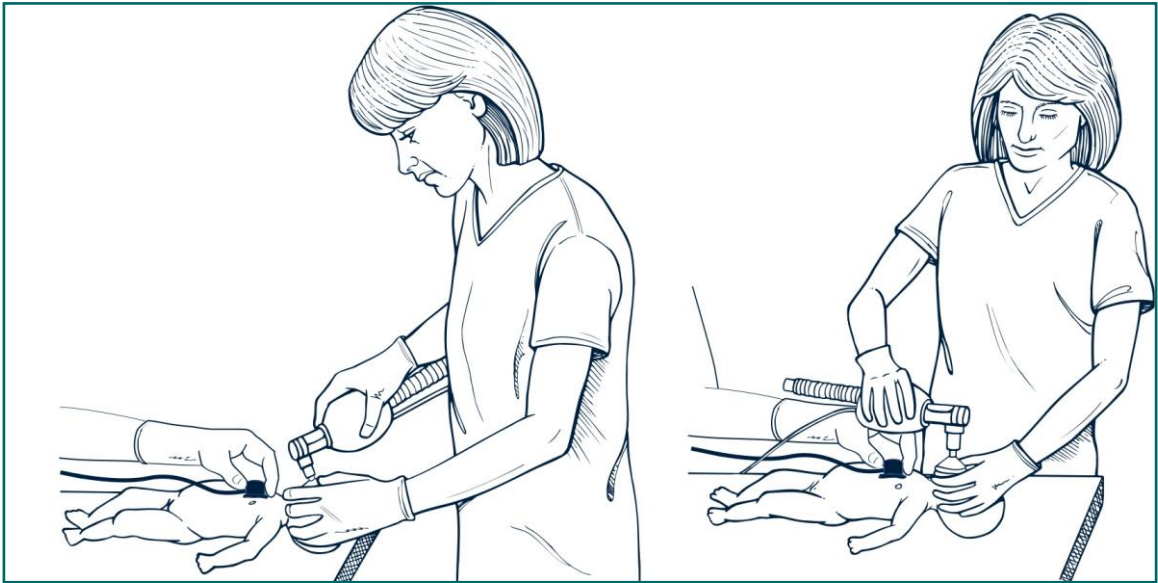




# NAVJAAT SHISHU SURAKSHA KARYAKRAM



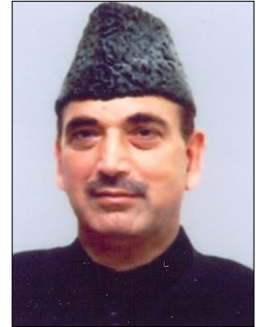
## BASIC NEWBORN CARE AND RESUSCITATION PROGRAM FACILITATOR'S GUIDE



Ministry of Health and Family Welfare  
Government of India

## Message

Although childhood and infant mortality in India has reduced substantially during the last decade, the rate of neonatal mortality is still high. Nearly two-thirds infant deaths each year occur within the first four weeks of life, and about two-thirds of those occur within the first week. Thus, the first days and weeks of life are critical for the future health and survival of a child.



Newborn care often receives less-than optimum attention. It is now well known that the newborns themselves require special attention separate from that of their mothers to assure a healthy start to life. The immediate causes of newborn death include infection, birth asphyxia, complications related to premature birth, and congenital anomalies. Most of the neonatal deaths can be prevented with simple, cost-effective solutions that do not depend on highly trained provider or sophisticated equipment.

Effective Newborn care is a crucial challenge that is faced by every health care setting dealing in maternal and child health. Training of Doctors, Nurses and ANMs in low resource settings is an urgent need. A key component is to equip the staff with appropriate knowledge and skill to improve the quality of service delivery. The Ministry of Health and Family Welfare is addressing this through the launch of the Navjaat Shishu Suraksha Karyakram (NSSK). A simple and scalable training module on Basic Newborn Care and Resuscitation has been developed for this programme.

This programme provides evidence-based knowledge in improving newborn health especially care at birth. The health provider after training will furnish all the required care at birth, identify and manage common complications, stabilize (if necessary) and refer/transfer newborns needing additional interventions.

I am sure that this programme, will act as an enabling tool for newborn survival and health in the country.

Ghulam Nabi Azad  
Union Minister for Health and Family Welfare  
Government of India

## Foreword

India's Infant mortality is a staggering 2.1 million per annum and contributes to nearly 21 per cent of the global burden of infant deaths. The rate of decline of Infant mortality rate in India over a period of time has slowed down. During the decade 1980 to 1990 Infant mortality rate declined by as much as 34 points, however during the decade 1990 to 2000 Infant mortality rate declined by just 12 points.



The major reason for this situation is the very slow decline in the neonatal mortality which accounts for 2/3rds of all infant mortality. Neonatal mortality world over is around 37 % of all under five mortality whereas in India this is around 50% of all under 5 deaths, which means that the proportion of U5 deaths by neonatal causes is disproportionately high in India.

The important causes of neonatal deaths is birth asphyxia and along with serious infections results in more than 50 % of all neonatal deaths. If infant mortality has to be brought down than it becomes important that these major causes of neonatal deaths are addressed.

The Government of India keeping this in mind has developed a program on "Basic Newborn Care and Resuscitation" which would address these causes in a large way. This program is timely and certainly would have a significant contribution in bringing down neonatal mortality and other serious long term morbidities like neuro-developmental sequelae in survivors of asphyxiated newborn babies. With more and more deliveries occurring at health care institutions as a result of the Jannani Suraksha Yojna, it becomes important that the large number of health professionals attending to births, are trained in the simple procedure of resuscitation and basic new born care.

The training manual has been prepared with the help of Indian Academy of Pediatrics and the pediatrics department of AIIMS and encompasses important evidence based procedures in a simple language. The training is of one day duration and should be easily scaled up to health providers thus making available the much needed skills for new born care and resuscitation at facilities. Health providers will benefit by the liberal illustrations used in the manual. The manual should prove to be invaluable in developing the skills of health providers to address neonatal mortality and to save new born lives.

Naresh Dayal, IAS  
Secretary Health and Family Welfare,  
Ministry of Health and Family Welfare,  
Government of India

## **From the Mission Director (NRHM)**

Worldwide 37 per cent of under-five deaths are attributed to neonatal causes (within the first 4 weeks of life). In India, this figure is around 50 per cent, which means that the proportion of under five deaths by neonatal causes is disproportionately high. Current neonatal mortality rate in India is 37/1000 live births accounting for almost two thirds of the infant deaths.



“Navjaat Shishu Suraksha Karyakram” a new programme on Basic Newborn Care and Resuscitation, is being launched by the Ministry of Health and Family Welfare to address important interventions of care at birth i.e. Prevention of Hypothermia, Prevention of Infection, Early initiation of Breast feeding and Basic Newborn Resuscitation.

Newborn care and resuscitation is an important starting-point for any neonatal program that is required to ensure the best possible start in life. The objective of this new initiative is to have persons trained in Basic newborn care and resuscitation available at every delivery. The implementation of this programme will help prevent a significant number of newborn deaths and ensure newborn survival.

The training package in this manual is based on the latest available scientific evidence and will be immensely useful in decreasing neonatal mortality in our country and in achieving our National goals.

P.K. Pradhan, IAS  
Additional Secretary and Mission Director (NRHM)  
Ministry of Health and Family Welfare  
Government of India

## Preface

India accounts for nearly 0.9 million newborn deaths per year that is 30% of global neonatal deaths. Nearly half of under 5 deaths occur in neonatal period and most of these deaths occur within first few days of birth. Birth asphyxia and sepsis are the major causes of these deaths. The National Population Policy Goal of IMR below 30/1000 live births by 2010, mandates urgent measures to be put in place to prevent these deaths to reach the NPP Goal. One of the effective measures to prevent deaths is to have skilled birth attendants trained in resuscitation, prevention of infection and temperature management. Initiation of breastfeeding within one hour of life itself is estimated to save a number of new born lives.



The Basic New born Care and Resuscitation program developed by the Ministry of Health and Family Welfare will help develop skills of health providers to address birth asphyxia and other causes of mortality at birth. The two day training envisaged under this program, would be able to enhance the skills of health providers and especially the birth attendants at facilities. It is estimated that this skill based training when put in place in the States can prevent approximately 1- 2 lakh newborn deaths every year.

The program in the first phase will be launched in the 8 EAG States (Bihar, Rajasthan, Uttar Pradesh, Orissa, Madhya Pradesh, Uttarakhand, Jharkhand, and Chhattisgarh), Jammu and Kashmir and Assam to address the high neonatal mortality in these states.

The Indian Academy of Pediatrics (IAP) and the Pediatrics Department of All India Institute of Medical Sciences have provided invaluable help in developing the manual and tools for this program. The Indian Academy of Pediatrics will also provide help in developing trainers in these States. The National Neonatal Forum will also be assisting in rolling out this national programme.

I would like to acknowledge the contributions of Dr. Panna Choudhury, National President, Dr. Naveen Thacker, Dr. Vikas Goyal of IAP; Dr. A.K. Dutta, Vice Principal, Lady Hardinge Medical college and Dr. Vinod Paul, Professor and Head of the Department of Pediatrics, AIIMS in developing this program. Use of materials from manual of AAP copyrighted material, Latter-Day Saint Charities, JN Medical College, Belgaum and WHO-CC for training and Research in newborn care, AIIMS, New Delhi is duly acknowledged. I would also like to acknowledge the contribution of Dr. B. Kishore Assistant commissioner Child Health who worked relentlessly to put up the entire thing together.

Amit Mohan Prasad, IAS  
Joint Secretary (RCH),  
Ministry of Health and Family Welfare,  
Government of India

# **Facilitators Guide**

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Indian Academy  
of Pediatrics



WHO-CC for training  
and research in  
newborn care, AIIMS





## INTRODUCTION TO THIS FACILITATOR GUIDE

### What is the purpose of this training course?

This training course on basic newborn care and resuscitation program has been developed to address the high early neonatal mortality in the country. The course aims to impart the basic skills essential to manage common neonatal problems like asphyxia, infections, hypothermia and breast feeding.

The course has been developed for Medical officers, Nurses and ANMs, who:

- are based at health centres (CHCs/FRUs/24x7 PHCs) and small hospitals (not referral hospitals) and
- are responsible for conducting deliveries and managing newborn babies

### 1. What is a FACILITATOR?

A facilitator is a person who helps the participants learn the skills presented in the course. The facilitator spends much of his time in discussions with participants, either individually or in small groups. For facilitators to give enough attention to each participant, a ratio of one facilitator to 3 to 6 participants is desired. In your assignment to teach this course, YOU are a facilitator.

As a facilitator, you need to be very familiar with the material being taught. It is your job to give explanations, do demonstrations, answer questions, talk with participants about their answers to exercises, conduct role plays, lead group discussions, organize and supervise clinical practice in outpatient clinics, and generally give participants any help they need to successfully complete the course.

### 2. How can this FACILITATOR GUIDE help you?

This *Facilitator Guide* will help you teach the programme **lessons**, including the video segment.

For each lesson, this *Facilitator guide* includes the following:

- \* a list of the procedures to complete the manual, highlighting the type of feedback to be given after each exercise
- \* guidelines for the procedures. These guidelines describe:
  - how to do demonstrations, role plays, and group discussions,
  - supplies needed for these activities,
  - how to conduct the video exercise,
  - points to make in group discussions or individual feedback.
- \* answer sheets (or possible answers) for most exercises

### 3. CHECKLIST OF INSTRUCTIONAL MATERIALS NEEDED IN EACH SMALL GROUP

ITEM NEEDED	NUMBER NEEDED
Facilitators guide	1 for each facilitator
Participants manual	1 for each participant
Trainers resuscitation kit	1 set for each facilitator
Videotape	(Breast feeding video.)
Audio/video equipment	1 set for each training group
Set of posters	One set for each group/table
Material for demonstrating Hand washing (soap and water)	One per group
Set of pre- post evaluations (written and performance) check lists	1 for each participant

### 4.CHECKLIST OF SUPPLIES NEEDED FOR WORK ON MODULES

**Supplies needed for each person include:**

- Name tag and hold
- Paper
- Ball point pen
- Eraser
- Felt tip pen
- Highlighter
- One pencil

**Supplies needed for each group include:**

- Paper clips
- Pencil sharpeners
- Stapler and staples
- Extra pencils and erasers
- Flipchart pad and marker or blackboard and chalk
- Two rolls transparent tape
- Rubber bands
- One roll masking tape
- Scissors

Access is needed to a CD /video player. In addition, certain exercises require special supplies such as drugs, demonstration aids or a baby doll (or rolled towel to hold like a baby). These supplies are listed in the guidelines for each activity. Be sure to review the guidelines and collect the supplies needed before these activities.

## 5. SCHEDULE FOR BASIC NEWBORN CARE & RESUSCITATION TRAINING PROGRAMME

<b>Day 1</b>	
8:30 A.M-9:30 A.M	Registration / inauguration
9:30 A.M - 12.00 P.M	<b>Lesson I: Neonatal resuscitation</b>
12:00 P.M - 1:00 P.M	<b>Lesson I: Neonatal resuscitation</b> <ul style="list-style-type: none"> <li>• Demonstration</li> </ul>
1:00 P.M - 2:00 P.M	LUNCH
2:00 P.M - 3.00 P.M	<b>Lesson I: Neonatal resuscitation</b> <ul style="list-style-type: none"> <li>• Performance check</li> </ul>
3.00 P.M - 5:00 P.M	<b>Lesson II: Care of the baby at birth</b>
<b>Day 2</b>	
9:00 A.M - 10:30 P.M	<b>Lesson III: Prevention of Infection</b>
10:30 P.M - 1:00 P.M	<b>Lesson IV: Thermal protection</b>
1:00 P.M - 2:00 P.M	LUNCH
2:00 P.M - 3.30 P.M	<b>Lesson V: Feeding of Normal and Low Weight Babies</b>
3.30 P.M - 4.00 P.M	<b>Lesson VI : Transport of Neonates</b>
4.00 P.M - 5:00 P.M	<b>Open house</b>

## 5. GUIDELINES FOR ALL MODULES

### When participants are working

- Be available, interested and ready to help.
- Watch the participants as they work, and offer individual help if you see a participant looking troubled, staring into space, not writing answer or not turning pages. These are clues that the participant may need help.
- Encourage participants to ask questions whenever they would like some help.
- If important issues or questions arise when you are talking with an individual, make note of them to discuss later with the entire group.

### When providing individual feedback

- Before giving individual feedback, refer to the appropriate notes in this guide to remind yourself of the major points to make.
- Compare the participant's answers sheet provided. If the answer is labelled "Possible Answer" the participant's answer does not need to match exactly, but should be reasonable. If exact answers are provided, be sure the participant's answer matches exactly.
- If the participant's answer to any exercise is incorrect or is unreasonable, ask the participant questions to determine why the error was made. There may be many reasons for an incorrect answer. For example, a participant may not understand the question, may not understand certain terms used in the exercise, may use different procedures at his clinic, may have overlooked some information about a case, or may not understand a basic process being taught.
- Once you have identified the reason(s) for the incorrect answer to the exercise, help the participant correct the problem. For example, you may only need to clarify the instructions. On the other hand, if the participant has difficulty understanding the process itself, you might try using a specific case example. After the participant understands the process that was difficult, ask him to work the exercise or part of the exercise again.
- Summarize, or ask the participant to summarize, what was done in the exercise and why. Emphasize that it is most important to learn and remember the process demonstrated by the exercise. Give the participant a copy of the answer sheet, if one is provided.
- Always reinforce the participant for good work by (for example):
  - Commenting on his understanding.
  - Showing enthusiasm for ideas for application of the skills in his work.
  - Telling the participant that you enjoy discussing exercises with him.
  - Letting the participant know that his hard work is appreciated.

### When leading a group discussion

- Plan to conduct the group discussion at a time when you are sure all participants completed the preceding work. Wait to announce this time until most participants are ready, so that others will not hurry.
- Before beginning the discussion, refer appropriate notes in this guide to remind yourself of the purpose of discussion and the major points to make.
- Always begin the group discussion by telling the participants the purpose of the discussion.
- Often there is no single correct answer that needs to be agreed on in a discussion. Just be sure the conclusions of the group are reasonable and that all participants understand how the conclusions were reached.

- Try to get most of the group members involved in the discussion. Record key ideas on a flipchart as they emerge. Keep your participation to a minimum but ask questions to keep the discussion active and on track.
- Always summarize, or ask a participant to do so, what has been discussed in the exercise.
- Give participants a copy of the answer sheet, if one is provided.
- Reinforce the participants for their good work by (for example):
  - Praising them for the list they compiled,
  - Commenting on their understanding of the exercise,
  - Commenting on their creative or useful suggestions for using the skills on the job, - Praising them for their ability to work together as a group.

### **When coordinating a Role-play**

- Before the role-play, refer to the appropriate notes in this guide to remind yourself of the purpose of the role-play, roles to be assigned, background information, and major points to make in the group discussion afterwards.
- As participants come to you for instructions before the role-play,
  - Assign roles. At first, select individuals who are outgoing rather than shy, perhaps by asking for volunteers. If necessary, a facilitator may be a model for the group by acting in an early role-play.
  - Give role-play participants any props needed, for example, a baby doll, and drugs. - Give role-play participants any background information needed.
- (There is usually some information for the "mother" which can be photocopied or clipped from this guide.)
  - Suggest that role-play participants speak loudly.
  - Allow preparation time for role-play for the participants.
- When everyone is ready, arrange seating/placement of individuals involved. Have the "mother" and "nurse" stand or sit apart from the rest of the group, where everyone can see them.
- Begin by introducing the players in their roles and stating the purpose or situation. Interrupt if the players are having tremendous difficulty or have strayed from the purpose of the role-play.
- When the role-play is finished, thank the players and praise them for their participation. Ensure that feedback offered by the rest of the group is supportive. First discuss things done well. Then discuss things that could be improved.
- Try to get all group members involved in discussion after the role-play. In many cases, there are questions given in the module to help structure the discussion.

**Ask participants to summarize what they learned from the role-play.**

## 6. INTRODUCTION OF SELF AND PARTICIPANTS

Facilitator will get up and greet the participants. Introduce self and the participants to each other. Keep on writing the surname/nickname on the board. After the round of introduction, facilitator should announce, "You will learn in this training basic newborn care and resuscitation of newborn babies. This module is for you to keep". Facilitator should distribute the module to each participant.

## 7. ADMINISTRATIVE TASKS

There may be some administrative tasks or announcements that you should address. For example, you may need to explain the arrangements that have been made for lunches, the daily transportation of participants from their lodging to the course, or payment of per diem.

## Lesson I: Resuscitation of the newborn baby

### Preparation

Before starting the session, make sure that:

1. You have understood the objectives of the session
2. You have all the items needed for running the module:
  - i. Mannequin (keep dressed)
  - ii. Cotton sheet – 2
  - iii. Shoulder towel (3/4")
  - iv. Different sizes and shapes of face mask
  - v. Resuscitation bag, reservoir, oxygen tubing
  - vi. Suction devices: catheter (12, 14F) mucous trap.

### Introduce the lesson

Introduce by saying: 'In this lesson, you will learn steps of resuscitation of an asphyxiated newborn (Routine care for a normal baby will be covered in a separate lesson). You must master the skills for providing safe and effective resuscitation of newborn babies. These can be practised on the mannequin using appropriate equipments as discussed in the module'.

Ask the participants to start reading pages 1-5. Once they have finished reading, conduct a group discussion regarding 'Preparation prior to delivery'.





## GROUP DISCUSSION

Assemble all the necessary equipments in the table. Ask all the participants to get up and gather around you with their modules opened on page 1-5. Make sure that all the participants are looking at the demonstration aid. Then ask participants one after other the equipments needed for resuscitation.

Show each item of resuscitation equipment as it is discussed: Bag, mask, suction device, clock, warm and folded cloths etc. indicate the remaining structures on the figure.

Raise a discussion about what the participants practice at the time of birth.

Ask the participants to read pages 5 to 19; then conduct a demonstration on 'The steps of resuscitation'.



## DEMONSTRATION

### Scenario:

Mother delivers a baby.

Two trainers/facilitators: one plays the mother and the other the health worker.

1. Demonstrate initial steps and assessment at birth: Show them how to deliver the baby on to the mother's abdomen.
  2. Note the time of birth; demonstrate the correct procedure of drying the baby (Holding the baby in a pre warmed linen, drying and removing the wet linen. Heat should be provided by keeping the baby warm using a warmer/bulb).
  3. Show them how to do suctioning of the mouth and nose using the suitable device if the liquor is meconium stained.
  4. Assess the baby's breathing: demonstrate how to assess breathing during drying itself.
- Enact all the four scenarios:
- Demonstrate baby crying and/ or breathing at 40 breaths per minute (Take a breath – count one/two – breathe again. Continue for 40 breaths)
  - Demonstrate gasp • Demonstrate baby not breathing at all.
5. Demonstrate resuscitation on the mannequin
  6. Inform the mother that the baby needs some help. Bring the baby under a warmer (tell participants that if there is no warmer, they have to arrange some source for providing warmth near the baby's corner)
  7. Demonstrate positioning. Position the baby in such a way that airways are patent. Show that the neck is not flexed or hyper extended.
  8. Demonstrate stimulating the baby and repositioning.
  9. Demonstrate them how to evaluate the baby's breathing again. Tell them that the baby is not breathing.

Ask the group: what should we do now? (Ventilate)

10. Now demonstrate the parts of resuscitation bag, safety features, function and mechanism of increasing oxygen concentration using reservoir and types of masks.

11. Show the assembly and testing of Bag and Mask equipment using palm.

### Testing bag and mask equipment

12. Show the procedure of Bag and Mask ventilation on the mannequin. Select appropriate sized bag and face mask, connect oxygen tubing and reservoir.

Show quickly that the equipment is in working order. Stand on head side or by the side of baby so that you have clear vision of chest of the baby.

13. Show the procedure of BMV with a visible chest rise.

14. Indicate rate "**Breathe – Two – Three, Breathe – Two – Three**". If you squeeze the bag on "Breathe" and release while you say "Two, Three", you will probably find you are ventilating at a proper rate.

15. If there is no chest rise – mention the possible reason (Inadequate seal, position, secretions, inadequate pressure and mouth closed) and corrective measure thereof.

### Evaluate Heart rate

16. Demonstrate how to evaluate heart rate and mention the action to be taken based on heart rate

After the demonstration, ask the participants to practice the skills on the mannequin.

After the demonstration, ask the participants to do the exercise on page 21; give individual feedback.



### SELF EVALUATION

1. In suctioning a baby's nose and mouth, the rule is to first suction the Mouth and then the Nose.
2. Choose the correct answer: The following babies will need resuscitation
  - baby crying at birth: No
  - baby breathing at a rate of 40 per minute: No
  - baby is gasping at birth: Yes
  - baby not breathing at birth: Yes
3. Compress the bag enough to cause a visible chest expansion at the rate of 40 breaths per min.
4. You are using a self inflating bag to ventilate a baby. The bag fills after every squeeze. But the baby's chest is not rising. List 3 possible reasons and the actions that had to be taken:
  - Blocked airway, Re-position the baby's head
  - Do suction (if secretions are present)
  - Leakage of air around the mask Check the seal around the mask; if it is not good, re-position the mask.
  - Inadequate pressure Squeeze the bag harder (using more pressure)

After providing individual feedback, ask participants to read pages 22 & 23. Once they have finished reading, conduct a demonstration on 'The steps of resuscitation'.



## DEMONSTRATION

The trainer to demonstrate in real time the sequence of events as taught above on the mannequin, from delivery to placing the baby skin-to-skin with its mother.

\_ One person to time resuscitation and tidying up and recording events.

1. Deliver the baby on to mother's abdomen
2. Note the time of birth and dry the baby – **No meconium**
3. Assess the baby's breathing:
  - Baby breathing or crying – **no further action**
  - Baby gasping or not breathing – **Continue resuscitation**
4. Cut cord quickly; transfer baby to a firm warm surface and START resuscitation.  
Open the airway:
  - Position baby's head so it is slightly extended
  - Suction first mouth and then the nose.
5. If still not breathing, STIMULATE and REPOSITION
6. If still not breathing well, VENTILATE
  - Use correct sized mask
  - Ensure proper seal
  - Squeeze 2-3 times and observe the chest rise
  - If chest rise is adequate, ventilate for 30 seconds and reassess
  - If chest rise is NOT adequate, take corrective steps (steps to improve ventilation).
6. Assess breathing, if breathing well slowly decrease rate of ventilation, then stop and provide observational care.
7. If not breathing well, continue ventilation, add oxygen if available, call for help and Assess heart rate after 30 seconds of ventilation:
 

If > 100/min: assess breathing; if breathing or crying, STOP VENTILATION, provide observational care.

If < 100/min: continue ventilation provide advanced care, if not possible organize referral.

  - Explain the events to the mother/family.
  - Arrange referral.
  - Record the event.

## SUMMARIZING THE LESSON

Summarize the lesson by repeating what has been taught in the module. Ask for any clarifications. If there are none, tell them that they have successfully completed this lesson.

## Lesson II: Care of the baby at birth

### Preparation

Before starting the session, make sure that:

1. You have understood the objectives of the session
2. You have all the items needed for running the session:
  - i. Doll (mannequin)
  - ii. Sterile tie
  - iii. Sterile blade
  - iv. Pieces of cloth etc.

### Introduce the lesson

Introduce by saying: 'In this lesson, you will learn about care of a normal baby at the time of and upto one hour after birth. Care of a baby who is asphyxiated and who needs resuscitation have already been covered.

Ask the participants to start reading pages 25-28. Tell them that once they have finished reading, there will be a demonstration on 'Immediate care of a normal newborn at the time of birth' .



### DEMONSTRATION

Demonstrate all the ten steps of care of a normal baby at the time of birth. Use a doll and demonstrate all the steps including care of the cord and eyes.

Ensure that you discuss following points

1. Eye care : Donot apply anything but in areas where the STD rates are high eye prophylaxis using Teteracycline ointment or 1 % silver nitrate drops
2. Cord care : Leave it to dry; do not apply anything to cord. Watch for bleeding or pus discharge
3. Temperature: Cover the baby's head with a cap. Cover the mother and baby with a warm cloth.
4. Breastfeeding: Emphasize the importance of counseling for breastfeeding at this time as mothers will be more receptive now.

Ask the participants to read pages 30 to 31 and then do the exercise on pages 32; once they have finished the self evaluation, give individual feedback.



### SELF-EVALUATION

1. The four basic needs of a baby at the time of birth are:
  - i. Warmth*
  - ii. Normal breathing*
  - iii. Mother's milk*
  - iv. Protection from infection*
2. Where should be a baby kept immediately after a normal delivery?  
***Baby has to be kept on the mother's chest (if this is not possible, the baby should be kept in a clean, warm, safe place close to the mother).***
3. How would you clamp and cut the umbilical cord after birth?  
***Cord should be clamped using a sterile, disposable clamp or a sterile tie and cut using a sterile blade about 2 cm (1-inch) away from the skin.***
4. Enumerate the steps of 'Warm chain'.

<u>At delivery</u>	<u>After delivery</u>
<ol style="list-style-type: none"> <li><b><i>1. Warm delivery room (25° C) with no draughts</i></b></li> <li><b><i>2. Dry the baby immediately; remove the wet cloth</i></b></li> <li><b><i>3. Wrap the baby with clean dry cloth</i></b></li> <li><b><i>4. Keep the baby close to the mother (ideally skin-to-skin) to stimulate early breastfeeding</i></b></li> <li><b><i>5. Postpone bathing/sponging for 24 hours</i></b></li> </ol>	<ol style="list-style-type: none"> <li><b><i>1. Keep the baby clothed and wrapped with the head covered</i></b></li> <li><b><i>2. Minimize bathing especially in cool weather or for small babies</i></b></li> <li><b><i>3. Keep the baby close to the mother</i></b></li> <li><b><i>4. Use kangaroo care for stable LBW babies and for re-warming stable bigger babies</i></b></li> <li><b><i>5. Show the mother how to avoid hypothermia, how to recognize it, and how to re-warm a cold baby</i></b></li> </ol>

5. Mention the benefits of initiating skin-to-skin care immediately after birth:  
***Maintains temperature and helps in early initiation of breastfeeding.***
6. Enumerate the 'Six cleans' one has to follow at the time of delivery:
  - i) Clean attendant's hands (washed with soap)***
  - ii) Clean delivery surface***
  - iii) Clean cord- cutting instrument (i.e. razor, blade)***
  - iv) Clean string to tie cord***
  - v) Clean cloth to wrap the baby***
  - vi) Clean cloth to wrap the mother***

After self-evaluation, ask the participants to read pages 33 to 34 and do the exercise on page 35. Once they have finished the Self-evaluation, give individual feedback.



### SELF EVALUATION

1. During the first hour after birth babies need to be monitored every **15 minutes**.
2. Name the two most important parameters that need to be monitored in the first hour after birth:  
***Breathing and  
Temperature or warmth***
3. Routine care of eyes at birth includes  
***Cleaning eyes immediately after birth with swab soaked in sterile water using  
separate swab for each eye (clean from medial to lateral side)  
Give prophylactic eye drops within 1 hour of birth as per hospital policy (in  
areas with high incidence of sexually transmitted diseases).***

### SUMMARIZE THE LESSON

Summarize the lesson by repeating what has been taught in the session. Ask for any clarifications. If there are none, tell them that they have successfully completed this lesson.

## Lesson III: Prevention of infection

### Introducing the lesson:

'In this lesson you will learn how to prevent infection occurring in newborn babies. Infection being the most common cause of death, we must take effective steps to prevent them'.

'You will learn

- Steps of effective hand washing
- Learn routines of housekeeping and disinfection in baby care area
- Learn disposal of hospital waste' in this module.

Ask the participants to read page 36 to 38. After they have finished reading, conduct a demonstration on 'Steps of hand washing' using a poster.



### DEMONSTRATION

Conduct a demonstration on 'Steps of hand washing' (using the poster).

After the demonstration, ask them to do the self evaluation on page 39. Tell participants that they would be given individual feedback after they have done the self evaluation





## SELF EVALUATION

1. Basic requirements for asepsis in baby care area include:
  - ✓ Running water supply
  - ✓ Soap
  - ✓ Elbow or foot operated taps
  - ✓ Strict hand washing
  - ✓ Avoid overcrowding, optimal number of health providers for care of more babies
  - ✓ Plenty of disposals
  - ✓ Obsession with good housekeeping and asepsis routines
  
2. Single Most Important, Very Simple and Cheap method for prevention of infection in nursery is hand washing.
  
3. The key features of good hand-washing technique include:
  - ✓ Six steps
  - ✓ Two minutes hand washing before entering the newborn care area
  - ✓ Twenty seconds hand washing in between and after touching the baby
  
4. Sterile gloves should be worn for the following procedures (Enumerate any three):
  - ✓ Blood sampling
  - ✓ IV access &
  - ✓ IV injection

Ask the participants to read page 40. Inform the participants that different hospitals may have different policies and they need to learn about their own policies and dispose off the hospital waste accordingly.

### SUMMARIZE THE LESSON

Summarize the lesson by repeating what has been taught in the session. Ask for any clarifications. If there are none, tell them that they have successfully completed this lesson.

## Lesson IV: Thermal protection

### Introduction

In this module you would learn about thermal protection. We know maintenance of normal temperature is essential for newborn babies. Hypothermia as well as hyperthermia is bad for babies. We can prevent these by simple measures.

Ask the participants to start reading pages 41 to 43.  
Once everybody has finished reading, demonstrate the 'Mechanisms of heat loss and the ways to prevent them'



### DEMONSTRATION

Place a naked wet doll on the table. Discuss the four ways a baby can lose heat and demonstrate how to prevent these.

*Ask four participants the following question adding a different way of losing heat each time, giving examples.*

**Ask:** *What are the four ways a baby can lose heat?*

#### Evaporation

- Not drying the baby after delivery when it is wet.  
*(Dry the doll with a towel)*

#### Radiation

- Not covering the baby's head so that its body heat is able to pass into the surrounding air.  
*(Put a hat onto the baby's head)*

#### Convection

- Leaving the baby in a draught.  
*(Take the baby away from an open door or window)*

#### Conduction

- Leaving the baby on a cold surface, particularly metal.  
*(Take the baby off the table top, wrap it up and indicate you have put it in a cot temporarily)*

Ask the participants to read pages 45 to 46. Then conduct a demonstration on 'Measurement of axillary temperature using a thermometer'



### DEMONSTRATION

Ask co-facilitator to record the axillary temperature. Lead a discussion about what steps were done correctly and what were wrong. Facilitator should lead a discussion & emphasize correct steps of recording temperature.

- Use a mannequin or doll and a thermometer.
- Follow the points given in the box '*Recording the axillary temperature*'.
- A participant to read out each point as it is demonstrated.

*Ask them to read page 48-49; after they have finished reading, conduct a demonstration on 'Temperature regulation and warm chain' using the poster*



### DEMONSTRATION

Make sure that all participants have read page 48-49 and seen the contents of poster. Gather all the participants near the demonstration aid fixed on the flip board. As a facilitator, read one of the components of poster aloud. Make sure that all the participants are looking at the poster. Then ask participants one after other to read the remaining components on the poster. Build a discussion on the various aspects of warm chain.

Ask the participants to do self evaluation on page 51.  
Tell participants that they would be given individual after they have done the self evaluation



### SELF EVALUATION

1. Newborn baby is prone to develop hypothermia due to
  - a) **Larger surface area**
  - b) **Decreased thermal insulation due to lack of subcutaneous fat (LBW infants)**
  - c) **Reduced amount of brown fat (LBW infants)**
  
2. Enumerate four mechanisms of heat loss in neonates:
  - Evaporation**
  - Radiation**
  - Convection**
  - Conduction**
  
3. Steps of “**warm chain**” in hospital include the following:
  - Steps to prevent heat loss in labor room**
    - i. **Warm delivery room (25°C)**
    - ii. **Newborn care corner temperature at 30°C**
    - iii. **Drying immediately. Remove the wet towel and cover with another pre-warmed towel**
    - iv. **Skin-to-skin contact between mother and baby**
  
  - Steps to prevent heat loss in postnatal ward**
    - i. **Breast feeding**
    - ii. **Appropriate clothing; cover head and extremities**
    - iii. **Keep mother and baby together**
    - iv. **Postpone bathing and weighing**
  
4. Routine temperature should be recorded by **axillary** route.
5. Normal axillary temperature range is **36.5 to 37.4°C**.
6. How can you assess baby’s temperature by touch?
  - By touching the abdomen and extremities of the baby**
  
7. A baby with cold stress will have warm abdomen and **cold** soles/palms.

Ask the participants to read page 52 to 53 and then demonstrate KMC



### Demonstration

Make sure that all participants have read all the pages. Gather all the participants near the demonstration aid and demonstrate skill of KMC. Build a discussion on the various aspects of the KMC.

Ask the participants to read page 55 to 58 and do self evaluation on page 59; tell them that they would be given individual feedback after they have done the self-evaluation



### SELF EVALUATION\*

1. Components of KMC include
  - a. Skin to skin contact**
  - b. Exclusive breastfeeding**
2. Benefits of KMC include (any four of the following)
  - a. Effective thermal control**
  - b. Increased breastfeeding rates**
  - c. Early discharge, better weight gain**
  - d. Less morbidities such as apnea, infections**

**e. Less stress**  
**f. Better infant bonding**

3. Mother should practice KMC at least for **1 hr** in one sitting.
4. Do you need additional staff for implementing KMC in your unit: **No**
5. Who all can practice KMC?

**Father, grandmother and other family members**

6. A mother is practicing KMC during the day. Can she provide KMC during the night while she is sleeping?

**Yes; she has to be careful and in propped up position;**

7. Can KMC be provided in the following scenarios?

- i. **Baby on OG tube feed – Yes**
- ii. **Baby receiving IV fluids – Yes**
- iii. **Baby receiving free flow oxygen – Yes**

*\*- while giving individual feedback, cross-check the learner's ability to analyze varied situations by asking relevant questions.*

After giving individual feedback, conduct a video demonstration on 'Kangaroo mother care'



**VIDEO**

Organize a video show for all participants. One of facilitator should announce "There will be a video demonstration on initiation, procedure of KMC, perceptions of family, health professionals about KMC. After the video there will be a discussion".

After the show, the facilitator should initiate a discussion with the group. Encourage the participants to share their own experience; perception about KMC. You should take their opinion on various aspects of the video demonstration.

After video demonstration, conduct a role-play on 'Counseling and motivating a mother for KMC'.



## ROLE PLAY

Two facilitators should demonstrate role-play on KMC. One of facilitators should moderate the discussion and take feedback from every participant on their comments.

Introduce the two facilitators doing role-play to the group:

-----is mother; -----is nurse. She has a premature baby 1.2 kg admitted in Nursery. Nurse will motivate and counsel the mother for KMC. All the participants will record the feedback in ALPAC format in the learner module page.

- AL: Ask and listen (and accept mother's concern).
- P: Praise the mother for her right practices, concern or enthusiasm for the baby.
- A: Give a few practical advices that she can understand and follow easily.
- C: Confirm whether she has understood

### Introduction of KMC to mother

- Nurse:** Hello Anita, how are you?
- Mother:** I am fine, thank you.
- Nurse:** Have you seen your baby today, how does he look?
- Mother:** Yes Sister, he looks much better now. His breathing problem has now settled and he is breathing on his own. He is 5 days old but still losing weight. His weight was 1200 grams at birth and today his weight is 1080 grams.
- Nurse:** Don't worry Anita. Most babies do lose weight in the first week of life. You can help in care of the baby. Since when are you coming to see your baby?
- Mother:** I have been coming to see the baby since last 24 hour. Initially I was scared to touch the baby. The nurses have helped me to overcome that fear and now I am able to touch and caress my baby. Today I also changed his nappy.
- Nurse:** That's *very* good Anita. Do you feel your baby require different kind of care than that of other babies?
- Mother:** Yes, he is too small. The sister asked to me to wash and warm before each handling. They are keeping my baby in this machine to keep him warm and also feeding him every 2 hourly.
- Nurse:** Did you hold your baby?
- Mother:** No I am scared.
- Nurse:** Do you want to take the baby in your lap?
- Mother:** Yes, but I am scared to do it
- Nurse:** There are things you can do for the baby which will help him gain weight and remain well. There is a method of care called Kangaroo Mother Care. It is based on the method by which kangaroos care for their babies. Have you heard about the animal kangaroo?
- Mother:** Yes. It is an animal found in Australia. But how does this method of care help me and my baby?
- Nurse:** The mother kangaroo carries the baby in her pouch, where the baby stays warm and gets breastfeeding and grows bigger till the time he starts coming out. We have tried

to adopt a similar method of care for our human babies. I can explain that method of care to you.

**Mother:** Is that method safe?

**Nurse:** That is a very important question. We have found this method to be safe. Initially you must do this under our supervision and then as you develop confidence you can do it on your own.

**Mother:** How does it help my baby?

**Nurse:** As I have already told you, this method ensures that your baby remains warm. As the baby is so close to you, this stimulation leads to improvement in breast milk output. Hence KMC helps in both warmth and breastfeeding. Both these things are most important at this stage for the baby. Do you want me to explain this method of care to you?

**Mother:** Yes

**Nurse:** You must wear a gown, which can be opened from the front. The baby should be prepared for this. He should be wearing a nappy to prevent soiling you and socks and cap to keep him warm. All other clothes should be removed

**Mother:** Would the baby not get cold if all his clothes are removed?

**Nurse:** I understand your concern. However your skin temperature is 37°C which is just accurate for the baby. By remaining in touch with you, the baby gets warmth from you and he does not get cold. In addition, your clothes cover him. The baby should be put upright on the chest between the breasts. Care should be taken to ensure that the head is slightly extended and turned to one side. This ensures that the baby continues to breathe. You can also observe his breathing in this position. Now wrap your gown over the baby. How are you feeling now?

**Mother:** I am comfortable but still I am not confident? What if he stops breathing?

**Nurse:** While the baby is in this position, you can keep a watch on the baby's breathing. While you are in the unit the doctors and nurses will also help you in the monitoring of the baby. As the baby grows older and puts on weight, you would become more confident. In fact you can then sense his breathing movements without observing them. In addition, your own breathing movements will stimulate the baby to breathe.

**Mother:** Does this method help my baby to put on weight?

**Nurse:** You are right. This helps your baby to put on weight. During KMC, the baby may start breast-feeding. In addition, you can express breast milk into a container and the baby can be fed the same milk by a tube. You would have more milk and we can then give more breast milk to your baby. This would help the baby to put on more weight

**Mother:** Does this mean that I can get discharged sooner if my baby starts gaining weight?

**Nurse:** Definitely. If your baby starts sucking and you are confident then we can also discharge you sooner.

**Mother:** I am feeling better now nurse. How often should I do this KMC?

**Nurse:** Try to do this procedure for three to four times a day and each time do it for 1-2 hour. In fact your husband can also help you. If you get tired or you are busy with something else, your husband or other family members can do it for you.

**Mother:** Thank you sister. Your explanation has really satisfied me and I am *very* relieved. I would like to definitely help in the care of my baby. I now feel that I can contribute to the care of my baby. This makes me feel better.

**Nurse:** You can also speak to a few mothers who are practicing KMC. It will give you more confidence. Please do not hesitate to talk to me or to any one of us if you have any doubts regarding this or anything else. I hope that you have a good experience and that your baby gets well soon. Thank you.

### Ask to stop role-play

Lead a discussion how the role-play was conducted. Ask the participants to comment on how the role-play was performed. Ask them to elaborate on what has been done well and what needs to be improved upon.



Build up the discussion by involving each participant. Write comments of participant on the flip chart under two headings (Good things and things need to be improved).

After the discussion, ask the participants to evaluate the role-play with principles of counseling (ALPAC) by writing on the Learners Guide.

Encourage participant to share their own experience and summarize the key points to the group.

### **Role-play by participants**

- *Ask the participants to volunteer for next role-play. Give a situation; assign one to be the nurse and the other to be a mother.*
- *Assignment of roles should be done much in advance (during tea/lunch breaks). Following instructions should be provided in writing to the participants of role play.*

### **Instruction for Mother**

You have delivered a baby 5 days ago weighing 1800 g, who is feeding well and active. You have observed a mother in the postnatal ward keeping her baby on her chest. Ask the Nurse what Seema is doing and can you also do this.

### **Instruction for Nurse**

As a nurse you have to counsel the mother to initiate and practice KMC, her baby is 1800g, 5 day old, active & feeding well.

Lead a discussion how the role-play was conducted. Ask the participants to comment on how the role-play was performed. Ask them to evaluate the role-play with principals of counselling(ALPAC).By writing on the learner's guide.

Discuss with the participants how to ensure privacy in hospital setting for the mother and use of different apparel for providing KMC.



### **GROUP DISCUSSION – CASE STUDY**

Ask one participant to read the case-scenario: *'You are posted in postnatal ward. A recently born baby is irritable. On examination you found a 6 hr old, lying in a separate cot. Baby has no clothes and yet only wrapped in a hospital cotton sheet. HR is 140/minute, RR 56/minute. Extremities are blue and cold while abdomen is still warm to touch. Axillary temperature is 36.1°C. The room is cold'.*

Lead a discussion by asking the following questions. Ask individual participant first and then ask the group; reach a final consensus answer and make everyone write the same on their modules.

- Q1. What is problem with the baby?  
***Baby is in cold stress***
- Q2. What are the adverse effects of this condition?
- ***Can progress to severe degree of hypothermia***
  - ***Baby can develop low blood sugar***
  - ***Fast breathing/ apnea***
  - ***Bleeding tendency***
- Q3. What led to this situation in the baby?
- ***Room is cold***
  - ***Rooming in is not being practiced***
  - ***No clothing offered to the baby***
  - ***Breastfeeding not yet initiated***
- Q4. What will you do to rectify these conditions?
- ***Provide a heater in room to raise room temperature***
  - ***Prevent air currents in the room. Switch off the fan, close the windows etc.***
  - ***Provide adequate and warm clothing to baby (cover head and extremities)***
  - ***Skin-to-skin contact with mother***
  - ***Frequently put the baby on breast***
  - ***Frequent monitoring of baby for temperature maintenance***

You can ask more questions regarding the case and lead the discussion.

Ask them to read page no. 63.

### **SUMMARIZING THE LESSON**

Once all the participants have completed the lesson, one of the facilitator should get up and summarize asking participants the key messages. Facilitator should keep writing on board.

## Lesson V: Feeding of normal and LBW babies

### Introduction to the lesson:

Introduce by saying aloud: 'In this lesson, you will learn feeding of normal and low birth weight babies. We are aware that most of the knowledge and skills you already possess, but still this module is *very* important to learn'.

Ask the participants to start reading pages 64 to 71; once they have finished reading, conduct a video demonstration on 'Good positioning and attachment'



**VIDEO**

Introduce by saying aloud: 'The video will demonstrate the correct position of mother and baby and signs of good attachment and effective sucking'.

After the show the facilitator should initiate a discussion with the participants. Encourage the participants to share their own experiences, perceptions about breastfeeding and lead a discussion. You should take their opinion on various aspect of the video.

*After the video demonstration, ask the participants to read pages 73 to 74 and do the self-evaluation on page 75. Give individual feedback.*



**SELF-EVALUATION**

1. Can a mother feed her baby in lying down position? **Yes**
2. Enumerate the four key points of positioning of baby for breastfeeding
  - i. Supporting whole of the baby's body*
  - ii. Head, neck and back are in the same plane*
  - iii. Entire baby's body should face mother*
  - iv. Baby's abdomen touches mother's abdomen*
3. Signs of good attachment are
  - i. Baby's mouth wide open*
  - ii. Lower lip turned outward*
  - iii. Baby's chin touches mother's breast*
  - iv. Majority of areola inside baby's mouth*

4. What differences do you see?
  1. Baby sucking on **nipple and areola (good attachment)**
  2. Baby sucking on **nipple only (poor attachment)**
5. Enumerate problems associated with poor attachment.  
**Sore nipple, breast engorgement, poor milk supply, refusal to suck**
6. How will you assess the adequacy of breastfeeding?  
**If the baby**
  - i. **Passes urine 6-8 times in 24 hours**
  - ii. **Goes to sleep for 2-3 hrs after the feeds**
  - iii. **Gains weight @20-40 gm/day**
  - iv. **Crosses birth weight by 2 weeks**
7. How many times should a baby be breastfed?  
**At least 8 times in 24 hours**
8. Can mother skip one or two night feeds? **No**
9. What advice will you give to a mother who develops heaviness and pain in breast on third day after delivery?  
**Frequent breastfeeding, correct attachment, hot fomentation, expression of milk and paracetamol for pain**
10. How you will manage a mother with sore nipple?  
**Correct positioning and attachment**  
**Apply hind milk to the nipple**  
**Expose the nipple to air between feeds**

After giving individual feedback, conduct a role-play on 'Not enough milk'



### ROLE PLAY

Give a brief introduction: 'A common complaint of mothers is "Not enough milk". We shall perform a role-play to address this problem'.

Introduce the Facilitator I as Health worker and Facilitator II as Mother. Ask the participants to observe:

- HW:** Hello Meena! How are you today?  
**Mother:** I am fine sister, but I am slightly worried about my baby  
**HW:** Meena, why are you worried?  
**Meena:** My baby has been crying all night. I have been feeding the baby but I think my milk is not enough for the baby.  
**HW:** Don't worry Meena. I am here to help you. Let us see what the problem is. Now tell me, has the baby passed urine during the day and night  
**Meena:** Yes sister, the baby has passed urine. In fact he has passed urine 2 times last night.  
**HW:** How many times did the baby pass urine in the last 24 hours?  
**Mother:** The baby has passed urine 5-6 times in the last 24 hours.  
**HW:** Excellent. Meena, if the baby is passing urine 5-6 times in 24 hours, then the baby is receiving sufficient milk. Even if the baby passes urine 4 times in 24 hours, the baby is getting

- adequate milk. So Meena, your baby is getting enough milk.
- Mother:** But sister, my baby has been crying all night.
- HW:** Meena, I can understand your worry. But the baby could be crying because of other reasons. The baby could be crying because of a wet nappy, or because he is feeling cold. Was the baby crying because of a wet nappy last night?
- Mother:** Yes sister, 1-2 times the baby was crying because of a wet nappy. But he was still crying at other times.
- HW:** OK Meena, show me how you were feeding the baby?  
(Mother demonstrates the positioning, attachment of the baby)
- HW:** Very good, Meena. You are doing very well. Your baby is sucking very well. **But** he is going off to sleep.
- Mother:** This is what usually happens. He sucks for some time and then goes off to sleep. Then he wakes up after 30 minutes and starts crying again.
- HW:** Meena, your observation is *very* correct. A baby must suck for at least 7-10 minutes on each breast to get a full feed. Most babies sleep off during the feed and they must be continuously stimulated to enable a baby to take a complete feed. If a baby takes a complete feed, he will be satisfied and will usually sleep for 2-3 hours.
- Mother:** I get tired also. Why can't I give top feed during the night?
- HW:** Meena that may be *very* harmful. Most babies are more active at night and would take a feed more often during the night. This sucking helps in milk production. Also, hormones for milk production are also released more during the night. Hence it is *very* important that the baby should suck more often and especially during the night to help in milk production. The best solution for not enough milk is to let the baby suck more often at the breast.
- Meena:** So, sister, if I feed the baby more often and during the night, then my milk will be enough for the baby. Will you be available during the night to help me?
- HW:** Yes, Meena I will be available or some other nurse will be available to take care of you throughout the night. OK, Meena, I want to ask you something now? How often would you feed the baby?
- Meena:** I will feed the baby every 2-3 hours and I will continue the feed during the night also because that will help my milk production.
- HW:** Yes, Meena, I can see that you have understood what I had to say. Excellent, Meena I am very sure that you will do a very good job of feeding your baby. If there are any problems, you can contact me at any time. OK bye.

After the role-play, ask the participants to evaluate it by using the principles of counseling (ALPAC) and write on the Learners Guide. Ask them to read pages 78-80.



#### DEMONSTRATION

Make sure that all participants have read all the pages. Gather all the participants near the demonstration aid fixed on the flip board. As a facilitator, read one of the components of poster on expression of breast milk aloud. Make sure that all the participants are looking at the poster. Then ask participants one after other to read the remaining components on the poster. Build a discussion on this topic.

After the demonstration, ask them to read page 82; conduct a video demonstration on Paladai feeding.



### VIDEO

After the show, initiate a discussion with the participants. Encourage the participants to share their own experiences, perceptions about this method of feeding and lead a discussion. You should take their opinion on various aspects of the two videos.

Ask them to do the 'Self-evaluation' on page no.84.



### SELF-EVALUATION

1. The best milk to be given by *paladai* feeding is  
***Expressed breast milk***
  
2. Advantages of *paladai* feeding include  
***Faster than spoon or cup; less spillage***
  
3. Preterm LBW babies are often not able to breastfeed. The reasons include:
  - Inability to suck effectively
  - Inability to co-ordinate sucking and swallowing
  - Inability to co-ordinate swallowing and breathing.

### SUMMARIZING LESSON

Tell the participants that in this lesson we learnt about

- Benefits of breast milk
- Positioning of baby and mother
- Attachment of baby for successful breastfeeding
- Common problems associated with breastfeeding and
- Feeding of LBW

Ask for any clarifications. If there are none, tell them that they have completed the lesson.

## Lesson VI: Transport of neonates

### Introduction to the lesson:

Sick newborn babies often have to be transported from one hospital to other or sometimes within the hospital. One should ensure that the baby is stable before transporting. You will now learn the precautions you should follow while transporting a newborn in this lesson.

Ask the participants to read page 85 to 86 and then conduct a group discussion on precautions before and during transport of newborn babies.



### GROUP DISCUSSION

After the participants have read the pages, conduct a group discussion on safe transportation of sick neonates and care before and during the referral. Facilitator should note the salient points on the flip chart. Summarize the discussion and thank the participants for their contribution.

### SUMMARIZE THE LESSON

Summarize the session by repeating what has been taught in the lesson. Ask for any clarifications. If there are none, tell them that they have successfully completed this manual.

## APPENDIX-1

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### PERFORMANCE EVALUATION TEST: INTRODUCTION

---

Skill Evaluation test is meant to test the basic skills required for neonatal resuscitation, it will be used to test your level of skill before Basic newborn care and resuscitation course and after the course. This test would determine the change in level of your skill after undergoing training in Basic newborn care and resuscitation course.

The test would be done in three stages; instructor would ask you the following question

- **How will you prepare for a baby's birth?**
  
- **What do you do when a baby is born ?**
  
- **What do you do if the baby needs Positive pressure ventilation ?**

You have to demonstrate your skill in neonatal resuscitation on the manikin according to the question asked to you. All the equipment and supplies required would be provided. You may ask any question regarding the condition of newborn from the instructor at any stage as per your need, you would not be given any hints regarding what to do next. The skill test would be done before the start of training and after the training.

#### **Instructions for instructor**

- Instructors parts are in bold letters
- In some of the responses minimum requirement is underlined
- Scoring : 0 = Not done, or done incorrectly 1 = Done correctly
- In each exercise, if the student doesn't completes the step, you may prompt one time  
**"Would you do anything else ?"**



Name: \_\_\_\_\_ Instructor: \_\_\_\_\_ Date: \_\_\_\_\_

**“Instructor: I am going to ask you to demonstrate the steps for resuscitation of a newborn baby”**

**1. How will you prepare for a baby’s birth?**

Indicates need of washing hands and wearing gloves

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Enumerates steps of washing hands (instructor: how would you wash hands?)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Prepares equipment and supplies

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Tests function of bag and mask

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

**Score: Total points x 5 (total points possible: 20)**

_____	_____
-------	-------

If not complete, prompt one time. “Would you prepare anything else?”

**2. What do you do when a baby is born?**

Dries the baby and removes wet linen ,Assesses the baby is crying or not

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Asks for meconium and takes appropriate action Indicates need for

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

**Initial steps (Instructor: what if baby is not crying?)**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Provides warmth, Positions the baby and clears mouth then nose (if necessary) Stimulates for breathing by rubbing back or flicking the

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

soles of foot Evaluates if baby breathing well, Indicates need for

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

PPV if not breathing well

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

**Score: Total points x 5 (total points possible: 35)**

_____	_____
-------	-------

If not complete, prompt one time. “Would you do anything else?”

**3. What do you do if the baby needs Positive pressure ventilation?**

Chooses correct size mask

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Positions the head and applies the face mask correctly

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Ventilates with appropriate rate and pressure (40-60 breaths per minute)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Looks and asks is the chest rising?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

**What do you do if the chest is not rising?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Checks the seal (reapplies mask and repositions head)

Opens the airway (clears mouth and nose,

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Ventilates with mouth slightly open)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Ventilates the baby with more air by squeezing the bag harder (if needed)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Achieves visible rise and fall of chest wall

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Checks the heart rate by palpation or by stethoscope

**Score: Total points x 5 (total points possible: 45)**

_____	_____
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If not complete, prompt one time. “Would you do anything else?”

_____	_____
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**APPENDIX-2****Written Evaluation Test (Pre Test and Post Test)**

NAME : \_\_\_\_\_ INSTRUCTOR : \_\_\_\_\_ DATE : \_\_\_\_\_

PRE- TEST

POST-TEST

**Written Evaluation.** This should be completed by all before and after the Course. Put an X next to the box under each statement whether it is True or False.

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 1. Approximately 10% of newborns require some assistance to begin breathing at birth.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. At every birth the presence of person skilled in neonatal resuscitation is not required, a skilled person is required only in condition of increased risk of asphyxia.                          | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. The most important and effective action in a neonate requiring resuscitation is to ventilate the lungs.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Bag and mask should be ready in the labor room only in condition of increased risk of asphyxia, otherwise bag and mask should be kept in safe custody.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. All newborns require an initial assessment to determine whether resuscitation is needed or not.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. If newborn is not crying and meconium is present you should first suction mouth then nose before doing anything else  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. The baby should be assessed immediately after birth and if the baby is not crying the birth attendant should wipe dry, provide warmth, position to open/clear air-way, stimulate and reposition | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Some babies who do not breathe at birth respond to stimulation but others need bag and mask ventilation to start breathing.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. If the baby is not crying at birth, there is no activity and the baby is cyanosed, the baby is probably dead and there is no need to initiate resuscitation.                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. With proper bag and mask ventilation the majority of newborns not breathing after initial steps begins spontaneous breathing   | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. During selection of mask for assisted ventilation be careful that the mask should cover the chin, mouth, and nose but not the eye  | <input type="checkbox"/> | <input type="checkbox"/> |

	True	False
12. Immediately after starting bag and mask ventilation you should see if the chest is rising.	<input type="checkbox"/>	<input type="checkbox"/>
13. When the chest is not rising after bag and mask ventilation you should re-apply the mask to the baby's face and reposition the baby's head and neck.	<input type="checkbox"/>	<input type="checkbox"/>
14. When the chest is not rising after bag and mask ventilation you should clear the airway and ventilate with the baby's mouth slightly open.	<input type="checkbox"/>	<input type="checkbox"/>
15. Increase in heart rate is a very important sign of improvement after bag and mask ventilation.	<input type="checkbox"/>	<input type="checkbox"/>
16. To evaluate the efficacy of bag and mask ventilation the heart rate should be counted minimum for one minute	<input type="checkbox"/>	<input type="checkbox"/>
17. To evaluate the efficacy of bag and mask ventilation the first assessment of heart rate should be done after ventilating for 2 minutes at a rate of 40-60 times per minute	<input type="checkbox"/>	<input type="checkbox"/>
18. If a baby is not breathing at birth he/she can be effectively resuscitated with bag and mask ventilation, even if oxygen is not available.	<input type="checkbox"/>	<input type="checkbox"/>
19. At birth the most effective and easiest method to provide warmth is to keep baby on mother's chest.	<input type="checkbox"/>	<input type="checkbox"/>
20. Keep the temperature in the room where the baby is rewarming between 25-28° C.	<input type="checkbox"/>	<input type="checkbox"/>
21. Hot water bottles should not be used for rewarming a hypothermic baby.	<input type="checkbox"/>	<input type="checkbox"/>
22. Hand washing for two minutes is the single most important means of preventing nosocomial infection	<input type="checkbox"/>	<input type="checkbox"/>
23. Rinsing hands with alcohol is a substitute for proper hand washing.	<input type="checkbox"/>	<input type="checkbox"/>
24. Initiating breastfeeding within the first hour of life can prevent mortality and morbidity significantly.	<input type="checkbox"/>	<input type="checkbox"/>
25. Breastfeeding is termed adequate if the infant passes urine 6-8 times in 24 hours, sleeps 2-3 hours after birth and gains weight adequately	<input type="checkbox"/>	<input type="checkbox"/>



