

Essential Newborn Nursing for Small Hospitals

In resource restricted countries

Facilitator's Guide



Department of Pediatrics
WHO Collaborating Centre for Training and
Research in Newborn Care
All India Institute of Medical Sciences, New Delhi

Supported by
Saving Newborn Lives, Save the Children

Demonstration



Oral Drill



Role Play



Group Discussion



Video



FAQ's



Skill Demonstration



Self Evaluation



1st Edition, July 2004

Compiled by faculty, residents and nursing staff of the WHO Collaborating Centre for Training and Research in Newborn Care, All India Institute of Medical Sciences, New Delhi, in collaboration with College of Nursing, All India Institute of Medical Sciences, New Delhi

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The protocols and recommendations in the module are based on an extensive review of available literature and the standard practices in leading neonatal centres in the country. The publications of the World Health Organization, Saving Newborn Lives, American Academy of Pediatrics, JHPIEGO, Kangaroo Foundation and National Neonatology Forum, among others, served as important sources of information. The evidence-based principles of newborn care were carefully adapted for application in the operational milieu of small facilities.

Medical and nursing knowledge keeps changing rapidly. Therefore, the users of this Guide are advised to refer to literature and amend these practices with passage of time to suit the situation prevalent in their units. The practices and policies may vary from one facility to another, hence there can be no universal recommendations.

The practices mentioned in this guide are just guidelines and are not to be taken to be firm and final or the only way to perform such procedures in newborn. The authors or sponsors will in no way be responsible for any harm or damage to patients, care givers or equipment resulting from misinterpretation or misuse of these practice guidelines.

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Preface

Your role as facilitator to conduct Learner's Course on Essential Newborn Nursing is very-very special. You have to be thorough with not only Learner's Guide but also with latest evidence based literature related to all the seven modules. You always have time to update yourself with resource guides provided to each group. As facilitator, you have to be pro-active, start thinking and plan ahead how you can facilitate learning for your group participants. You should be prepared and motivated to do the whole course but it is always better to share with other team members the responsibilities. This will give you enough time to think and plan your task in a cohesive structured manner. In addition, in facilitating the course you have to look interested and available for sorting out minor administrative issues. You have added responsibility to make sure that weakest of your participant is able to grasp the contents, to facilitate this you may use the help of other participants whom you think are quick to grasp and finish the desired task. Be on look out for intelligent, interested and good communicators in your group who may take your role in future. I may reiterate that your participation is going to be remembered by all the participants through out life, if you do your job in a flawless manner. We wish you good luck for taking initiative of being equal partner for disseminating Essential Newborn Nursing practices among nursing colleagues.

This guide has been developed with inputs from many of you. Use of facilitator guide is very useful tool for anyone who is assisting the course for participatory learning. Please go through the guidelines for Facilitating a course and your role as Facilitator (see Annexure pages 73-77 in last). For clinical demonstration refer to pages 61-72 of the guide. Annexure at end of this guide have pre, post test KAP questionnaires, Feedback form and Tentative Course schedule. Remember each one of us have instinctive way of facilitating learning for others, so your feedback and suggestions on Learner Module and Facilitator Guide, not only on contents but in the process of facilitating learning are welcome for improvement of present training tool for our nursing colleagues.

Dr. A.K. Deorari

20th May, 2004

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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.

Day 1 Activities

Procedure

Feedback

Module I - Kangaroo Mother Care

- | | |
|-----------------------------------|---------------------|
| 1. Introduction to the module | ..... |
| 2. Read pages 1&2 and poster on 3 | All |
| 3. Demonstration on KMC poster | ..... |
| 4. Read pages 5 to 9 | ..... |
| 5. Self evaluation page 10 | Individual feedback |
| 6. Video demonstration | ..... |
| 7. Demonstration role-play | ..... |
| 8. Role-play by participants | ..... |
| 9. Summarizing the module | ..... |

Module II - Thermal Protection

- | | |
|---|---------------------|
| 1. Introduction to the module | ..... |
| 2. Read pages 13 to 17 | All |
| 3. Self evaluation page 18 | Individual feedback |
| 4. Oral Drill page 19 | ..... |
| 5. Group Discussion page 20 | ..... |
| 6. Demonstration of temperature recording | ..... |
| 7. Demonstration role-play page 21 | ..... |
| 8. Read page No. 22, 23 | All |
| 9. FAQs page 24 | ..... |
| 10. Summarizing the module | ..... |

Module III - Feeding

- | | |
|---|---------------------|
| 1. Introduction to the module | ..... |
| 2. Read pages 25 to 26 | All |
| 3. Demonstration on Anatomy of breast & Physiology of lactation | ..... |
| 4. Read pages 28 to 31 | All |
| 5. Do self evaluation on page 32 | Individual feedback |
| 6. Read pages 33 to 35 | All |
| 7. Do self evaluation on page 36 | Individual feedback |
| 8. Video on breastfeeding | ..... |
| 9. Read pages 38 to 42 | All |
| 10. Do self evaluation on page 43 | Individual feedback |
| 11. Demonstration role-play | ..... |
| 12. Read pages 45 to 47 | All |
| 13. Do self evaluation on page 48 | Individual feedback |
| 14. Demonstration role-play (not enough milk) | ..... |
| 15. FAQ's | ..... |
| 16. Summarizing the Module | ..... |

Day 1

Introduction to the Module on KMC

Facilitator will get up and greet the participants. Introduce yourself and the participants to each other. Write the names on the board. Facilitator should announce, "You will learn in this module initiation, procedures and benefits of Kangaroo Mother Care. This module is for you to keep". Facilitator should distribute the module to each participant.

Now ask them to read page 1 & 2 and read poster on page 3. There will be a demonstration on the poster.

Demonstration on the KMC Poster

Make sure that all participants have read all the pages. Ask them to open page 3 (poster on KMC) of the module. 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 another to read the remaining components on the poster. Build a discussion on the various aspects of the KMC.

Now all of you will read page 5 to 9 and do self evaluation on page 10. Tell participants 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
 - c. Physical, emotional and educational support
 - d. Early discharge and follow up.

(Refer to KMC Module page no. I/1-I/2)

2. Benefits of KMC include
 - a. Breastfeeding
 - b. Thermal control and metabolism
 - c. Growth
 - d. Other effects

(Refer to KMC Module page no. I/2)

3. Mother should practice KMC at least for 1 hr in one sitting.

(Refer to KMC Module page no. I/7)

4. Do you need additional staff for implementing KMC in your unit: No

(Refer to KMC Module page no. I/2)

5. Who all can practice KMC
Father, grandmother and other family members

(Refer to KMC Module page no. I/7)

6. A mother is practicing KMC during the day. How can KMC be provided during the night while she is sleeping.
Yes, she has to be careful and in propped up position

(Refer to KMC Module page no. I/8)

7. Mention the discharge criteria from the hospital a mother baby dyad practicing KMC
 - a) The baby's general health is good and there is no concurrent disease such as apnea or infection;
 - b) Baby is feeding well, and is exclusively or predominantly breastfed.
 - c) Baby is gaining weight (at least 15g/kg/day for at least three consecutive days)
 - d) Baby's temperature is stable in the KMC position (within the normal range for at least three consecutive day)
 - e) The mother is confident of caring her baby and would be able to come regularly for follow-up visits.

(Refer to KMC Module page no. I/8)

Video demonstration

Organise 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 aspect of the video demonstration.

Demonstration 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 12.

- 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

Objective : Motivation and counselling of the mother for providing KMC

Time limit : 10 min for role-play + 15 min for discussion

Demonstration role-play *Introduction of KMC to mother*

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 breast-feeding 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 breast-feeding. 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 evaluate the role-play with principles of counselling (ALPAC) by writing on the Learners Guide.

Write comments of participant on the flip chart under two headings (Good things and things need to be improved).

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. 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.

Summarizing the module

Once all the participants complete the module, one of the facilitator should get up and summarize the module. "So we have learnt in this module about benefits and procedure of KMC. Tomorrow we will see actual demonstration in hospital setting.

Module II: Thermal Protection

Introduction

In this module you would learn about thermal protection. We know maintenance of normal temperature is very essential for newborn babies. Hypothermia as well as hyperthermia is bad for babies. As a staff nurse we can prevent these by simple measures. Use the highlighter pen to highlight important points in the module for yourself. Start reading pages 13 to 17 and do self evaluation on page 18. You would be provided individual feedback.

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)(Refer to Thermal Protection Module page no. II/14)

2. Newborn baby loses heat by four mechanisms
Radiation
Convection
Evaporation
Conduction
(Refer to Thermal Protection Module page no. II/14)

3. Steps of "**warm chain**" in hospital include:
 - a) Warm room
 - b) Appropriate clothing
 - c) Breast Feeding
 - d) Keep baby and mother together
 - e) Postpone bathing and weighing(Refer to Thermal Protection Module page no. II/17)

4. Routine temperature should be recorded by axillary route.
(Refer to Thermal Protection Module page no. II/14)

5. Normal axillary temperature range is 36.5 – 37.5°C.
(Refer to Thermal Protection Module page no. II/ 14)

6. If you do not have a thermometer to measure temperature, how can you assess baby's temperature?
By touching the abdomen and extremities of the baby.
(Refer to Thermal Protection Module page no. II/16)

7. If you touch a baby with normal temperature, he will have warm trunk and warm soles/palms.
(Refer to Thermal Protection Module page no. II/16)

Oral Drill

One of facilitators should conduct the oral drill. Ask all participants to open the module on page 19. Facilitator can also have a look on the table on page 19. Tell them that you will ask them a question and they need to answer from the table.

Give an example referring to table (e.g. Moderate hypothermia temperature range is 32-36°C). Make sure all participants locate this in the table. You can ask

Q1. If baby has warm trunk and cold extremities on touch, he has

Ans. Cold stress

Emphasize they locate on the table and then answer rather than doing so by memory

Q2. What action you will undertake for a baby with cold stress?

Ans. Cover adequately
Warm room or bed
Skin-to-skin contact
Provide warmth

Q3. A baby has been brought to emergency room with axillary temperature of 31.8°C. Classify the hypothermia category

Ans. Severe hypothermia

Q4. What are the clinical symptoms and signs in a baby who has axillary temperature of 34°C

Ans. Poor feeding, weak cry, lethargy and fast breathing.

Q5. How would a baby with normal temperature be felt on touch?

Ans. Warm trunk and warm extremities

Group Discussion - Case Study

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.

Q1. What is your assessment?
Baby is in cold stress.

(Refer to Module on Thermal Protection page no. II/19)

Q2. What can be its adverse effects?

- Can progress to severe degree of hypothermia
- Baby can develop low blood sugar
- Fast breathing/ apnea
- Bleeding tendency

(Refer to Module on Thermal Protection page no. II/19)

Q3. What might have led to the situation in this baby?

- Room is cold
- Rooming in is not being practised
- No clothing offered to the baby
- Breastfeeding not yet initiated

Q4. What actions should you undertake to rectify the condition?

- 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

(Refer to Module on Thermal Protection page no. II/19)

There will be demonstration of correct step of recording axillary temperature

Ask co-facilitator to recorded axillary temperature & lead a discussion what steps were done wrong. Facilitator should lead a discussion & emphasize correct steps of recording temperature.

Role-play

Objectives: To demonstrate how to keep baby warm in postnatal ward.

Time allotted: 10 minutes

Nurse: Good morning Geeta. How are you.

Geeta: I delivered in the morning. I breastfed her and she passed black stool after that.

Nurse: That's good Geeta. Your baby looks so cute but why did not you dress her fully yet.

Geeta: My mother-in-law has just brought clothes for her but I do not know how to dress her.

Nurse: Do not worry Geeta. Your mother in law is so caring for you and your baby. I will help you how to do that.
(Demonstrate adequate clothing of the baby – woolens, cap, socks etc.)

Geeta: Thank you sister. But how would I know that the baby is not heated up in this hot season.

Nurse: Babies usually need little more cloths than adults even in summer month. You can assess temperature of baby by touching his abdomen and hands and face. If she appears too warm than you can decrease the clothing a little bit. If he is appropriately clothed he will not get cold and will be comfortable.

Geeta: How will I know that my baby is cold?

Nurse: I will demonstrate this to you. See, touch with your dorsum of hand on abdomen and extremities of baby. If abdomen is warm but the extremities are cold then your baby is in cold stress. Give extra clothes or keep baby next to you in skin-to-skin contact.

Geeta: When should I give bath

Nurse: Tomorrow and make sure that baby has warm soles and abdomen.

Read page no. 22 & 23. There will be a discussion on frequently asked question after you have read.

Frequently Asked Questions – For Group Discussion

There will be a group discussion on FAQ's related to thermal protection by the facilitators.

1. How should you keep thermometer in the axilla to record temperature?
Keep thermometer high in axilla. The axis of thermometer should be along the body of the baby. This will prevent thermometer crossing to the opposite side.
2. Should we add one °F to the measured axillary temperature to get core – temperature?
Normally axillary temperature is nearly equal to core temperature so there is no need to add something. It represents core temperature only.
3. How frequently one should record the temperature in
 - i) A normal baby in ward: twice a day
 - ii) An otherwise sick but stable baby : 6-8 hourly
 - iii) A hypothermic baby who is being provided extra heat source: every 15 minutes till temperature becomes normal and then 1 hourly.
4. Enumerate specific measures to keep baby's temperature normal in summer months.
 - Keep ambient temperature in normal range by fan, cooler etc.
 - Frequent breastfeeding
 - Maintain proper ventilation of the room
 - Do not use woolens. Keep baby in optimal cotton clothing. Do not cover the baby too much.
5. A baby has high temperature. How you will be sure that this is due to infection or raised environmental temperature?
 - When the baby has raised temperature because of environment then his core (axillary) as well as peripheral temp (sole) will be high, while in fever because of infection the core temperature will be higher than periphery temperature.

Summarizing the module

Once all the participants have completed the module, one of the facilitator should get up and summarize asking participants the key messages. Facilitator should keep writing on board. Then again ask one participant to open the learning objectives and read. In end tell, we will see clinical demonstration of what you have learnt in hospital tomorrow. This module is for you to keep, we have finished two of three modules. Now we will start next module.

Module III: Feeding of healthy and LBW baby

Introduction to the module

In this module you will learn feeding of normal birth weight babies 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. Let us read page 25 & 26. Once you have read, there will be demonstration on anatomy of breast.

Demonstration on the Anatomy of breast and physiology of lactation

Make sure that all participants have read pages 25 & 26. Ask them to open page 28 (figure on Anatomy of Breast) of the module. Gather all the participants near the demonstration aid fixed on the flip board. As a facilitator, read one of the components of figure aloud pointing where that structure is. Make sure that all the participants are looking at the demonstration aid. Then ask participants one after other to indicate the remaining structures on the figure.

Similarly using demonstration aids on prolactin and oxytocin reflex build a discussion among the participants.

After you have finished the discussion, ask the participants to read pages 28 to 31 and do the exercise on page 32 and tell them that they will be given individual feedback, once they have completed the exercise.

Self-evaluation

1. Benefits of feeding babies with breast milk are:
Complete food, easily digested, protects against infection, promotes emotional bonding, Delays pregnancy, lowers risk of breast and ovarian cancer, decreases mother's work load, better involution of uterus
(Module III/26)
2. How long exclusive breast-feeding should be continued for babies?
For at least 6 months.
(Module III/30)
3. Milk secretion is caused by Prolactin hormone, while milk ejection (letdown) by Oxytocin hormone.
(Module III/29)
4. Enumerate factors, which enhance "milk secretion reflex" by increasing prolactin production.
Suckling, expression of milk, emptying of breast, night feeds.
(Module III/29)
5. Oxytocin reflex is stimulated by:
Mother thinks lovingly of baby.
Sound of the baby.
Mother is relaxed/comfortable.
Confidence.
(Module III/29)
6. Look at the picture. Is Malti doing correct? Yes/No
No.
How many times she should breast feed in a day?
As frequently as baby demands day and night (at least 8 times in a day)
(Module III/31)

After individual feedback ask participant to read page 33 to 35 and do exercises on page 36. You will be given individual feedback once you finish the self evaluation.

Self-evaluation

1. When mother's nipple touches the baby's cheek, the baby turns in the direction of the nipple, opens his mouth. This reflex in newborn is called rooting reflex.
(Module III/35)
2. Can a mother feed her baby in lying down position Yes/No.
Yes
(Module III/33,34)
3. Enumerate the points of good positioning of baby for proper attachment
 - 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 abdomen
(Module III/34)
4. 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
(Module III/34)
5. What differences do you see?
Baby sucking on nipple & areola (good attachment)
Baby sucking on nipple only (poor attachment)
(Module III/34)
6. Enumerate problems associated with poor attachment.
Sore nipple, breast engorgement, poor milk supply, refusal to suck.
(Module III/35)
7. Should the mother stop breast-feeding a baby if baby has loose stools? Yes/No
No
(Module III/31)

Video Demonstration on Breast Feeding

This video will demonstrate to you 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.

Ask the participants to read page 38 to 42. Do the self evaluation on page 43. Once they have finished the self evaluation they will be given individual feedback.

Self-evaluation

1. Causes of not enough milk in a primigravida mother include:
Delayed initiation of feeding
Infrequent feeds.

(Module III/40)

2. What advice you will give to mother who develops heaviness and pain in breast on third day after delivery.
Frequent breastfeeding.
Correct attachment.
Hot fomentation
Expression of milk
Paracetamol for pain

(Module III/39)

3. How will you manage a mother with sore nipple?
Correct positioning and attachment.
Apply hind milk to the nipple.
Expose the nipple to air between feeds.

(Module III/39)

4. What will you do for a mother who complains of insufficient milk production?
Frequent feeding.
Good positioning and attachment.
Continue night feeds.
Back massages.
Treatment for engorged breast.

(Module III/41)

Demonstration Role-play

Tell that facilitator will be Nurse. Facilitator will be mother, who has delivered recently. Role-play will focus on initiation of breastfeeding. Ask all participants to observe, their feedback will be taken.

ROLE-PLAY OF A MOTHER WITH STAFF NURSE Issues: Initiation of Breastfeeding

- Nurse:** Hello Lata, How is your baby
Lata: The baby is fine. She is now 4 hrs old. Her weight is 2.8 Kg. She is now sucking on her fingers.
Nurse: Did you put the baby on breast?
Lata: No Sister. Actually this is my first baby and milk has not come in yet.
Nurse: Lata your concerns are genuine but babies are very active, ready to feed in initial 4-6 hrs then they go for a prolonged sleep. This initial period of alertness should be utilized for establishment of a good contact between mother and baby. Initiation of lactation is promoted by baby's suckling efforts. With frequent nursing you will have plenty of milk soon. Initial milk though small in quantity is really precious for baby-very rich in antibodies and helps the baby to fight infections. It can be considered as his 'first vaccine'.
Lata: Is it so! – I really want to breastfeed her but sister I had caesarean section and I find myself unable to move or sit. How can I help myself?
Nurse: I see Lata. You can put the baby on your breast in whatever position comfortable to you. Else other relative can put the baby on your breast avoiding caesarean scar while you lie on your back. The baby can suck very well. Let me show you how it can be done (Help mother in attachment of the baby).
Lata: Yes, sister, she is sucking, I feel good. How frequently should I do it?
Nurse: You can do it as often you and your baby want – may be every 2-3 hrly.
Lata: That's fine sister. My mother says that we should give her some top milk till I have good amount of milk.
Nurse: No Lata. Top milk supplementation will make your baby satisfied and she will not suck on your breast, thus the milk production will be inefficient. Secondly, you may introduce infection in baby also.
Lata: Should we give her some honey or ghutti along with my milk?
Nurse: There is no need of giving any ghutti/water/honey or top milk along with your milk for initial 6 months. In fact, these practices are harmful and can make your baby sick.
Lata: How do I know she is taking sufficient milk?
Nurse: He will pass urine 6-8 times a day will gain weight 20-30 gm per day.
Lata: Thank you sister.
Nurse: Best wishes Lata! I will come again to see your progress and help you. Please do not hesitate if you need any kind of help.

Discuss the role-play and at the end tell them to read pages 45 to 47 and do exercise on page 48. Once you finished the participants will be given individual feedback.

Self-evaluation

1. Describe best mode of feeding in following babies.
1080 gm: inform doctor, may need IV fluids, initiate gavage feeding gradually
1560 gm: paladai feeds, initiate breastfeeding gradually
1996 gm: Breastfeeding as normal weight baby, monitor for adequacy of feeding.
(Module III/45)
2. When should we start feeds in a baby who is born with birth weight of 1180 gm and does not have any respiratory distress?
Initially start IV and oral feeds to be introduced gradually.
(Module III/45)
2. The best milk to be given by orogastric tube feeding is mother's milk.
(Module III/45)
3. Advantages of spoon feeding include
Simple and effective
Less risk of infection
Does not interfere with breastfeeding
Spoon is easy to clean
(Module III/47)

Demonstration Role-play

This role-play will focus on Not Enough Milk. Introduce the Facilitator I as Nurse and Facilitator II as Mother. Ask the participants to observe; their feedback will be taken.

Demonstration role-play on "Not enough milk"

A common complaint of mothers in the postnatal ward is "Not enough milk". We shall perform a role-play to address this problem.

- Nurse:** Hello Meena! How are you today?
- Mother:** I am fine sister, but I am slightly worried about my baby
- Nurse:** 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.
- Nurse:** Don't worry Meena. I am here to help you. Let us see what is the problem. 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.
- Nurse:** 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.
- Nurse:** 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.
- Nurse:** 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.
- Nurse:** OK Meena, show me how you were feeding the baby?
- Mother:** Demonstrates the positioning, attachment of the baby
- Nurse:** Very good, Meena. You are doing very well. Your baby is sucking very well. 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.
- Nurse:** 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?
- Nurse:** 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?
- Nurse:** 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.
- Nurse:** 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 my staff or me at any time. OK bye.

Discuss the role-play after leading a discussion, how this was done

Frequently Asked Questions (FAQ's)

1. What should be done for cesarean born term babies?
2. Can a mother feed baby lying down
Yes, she can feed the baby in lying down or semi-reclining position.
2. How many times a baby should be breastfed?
Eight times a day
3. Can mother skip one or two night feeds?
Ideally no.
Prolactin secretion is more so in night time. Skipping feed will decrease prolactin secretion thus resulting in low milk production. In addition higher prolactin inhibits ovulation thus acts like lactation associated amenorrhoea (LAM)
4. Can a mother with twins exclusively breastfed the babies?
Yes, she can feed both simultaneously by keeping baby in football holding position refer to page 34 of module.
6. Do we need to supplement water to a exclusively breast fed baby?
No. Breast milk has major component as water (90%)

Summarizing the Module

Tell the participants that in this module we learnt about

- Benefits of breast milk
- Milk production and let down reflex mediated by Prolactin and Oxytocin
- Positioning of baby and mother
- Attachment of baby for successful breast feeding
- Common problems associated with breastfeeding
- And feeding of LBW

Ask for any clarifications. If there are none, tell them that they have completed today's task successfully.

Day 1 At end tell

So today we learnt about KMC, Thermal Protection and Feeding of Healthy Normal and Low Birth Weight babies since morning. Tomorrow we will practice many of the skills. Do not forget to bring your modules with you tomorrow. Assemble at 8.45 AM here in The Conference Hall.

Day 2 Activities

Procedure

Feedback

Clinical demonstration

- Checklist A
- Checklist B

All
All

Module IV - Prevention of Infection

1. Introduction to the module
2. Read pages 71 to 74
3. Self evaluation on page 75
4. Oral drill A (disinfectants and germicide use) on page 77
5. Oral drill B (House keeping routines) on pages 78-79
6. Read page 80 to 81
7. Demonstration on waste disposal
8. Read page 83
9. Do self evaluation on page 84
10. Video demonstration
11. FAQs on 86

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Individual feedback
All
All
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.....
.....
All
Individual feedback
.....

Module V - Common Procedures

1. Introduction to the module
2. Read pages 87 & 88
3. Demonstration by participants (IM injection)
4. Read page 88 to 92 (commonly used medication)
5. Demonstration by participants on medication preparation.
6. Read pages 93 & 94 (establishment of IV access)
7. Demonstration by facilitator on initiation of IV line
8. Read page 94,95 (oxygen therapy)
9. Demonstration
10. Video demonstration (to be made)
11. Summarization of the day 2 activities

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All
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Day 2 Activities: Clinical Demonstration

Today we will see what we have learnt yesterday about KMC/Thermal Protection/Feeding of Healthy and LBW babies.

We will divide your group in two A1-A2/B1-B2/C1-C2 (so that each group has 6-7 participants)

For A1 – Facilitator will be and

For A2 – Facilitator will be and

Ask participants to follow facilitators. They should not get lost on the way otherwise whole group will be delayed. Tell them to bring their modules along because they will have to refer them . Tell them, You have a checklist (show and give to each participant) to enter what you have seen.

At the end of the demonstration bring them with you at the Conference Hall. If you finish early, keep your group busy in the Conference Hall by revising a few things you feel your Group is having difficulty in understanding. Keep them busy, so that they feel you are really interested in making their learning simple. They will respect you if they find that you are concerned and dedicated for their training.

Or revise what they have seen since morning in the Clinical Demonstration.

Day – 2 Programme

Time	Ward	Class Room
09.00 - 10.00 AM	-	A, B, C, (Module III contd.)
10.00 - 11.30 AM	A	B & C (Module IV Asepsis)
11.30 - 12.00 AM	Tea Break	
12.00 - 13.30 PM	B	A & C (Module Asepsis & Procedures I)
13.30 - 14.30 PM	Lunch Break	
14.30 - 16.00 PM	C	A (Procedure I)B (Procedure I)
16.00 - 16.30 PM	Tea Break	
16.30 - 17.30 PM	-	A,B,C (Procedure II)

Each group will be divided into two for the ward demonstrations. The two facilitators should accompany the group to the ward. One facilitator should lead the group and the other facilitator should follow at the end to make sure that all the participants reach the ward.

Ward demonstrations will be done in two groups, one hour each.

First demonstration will be on Thermal protection and KMC and would be conducted in the High Risk Cubicle. Ensure that the following points are covered.

- Recording axillary temperature
- Assessment of temperature by touch
- Keeping the baby warm
- Functioning of warmer
- Initiation of kangaroo mother care
- Paladai feeding
- Orogastric feeding
- Expression of breast milk

Second demonstration on feeding will be in the postnatal ward. Ensure that the following points are covered.

- Positioning the mother
- Positioning the baby
- Attachment
- Reflexes – rooting, sucking etc.
- Management of breast engorgement
- Management of inverted and sore nipple
- Back massages for insufficient milk

Checklist For Clinical Demonstration (Day 2)

Tick the procedure you have observed

Thermal Protection

- Record axillary temperature
- Assessment of temperature by touch
- Demonstration of functioning of radiant warmer
- Keeping the baby warm

Kangaroo Mother Care

- Initiation of Kangaroo Mother Care

Feeding of Newborn Babies

- Positioning mother
- Positioning baby
- Attachment
- Reflexes – rooting, sucking etc.
- Management of breast engorgement
- Management of inverted and sore nipple
- Back massages for insufficient milk
- Paladai feeding
- Orogastic feeding
- Expression of breast milk

Module IV: Prevention of infection

Introducing the module

In this module 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
- Learn disposal of hospital waste

Start reading page 71 to 74. After you have finished reading, do self- evaluation on page 75. After you have completed you will be given individual feedback.

Self-evaluation

1. Basic requirements for asepsis in nursery include:
Running water supply
Soap
Elbow or foot operated taps
Strict hand washing
Avoiding overcrowding
Plenty of disposable items
Rational antibiotic policy
Strict housekeeping & asepsis routines
(Module V/71)
2. Single Most Important, Very Simple and Cheap method for prevention of infection in nursery is hand washing.
(Module V/73)
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(Module V/73)
4. Sterile gloves should be worn for the following procedures (Enumerate any three):
Blood sampling
IV access & IV injection
(Module V/72)
5. What are the steps of skin preparation of iv cannula insertion or needle prick?
Clean with spirit, let it dry,
Clean with iodine, let it dry and
Clean with spirit
(Module V/74)

Oral drill A (Indication of disinfectants and germicide use)

One of the facilitator will get up and conduct oral drill. Emphasize that you will ask quick question related to disinfectants and germicides as given on page no 77. Make sure that all participants have opened page no 77 of module. Following are the few examples of question you would rapidly ask the participants. Make sure that the participants are able to refer to the table while answering the questions. Make sure that you ask sufficient questions to cover the contents of the table and involve all the participants.

1. Two uses of bacillocid
2. How do you disinfect tubings
3. How will you dispose off needle after use
4. How will you clean the floors?
5. How will you clean oxygen hood.

Oral drill B (Housekeeping and disinfection routines)

Now the second facilitator will get up and conduct oral drill on housekeeping and disinfection routines. Emphasize that you will ask quick question related to routines as given on page no 78. Make sure that all participants have opened page no 78 of module.

1. How do you clean the refrigerator?
2. Should you do dry sweeping in nursery.
3. How should you clean buckets?

Ask and ensure the participant to open page no 78 and ask question:

1. How do you disinfect cotton gauze?
2. Cheattle forceps is cleaned by
3. How do you sterilize sets for procedures
4. How do you clean swab containers

Ask and ensure the participant to open page no 79 and ask question:

1. How do you clean measuring tape
2. How do you disinfect resuscitation bags
3. How is Radiant warmer cleaned when not in use.
4. How do you clean phototherapy unit.

After oral drill ask participants to read pages 80 & 81

Demonstration on waste disposal

Organise a demonstration on safe disposal of hospital waste using the demonstration aid. 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.

Ask the participant to read page no. 83 and do the exercises on page no. 84. They will be given individual feedback after they have finished.

Self-evaluation

1. Indicate the bucket you will use for following wastes:
 - Paper towel after use black
 - Soiled nappy of the baby yellow
 - Used disposable syringe blue

(Module V/83)

2. How do you sterilize/disinfect the following?
Thermometer-Spirit
Ambu bag-Autoclave, boil, cidex
Cheattle forceps – Autoclave
Probe of pulse oximeter-Spirit
Oxygen tubing-Cidex
Stethoscope -Spirit

(Module V/78,79)

3. B/O Rajkumari is a 32 week preterm baby with birth weight of 1.3 kg. The baby is 2 days old now. Mother is now recovered from her birth related problems and wants to help you in baby's work, what are the areas you will like to involve the mother?

(Module V/80)

 1. Give EBM
 2. Assist feeding
 3. KMC
 4. Change nappy

Video demonstration

There will be a short video film on the asepsis routines to be followed in the nursery. Lead a discussion on the video. Ask participants what they have learnt new and what they have been practicing in their hospitals. Discuss that ideally one should use distilled water after sterilization but for practical purposes running water is good enough. If they do not have Cidex washing AMBU bag with soap/surf water and then with fresh water can achieve nearly same goal of maintaining asepsis.

Frequently asked questions

One of the facilitator will lead discussion on FAQ's as listed on page 86.

Summarizing the module

So in the module we have learnt importance of hand washing, disinfection routines, waste disposal and preparation of skin and other asepsis routines to be followed up in baby care area.

Module V : Common Procedures

Introduction to the module

In this module you will learn about the different procedures carried out in baby care area. Though we have been doing these procedures quite commonly, but we will recapitulate and try to focus on finer aspects of the procedures. Please read pages 87 to 88. This is about giving intramuscular injection to the baby. There will be a demonstration on how to give intramuscular injection after all of you have read.

Demonstration on IM injection

Ask one of the participants to come in front and demonstrate the procedure of IM injection. Ask her/him to give 1 mg of vit K to the manikin. Provide her/him necessary articles needed. Discuss briefly about the procedure highlighting the key points and take the view of the participants on how the procedure was done. Build a discussion.

Ask them to read pages 88-92. Tell them that they will read about brief information on commonly used drugs for the babies. After all the participants have read there will be a demonstration on preparation of medication.

Demonstration on preparation of medication

Ask one of the participant to demonstrate how to prepare 75 mg injection Ampicillin for IV injection for a baby. Ask the other participants to observe the steps carefully and give feedback at the end. Emphasise to them to follow strict aseptic precaution, while preparing injection. Establishment of IV access is very important in treating newborn babies and we know that it needs to be done properly and in aseptic measure as it is very common route of infection to the babies. Now we will read pages 93 and 94.

Demonstration on fixation of IV line

Using a model, one of the facilitator should demonstrate the technique of ideal IV line fixation, followed by other demonstration by one of the participant. Tell other participant to observe the steps and lead a discussion. Now we will read page 94-95.

Oxygen administration

Sick newborn babies commonly require O₂ administration. We can give oxygen by many ways and in the next part of the module we will read how oxygen can be given by a hood.

End of the day 2

Today we have learnt various aspects of newborn care related to keeping baby warm and feeding of healthy newborn in hospital setting. In addition, we read the module on asepsis routine and a few common procedures. Rest of the module on common procedure we will learn tomorrow. Please bring all your modules tomorrow with you.

Day 3 Activities

Procedure

Feedback

Clinical demonstration

- | | |
|---|-----|
| 1st Demonstration - Asepsis routines | All |
| 2nd Demonstration - Breastfeeding counseling and equipments | All |

Module VI - Common Procedures

- | | |
|---|-------|
| 1. Read pages 95 to 97 (insertion of feeding tube) | ..... |
| 2. Read pages 97 to 99 (expression of breast milk) | All |
| 3. Demonstration on expression of breast milk | ..... |
| 4. Read page 99 to 100 (temperature recording) | All |
| 5. Read pages 100,101 (weight recording) | All |
| 6. Read pages 101 ,102 (oro pharyngeal suction) | All |
| 7. Read pages 102 to 104 transport of sick newborn) | All |
| 8. Summarizing the module | ..... |

Module IV - Module on Neonatal Resuscitation

- | | |
|--|-------|
| 1. Introduce the NRP module | ..... |
| 2. Participants read pages 51 to 53 of their module. | ..... |
| 3. Demonstration of Algorithm (Routine care) page 54 | ..... |
| 4. Read page 55 | ..... |
| 5. Demonstration of Initial steps | ..... |
| 6. Read page 57-60 | ..... |
| 7. Self evaluation page 61 | ..... |
| 8. Demonstration of Bag and mask | ..... |
| 9. Read page 63-66 | ..... |
| 10. Self evaluation on page 67 | ..... |
| 11. Read page 68 | ..... |
| 12. Group discussion on page 69 | ..... |
| 13. Video to be made | ..... |
| 14. Summarizing the module | ..... |

Module VII-Module on management of normal, at risk and sick neonate

- | | |
|---|-------|
| 1. Introduction to module | ..... |
| 2. Read pages 105-108 | ..... |
| 3. Self evaluation on page 109 | ..... |
| 4. Read page 110-113 | ..... |
| 5. Oral drill on 114 | ..... |
| 6. Read page 115, 116 | ..... |
| 7. Self evaluation on page 117 | ..... |
| 8. Summarizing the module Operationalization criteria for ENBC page 119,120 | ..... |

ANNEXURES

- | | |
|------------------|-----|
| 1. Pre-test KAP | All |
| 2. Post-test KAP | All |
| 3. Feedback | All |

Day -3 Programme

Schedule for today

Time	Ward		Procedures-II, Sick NB
09.00-11.00AM	C		A & B
11.00-11.30 AM		TEA BREAK	
11.30-1.30 PM	B		A & C
01.30-2.30 PM		LUNCH	
02.30-4.30 PM	A		B & C
4.30-5.00 PM		WRAP UP	

Each group will be divided into two for the ward demonstrations. The two facilitators should accompany the group to the ward. One facilitator should lead the group and the other facilitator should follow at the end to make sure that all the participants reach the ward.

Ward demonstrations will be done in two groups, one hour each.

First demonstration (Asepsis routines)

- Handwashing
- Waste disposal
- Disinfection procedure
- Skin preparation for IV canula insertion/pricks
- Assessment of CRT

Second demonstration (Counselling and equipment)

- Counselling of mother for breastfeeding
- Counselling of mother at discharge (Normal newborn)
- Weight record
- Phototherapy
- Radiant warmer

Facilitators should escort their group back to the conference hall. After returning to the conference hall, the checklist for clinical demonstration should be handed over to the participants.

Contd. Procedures

Insertion of feeding tube is a routinely required procedure in management of sick and small babies. This part of the module deals with technique of insertion of feeding tube.

Insertion of feeding tube

Read page 95 to 97.

Expression of breast milk is required in number of breast conditions as well as when breastmilk is required for the feeding of sick or small babies. In next – few pages we will learn about expression of breast milk. Read pages 97 to 99.

Demonstration on expression of breast milk. One of the facilitator will demonstrate the expression of breast milk by using a model. Demonstrate the right technique of providing hot fomentation, breast massage and squeezing/pressing the breast. You will see the procedure while visiting the hospital.

Temperature recording

As a staff nurse, we record temperature of normal and sick babies. We will learn the correct technique of recording temperature. You will be demonstrated the procedure in the hospital in the clinical demonstration session. Read page 99, 100.

Weight recording is an essential component of newborn care. For all babies weight is recorded at birth or at admission to hospital. Now you will learn the proper procedure of weight recording on page 100,101.

Oropharyngeal suction

Read page 101,102

Transport of neonates

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 on page 102-104.

Module VI: Neonatal Resuscitation

Preparation

Before starting the session, make sure that:

1. You are clear about the objectives of the session
2. You have all the items needed for running the module:
 - i. Wall Chart (A3 size) pinned on flip chart
 - ii. Manikin (keep dressed)
 - iii. Cotton sheet – 2
 - iv. Shoulder towel (3/4")
 - v. Different sizes and shapes of face mask
 - vi. Resuscitation bag, reservoir, oxygen tubing
 - vii. Suction devices: catheter (12, 14F) mucous trap.
3. Each facilitator should have extra resource material for an advanced learner. You can ask them to be read this in case some one happens to finish before time.
 - i. NRP manual
 - ii. Teaching aids

Introduce the module

In this module you will learn steps of routine care for a normal baby and resuscitation of an asphyxiated newborn. Tell participants to start reading page 51-55. Tell them once he is done he should raise hand. There will be demonstration using chart for all.

1. Ask all the participants to get up and gather around you with their modules opened on page 54.
2. Teaching of algorithm
 - a. At birth, we need to ask five questions (Refer to algorithm only). If all answers are "Yes" provide routine care. Majority (80%) babies require routine care. If there is "No" to any of question provide initial steps.

Do demonstration on routine care

Demonstration of initial steps

Now you will learn the initial steps of resuscitation. These consists of:

1. Preventing heat loss (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).
2. Positioning is such a way that airways are patent. Show that the neck is not flexed or hyper extended.
3. Suctioning the mouth using the suitable device.
4. Evaluating the baby with three signs (HR, respiration & colour).
5. Baby not breathing or having gasping breathing will need tactile stimulation. These who are centrally cyanosed with normal breathing will need free flow of oxygen.
6. You will be shown how to provide tactile stimulation and two methods of providing free flow of oxygen.

Demonstrate on a manikin:

- a) Slapping, flicking the sole, and rubbing the back.
- b) Two methods – direct with a tube using your hand as a cup and using face mask. Emphasize that with a tight mask or hand cup very near to face provides 60-80% oxygen and loose mask or hand away from mouth provides 40-60% oxygen.

Ask participants to start reading page 57-60 and then do self evaluation on page 61 to know how much he has learnt about initial steps. After she / he has completed, ask him to raise hand for individual feedback.

Self evaluation

1. A newborn who is breathing well, has pink color, and has no meconium in the amniotic fluid or on the skin will need routine care but no initial steps.
(refer to page no.IV/55)
2. When a suction catheter is used to clear the oropharynx of meconium before inserting an endotracheal tube, the appropriate size is 12 F or 14 F.
(refer to page no.IV/58)
3. In suctioning a baby's nose and mouth, the rule is to first suction the Mouth and then the Nose.
(refer to page no.IV/58)
4. Correct ways of providing tactile stimulation
Ans. Flicking/ Slapping the sole or rubbing the back
(refer to page no. IV/59)
5. A newborn is covered with meconium, is breathing well, has normal muscle tone, and a heart rate of 120 beats per minute, and is pink. The correct action is to.
Ans. Provide initial steps.
(refer to page no. IV/54)
6. A 24-year-old woman enters the hospital in active labor at term. The membranes ruptured one hour before arrival, and the amniotic fluid was clear. The cervix dilates progressively and, after several hours, a baby girl is born vaginally in vertex presentation.
 - i. What preparations you will make until delivery occurs?
 - Put on the radiant warmer
 - Keep at least two baby sheets to receive the baby in pre-warmed sheets.
 - Keep O₂ point checked
 - Keep suction ready, with 10-12 F size catheter
 - At least have 1 mucus aspirator (De Lee trap)
(refer to page no. IV/53)
 - ii. What five questions you will ask to yourself once baby is delivered?
Is baby:
 - Clear of meconium
 - Breathing or crying
 - Good muscle tone
 - Colour pink
 - Term gestation
(refer to page no. IV/54)
 - iii. What care will you provide if answer to all five questions is yes?
Provide routine care:
 - Provide warmth by putting the baby in direct skin-to-skin care with mother.
 - Clear the airway (using wipes/ gauze pieces)
 - Dry
(refer to page no. IV/55)
 - iv. What will you do if answer to any of the question is no?
Provide initial steps
 - Provide warmth
 - Position clear airway (as necessary)
 - Dry stimulate, reposition
 - Give O₂ (as necessary)
(refer to page no. IV/54)

Facilitator Aid Demonstration

Let us get up and come near the algorithm (Every participant will move towards the flip chart).

Ask participants to bring their module with them and open page no.54.

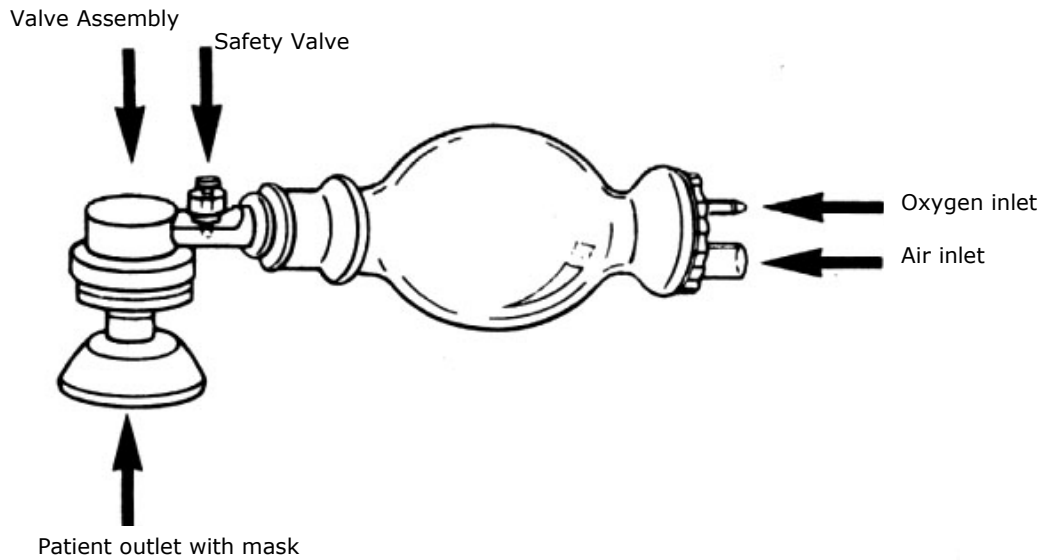
Ask any one of the participants looking at the facilitator aid the flip chart what five questions need to be asked at birth. Make the participant read and indicate on the algorithm five questions.

After the participant has read five questions, you ask him if the answer to all the question is "Yes". What she will do. She should say – I will provide routine care and now you say if the answer to any of the question is "No" – then you provide initial steps. Following initial steps, referring the algorithm, if on evaluation there is apnea/gasping or HR<100 – you will initiate positive pressure ventilation.

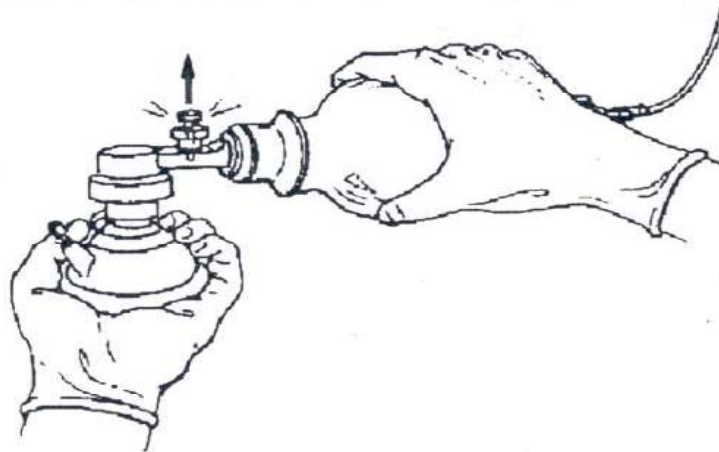
Now facilitator will demonstrate equipment of bag and mask ventilation

Demonstration of Procedure of BMV

Now facilitator will demonstrate parts of resuscitation bag, function and mechanism of increasing oxygen concentration, using reservoir/safety features and types of face mask. Show how to assemble and test the resuscitation bag.



Testing bag & mask equipment



Now ask the participants to read page no. 63 to 66 from their module.

Now there will be a demonstration of procedure of bag and mask ventilation and of corrective steps if there is no chest rise:

1. Select appropriate sized bag and face mask, connect oxygen tubing and reservoir. Show quickly that the equipment is in working order.
2. Stand on head side or by the side of baby so that you have clear vision of chest of the baby. Show the procedure of BMV with a visible chest rise.
3. Indicate rate (Squeeze, one, two, squeeze..) and adequacy of BMV (visible chest rise).
4. If there is no chest rise – mention the possible reason (Inadequate seal, position, secretions, inadequate pressure and mouth closed) and corrective measure thereof.

After the demonstration, ask participants to read page no. 63-66 and answer at page no. 67 how much you have learnt. Once you have done, raise your hand. One of us will provide you individual feedback.

Self evaluation

1. List the two indications for positive pressure ventilation.
 - a. No respiration or gasping respiration
 - b. HR <100

(refer to page no.IV64)
2. When selecting a face mask, make sure that the rim covers the tip of the Chin, then Mouth, and the Nose but does not cover the eyes.

(refer to page no. IV/63)
3. Compress the bag enough to cause a visible chest expansion at the rate of 40-60/ minute.

(refer to page no.IV/65)
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 reasons
 - i. Inadequate seal
 - ii. Blocked air ways – secretions or improper position
 - iii. Inadequate pressure

(refer to page no. IV/65)
6. A 20-year-old woman with pregnancy-induced hypertension has labor induced at 37 weeks gestation. Several late deceleration of fetal heart rate are noted, but labor progresses quickly, and a baby girl is delivered rapidly.

She is taken to the radiant warmer, where the resuscitation team finds her to be apneic, limp, and cyanotic.

She is appropriately positioned to open her airway, while her mouth and nose are cleared of secretions with a bulb syringe. She is dried with warmed towels, wet linen is removed, her head is repositioned and further attempts to stimulate her to breath are provided by flicking the soles of her feet.

No spontaneous respirations are noted even after stimulations.

- i. What are the indications to start the bag and mask ventilation?
 - Apneic or gasping following initial steps and tactile stimulation
 - Heart rate less than 100 beats per minute in a spontaneously breathing baby.

(refer to page no. IV/64)
- ii. How will you know that BMV is effective?
 - Adequate chest rise
 - HR will increased
 - Spontaneous breathing

(refer to page no. IV/65)
- iii. What are the causes if there is no chest rise?
 - Inadequate seal
 - Blocked airway
 - Insufficient pressure

(refer to page noIV/65)

iv. What corrective measures will you take to ensure adequate chest rise?

- Reapply seal
- Position
- Suction of airways
- More pressure
- Ventilate with mouth open

(refer to page no. IV/65)

Facilitator Aid Demonstration

Let us get up and come near the algorithm (Every participant will move towards the flip chart).

Ask one of participants to volunteer. Ask her what she will do if she finds it is a preterm baby with clear liquor, crying with good muscle tone and pink. **Emphasize preterm baby**

She should indicate that she would provide initial steps referring to the algorithm. Now tell her that after providing initial steps (read through algorithm) – baby is apneic. Ask her what she will do now. Make her understand (based on algorithm) that she will initiate PPV. Tell her that after 30 sec. of effective PPV, HR is < 60. What action should she take? She should say initiate chest compressions.

Now a nurse facilitator will demonstrate to you the procedure of chest compression.

Demonstration of Procedure of Chest Compressions
(Two facilitators are required one for BMV and other one for chest compression)

Show on the manikin:

1. How to locate the site for chest compression
2. Two methods of chest compression
3. Depth of chest compression (1/3 of AP diameter of chest)
4. Rate and synchronization of chest compression with BMV.
(One and ... two and Three and.... Squeeze and) 30 ventilation and 90 chest compression
(total 120 events) per minute.

Now start reading page no. 68. Raise your hand once you are done for group discussion.

Case Study

You can utilize these case scenarios in two ways.

1. If all the participants finish the module before the stipulated time then use these scenarios for providing opportunity to the participants to practice on the manikin.
2. If some participants finish the module before the stipulated time while others are still reading it then ask to write answers for the questions of the case scenarios and provide them individual feedback.

Case Study - I

Veena, 22 years old primi old admitted with labour pains. She delivered a full term female baby. Baby did not cry immediately after birth.

Q1. What are the initial steps you take in resuscitation?

Ans. Drying, positioning and cleaning of mouth followed by nose.

(refer to page no IV/57)

Q2. After wiping the baby, positioning and cleaning the mouth and nose. There is no spontaneous respiration. How do you continue resuscitation?

Ans. Provide tactile stimulation. If no response, use Bag and mask ventilation.

(refer to page no. IV/58,59)

Q3. After given effective bag and mask ventilation for 30 sec., what do you evaluate in the baby?

Respiration, heart rate and colour.

(refer to page no IV/58)

Q4. There is no spontaneous breathing. HR is 5 in 6 sec. What do you do?

Ans. Chest compression along with bag and mask ventilation.

(refer to page no. IV/66)

Q5. After 30 sec. of bag and mask ventilation with chest compression, HR is 4 in 6 sec. What do you do next?

Injection adrenaline 1:10,000, 0.2 ml/kg through IV or ET route.

(refer to page no. IV/54)

Summarizing the module

Ask the participants to look at the page no. 51 of their module. Ask one participant to start reading learning objectives. While she is reading learning objectives:

Ask others whether this is achieved or not. If yes ask her to read other objectives.

Praise everyone for their enthusiasm for finishing this module on time

Module VII – Management of the 'Normal', 'At Risk and Sick Neonate'

This is the last module for you. You will learn how to identify a neonate who is either at risk or actually sick .You will also learn how to manage them in your hospital setting.

Read page 105 to 108 and do self evaluation on page 109.

Self Evaluation

1. Component of essential newborn care include
Warm Chain_____ Cord Cares_____
Breast feeding_____ Skin Cares, Eye Care _____
(refer to page no. VII/107)
2. Six cleans at time of delivery are
Clean attendant's hands Clean delivery surface_____
Clean cord-cutting instrument Clean string to tie cord_____
Clean cloth to wrap the baby Clean cloth to wrap the mother_____
(refer to page no. VII/106)
3. Warm chain includes
At Delivery After Delivery
Ensure the delivery room is warm Keep the baby clothed & wrapped____
Dry the baby immediately_____ Minimize bathing_____
Wrap the baby with clean dry cloth Keep the baby close to the mother_
Keep the baby close to the mother Use KMC for stable LBW babies_____
(refer to page no. VII/106)
4. Do's and don't for cord care are
Do's **Don't**
Cut with clean instrument Avoid any applications
Tie the cord tightly Don't apply bandages
Keep the cord clean & dry
(refer to page no. VII/107)
5. Baby bath should be postponed to _____6_____hours after birth.
(refer to page no. VII/106)
6. Normal newborn has following characteristics.
Birth weight >2.5 kg
Cries at birth
Has warm trunk & soles to touch
Pink in color
Spontaneous body movement
Suck actively on breast
(refer to page no. VII/105)

Tell participant to read page 110 upto 113. Look at page 114, there will be an oral drill.

Oral Drill

Facilitator will conduct a drill on identification of 'at risk' neonate and sick neonate.

Clinical Feature	Normal Neonate	'At Risk' Neonate	Sick Neonate
Weight	> 2.5 kg	1.5 - 2 kg	<1.5 kg
Temperature	36.5 - 37.5° C	36.0 - 36.5° C	<36° C
Cry after birth	< 1 min	1-5 min	> 5 min
Sucking	Good	Poor	Absent
Sensorium	Active	Depressed	Not arousal
Respiration	Rate <60/min no retractions	Rate >60/min, / Gaspings	Retractions / Apnea
Jaundice	Absent of palms / soles	Present without staining	Staining of palms/ soles
<ul style="list-style-type: none"> • Diarrhea/ vomiting / abdominal distension • Umbilical discharge (pus)/ skin pustules • Fever 	None	Presence of any	Presence of two

Read page 115 & 116 and do self evaluation on page 117

Self Evaluation

Let us see how much you have learnt about 'AT RISK' and 'SICK' Neonate:

1. Where is the 'at risk' neonate managed?
The care of 'at risk' neonate is immediately initiated at health facility itself under direct supervision. After initial improvement, further care can be provided at home.
(refer to page no. VII/115)

2. What are the signs you will monitor in 'at risk' and sick neonate?
Temperature, sucking, sensorium, respiration, apnea, cyanosis, convulsions, bleeding, diarrhea, vomiting, abdominal distension.
(refer to page no. VII/116)

3. What advice you give for home care of 'at risk' baby?
 - Keep the baby warm
 - Continue the prescribed treatment
 - Provide exclusive breast milk feeding
 - Monitor for danger signs*(refer to page no. VII/112)*

4. What is the immediate care given for a sick baby?
Maintain temperature, oxygen if there is respiratory distress/ cyanosis, stabilize (Inj. 10% Dextrose I/V, Inj Normal saline I/V), Inj. Vit K, feeding if possible, first dose of antibiotic, monitoring, communication with parents & organizing transport to appropriate health facility.
(refer to page no. VII/115-116)

Day 1

Clinical Demonstration

Ideally a separate facilitator should be assigned for this activity. Identify a room or space to conduct the activity. On day one of the course she/he should work in consultation with the local coordinator and select cases to show the signs as detailed in the checklist. Assign task to participants or do the return demonstration of skills with all the participants. The preparations can be made in the postnatal ward itself. The other Facilitator will bring their group to Clinical Facilitator who will be responsible for skill demonstration. After demonstration to all, ask each one to demonstrate and take feedback from the others.

Preparations for Clinical demonstration

Do complete clinical demonstration as per your schedule. Even if there are one or two participants whom you think they know this. It is quite possible most are unaware. The Co-Facilitator have the responsibility of keeping these participants away from the first row of the Group because they are trouble makers. Having completed everything will give you more satisfaction rather than jump starting and finishing quickly.

1. Clinical Instructor will identify suitable cases (willing mothers) for Demonstration. Use different mother-baby pair for clinical skill demonstration. Demonstration on a single case is often tiring and on occasions parents may resent examination.
2. Often helpful to identify mothers with breast feeding problems like cracked nipple, breast engorgement. Look around for preterm, LBW baby who is well covered.
3. Baby on Paladai feeding. Ask mother to demonstrate use of paladai in front of the group. This means you will have to identify which baby is due for feeding at what time, so that you can bring the group participants at correct time for demonstration to that case.
4. Collect all supplies for demonstration of temperature recording. Collect rectal & clinical thermometer for demonstration.
5. Identify a room having room thermometer
6. Identify two mothers one for demonstration of KMC procedure and ask one of the participant to counsel a mother for initiation of KMC.

Day 2 Activities: Clinical Demonstration

Today we will see what we have learnt yesterday about KMC/Thermal Protection/Feeding of Healthy and LBW babies.

We will divide your group in two A1-A2/B1-B2/C1-C2 (so that each group has 6-7 participants)

For A1 – Facilitator will be and

For A2 – Facilitator will be and

Ask participants to follow facilitators. They should not get lost on the way otherwise whole group will be delayed. Tell them to bring their modules along because they will have to refer them . Tell them, You have a checklist (show and give to each participant) to enter what you have seen.

At the end of the demonstration bring them with you to the Conference Hall. If you finish early, keep your group busy in the Conference Hall by revising a few things you feel your Group is having difficulty in undersatnding. Keep them busy ,so that they feel you are really interested in making their learning simple. They will respect you, if they find that you are concerned and dedicated for their training.

Or revise what they have seen since morning in the Clinical Demonstration.

Each group will be divided into two for the ward demonstrations. The two facilitators should accompany the group to the ward. One facilitator should lead the group and the other facilitator should follow at the end to make sure that all the participants reach the ward.

Ward demonstrations will be done in two groups, one hour each by Clinical Instructor

First demonstration will be on Thermal protection and KMC and would be conducted in the High Risk Cubicle. Ensure that the following points are covered.

- Recording axillary temperature
- Assessment of temperature by touch
- Keeping the baby warm
- Functioning of warmer
- Initiation of kangaroo mother care
- Paladai feeding
- Orogastric feeding
- Expression of breast milk

Second demonstration on breast feeding will be in the postnatal ward. Ensure that the following points are covered.

- Positioning the mother
- Positioning the baby
- Attachment
- Reflexes – rooting, sucking etc.
- Management of breast engorgement
- Management of inverted and sore nipple
- Back massages for insufficient milk

Checklist for Clinical Demonstration (Day 2)

Tick the procedure you have observed

Thermal Protection

- Record axillary temperature
- Assessment of temperature by touch
- Demonstration of functioning of radiant warmer
- Keeping the baby warm

Kangaroo Mother Care

- Initiation of Kangaroo Mother Care

Feeding of Newborn Babies

- Positioning mother
- Positioning baby
- Attachment
- Reflexes – rooting, sucking etc.
- Management of breast engorgement
- Management of inverted and sore nipple
- Back massages for insufficient milk
- Paladai feeding
- Orogastric feeding
- Expression of breast milk

At the end tell

Today we have learnt various aspects of newborn care related to keeping baby warm, Kangaroo Mother Care and feeding of healthy newborn in hospital setting.

Day –3 Programme

Each group will be divided into two for the ward demonstrations. The two facilitators should accompany the group to the ward. One facilitator should lead the group and the other facilitator should follow at the end to make sure that all the participants reach the ward.

Ward demonstrations will be done in two groups, one hour each by Clinical Instructor.

First demonstration (Asepsis routines)

- Hand washing
- Waste disposal
- Disinfection procedure
- Skin preparation for IV cannula insertion/pricks
- Assessment of CRT

Second demonstration (Counselling and equipment)

- Counselling of mother for breastfeeding
- Counselling of mother at discharge (Normal newborn)
- Weight record
- Phototherapy
- Radiant warmer

Facilitators should escort their group back to the conference hall. After returning to the conference hall, the checklist for clinical demonstration should be handed over to the participant.

**Checklist for Clinical Demonstration
(Day 3)**

- Weighing of baby
- Assessment for capillary refill time (CRT)
- Hand washing
- Skin preparation for IV cannula insertion
- Counselling of mother for breast feeding
- Counselling at discharge (Normal newborn)
- Waste disposal
- Disinfection procedures
- Phototherapy
- Radiant warmer

Counselling of mother at discharge (Normal newborn)

One of the facilitator will demonstrate counselling of mother of normal newborn at discharge. This will be done in the postnatal ward.

Counselling should be done with the principles of 'ALPAC'.

AL: Ask mother if she has any problems in feeding or taking care of her baby. Listen to her and allay her anxiety and doubts.

P: Praise the mother for her right practices, concern or enthusiasm for the baby.

A: Advise regarding care of normal newborn at home.

1. Maintain baby's temperature – Protect the baby from cold/heat by wrapping/clothing according to climate. If baby is cold to touch, re-warm by skin to skin contact and appropriate clothing including cap and woolen socks.
2. Exclusive breast feeding till 6 months of age frequently day and night. Do not give the baby any other food including water even in summer months.
3. Prevention of infection – Keep the umbilical stump clean and dry. Do not apply anything on the cord stump. Do not apply anything in the eyes.
4. Immunization – Tell her, the schedule for immunization and time of her next visit.
5. Danger signs – Mother as well as family must be informed of the danger signs for identifying her sick baby. Ask them to seek medical help if any of these danger signs are present.

The danger signs in a newborn include: lethargy, hypothermia (both abdomen and feet are cold to touch), rapid or difficult breathing, convulsion abdominal distension, bleeding from any site, yellow palms/soles.

C: Confirm whether she has understood your advice. Then ask one of the participants to do discharge counselling of mother of another newborn in the ward.

Weighing a baby

Purpose	To monitor the adequacy of nutrition as well as fluid balance. (Term babies lose about 10% of birth weight and regain birth weight at 7 – 10 days of age while preterms can lose up to 15% of birth weight and regain birthweight by 14 days of age).
Indications	<ul style="list-style-type: none"> • All babies at birth. • All LBW babies at 2 weeks (to check regaining of the birth weight), 4 weeks (to ascertain a weight gain of 80-100 g/kg per week) and then every month. • Sick newborn and VLBW (<1500 g) babies daily to monitor fluid therapy for at least one week.
Point of emphasis	If baby loses or gains 3 % or more of body weight in a day it should be brought to the notice of a physician.
Equipment	<p>Weighing scale Clean and preferably sterile towel (autoclaved newspaper can be used)</p>
Procedure	<ol style="list-style-type: none"> 1. Put the weighing scale on a flat, stable surface. 2. Put a clean towel on the scale pan. Zero the scale, if the machine has the facility or record the weight of the towel. 3. Record weight prior to feeding. 4. Detach as many tubes / equipment as possible. Keep the naked baby on the towel and record the weight (subtract the weight of the towel if the scale has not been zeroed with the towel on the scale). 5. Keep baby in middle of scale pan; hold the remaining tubes and lines in hand. 6. Use separate sterile towel for each baby. 7. If using pre-weighed splint, reduce the weight from baby's weight. 8. For quality assurance check accuracy of weighing scale with standard known weights every 2 weeks.

Radiant Warmer

Radiant warmer is one of the most important equipment used in neonatal care. It provides radiant heat to the baby. These can be manual or servo controlled. If a manual warmer is being used a baby under it has to be constantly monitored till he attains a normal temperature and then it has to be switched off. As far as possible use of manual radiant warmers should be avoided. Servo controlled warmers have a skin probe which senses the skin temperature and displays it on the display panel. This information is processed by the microprocessor and used to provide heater output. The desired skin temperature is set on the display panel which is matched with the actual sensed skin temperature by the microprocessor and if the measured temperature is low, the heater is switched on whereas if it is high or normal heater remains off. If the heater has been switched on, based on the low sensed temperature, as the heating progress and baby's temperature reaches normal the heater output reduced and is finally switched off when the desired and actual temperatures are the same. The use of this warmer will be demonstrated to you and possible trouble shooting will also be discussed.

Objective: Upon completion of this section the participant should

1. know the parts of a warmer
2. be able to demonstrate the working of the warmer
3. know the dangers associated with its usage and should be able to rectify minor equipment failures.

Parts: Bassinet

- Quartz rod
- Skin probe
- Air probe
- Control panel
- Heater output

Working:

- i) Connect to mains
- ii) For pre warming keep heater output to maximum
- iii) Place baby
- iv) Connect probe
- v) Read temperature on display
- vi) Adjust heater output
 - If below 36°C – High
 - If between 36-36.5°C – Medium
 - If between 36.5 – 37.5°C Low
 - If >37.5°C – Remove baby /Switch off warmer
- vii) Measure temperature ½ hourly x 2 hours & then 2 hourly

Cleaning & Disinfection

- Glutaraldehyde 2%
- Soap/Detergent once daily

Dos & Donts:

- i) Check temperature ½ hourly /2 hourly
- ii) Ensure warm feet
- iii) Do not leave baby unattended
- iv) Ensure side walls of bassinet are fastened up
- v) Ensure adequate clothing in case of electricity failure

In case of equipment failure

- i) Check fuse
- ii) Check plug
- iii) Check cord

Side effects & Dangers

- Increased insensible water loss
- Fluid intake must be tailored to meet demands
- Hyperthermia
- Hypothermia

Phototherapy Unit

Phototherapy units are equipments used for treatment of hyperbilirubinemia. Unconjugated bilirubin absorbs blue light and in the process becomes decolourised. Light is effective in the treatment of hyperbilirubinemia mainly because of its blue content. Phototherapy reduces the serum concentration of bilirubin and the risk of bilirubin toxicity by producing configurational and structural photoisomers of bilirubin. These photoisomers are non-toxic and water soluble and are easily excreted by the body. Phototherapy is easy to use and doesn't produce any major side effects.

A phototherapy unit consists of a light source of 6 white tube lights of 20 watt each which gives an irradiance of 4-8 microwatt/cm²/nm in 400-500 nm range (wavelength) at the baby's level. The baby is kept under the phototherapy unit at a distance of 45 cms.

A baby requiring phototherapy (based on clinical and laboratory assessment) is placed under the phototherapy units naked except for an eye shield and a napkin. The baby's position is changed after every feed to allow exposure of the body surface to this light. When a baby receives phototherapy they should be provided extra fluids in the form of frequent breast feeding or IV fluids to take care of the increased insensible water loss. The baby's temperature should be maintained frequently to prevent hypo or hyperthermia.

The phototherapy unit should be checked use to ensure effective phototherapy. A unit in use should have all the tubelights in good working condition. If a tubelight is flickering or is fused or has black rings at the ends it should be replaced immediately.

A baby under phototherapy should be regularly monitored for effectiveness of therapy and for possible side effects. The baby should be removed from phototherapy as soon as the bilirubin level declines to safe levels.

- Objective: Upon completion of this section the participant should
1. know the parts of a phototherapy unit
 2. be able to understand the functioning and demonstrate the working of a phototherapy unit
 3. be able to place a baby under phototherapy unit

- Parts:
- | | | | | |
|-------|---|------------|---|-----------|
| Tubes | - | Number | - | 6-8 |
| | - | Colour | - | White |
| | - | Watt | - | 20 |
| | - | Wavelength | - | 420-460nm |
| | - | Distance | - | 45 cms |

- Working:
- i) Connect to mains
 - ii) Switch on the unit & check that all tubelights are working
 - iii) Place baby naked only with the napkin on
 - iv) Cover the eyes
 - v) Change position with each breastfeed
 - vi) Increase fluid intake
 - Breast feed frequently
 - Spoon/Gavage/IV increase by 20 ml/kg/day
 - vii) Provide continuous phototherapy

- Dos & Donts:
- i) Cover eyes
 - ii) Check temperature – prevent hypo/hyperthermia
 - iii) Check weight daily

- iv) Frequent breast feeding/increase allowance for fluid
- v) Reassess frequently

In case of equipment failure:

- i) Check fuse
- ii) Check plug
- iii) Check cord
- iv) Change tube if flickering or if ends are blackend

Ineffective Phototherapy:

- i) Baby covered
- ii) All tubes not working
- iii) Flickering light
- iv) Tube ends have black circles

Side effects and Dangers:

- i) Hyperthermia/Hypothermia
- ii) Increased insensible water loss

Tailor fluid intake to meet demands

Guidelines to use facilitator guide

How does this course differ from other training courses?

- The material in the course is not presented by lecture. Instead, each participant is given a set of instructional modules, which have the basic information to be learned. Information is also provided through demonstrations, role-play and videotapes.
- The modules are designed to help each participant develop specific skills necessary for management of normal and sick newborn. Participants develop these skills as they read the modules, observe live and videotaped demonstrations, and practice skills in written exercises, group discussions, or role-plays.
- After reading skills in the modules, participants practice the skills in a real clinical setting, with supervision to ensure correct practices.
- Each participant works at his own speed.
- Each participant discusses any problems or questions with a facilitator, and receives prompt feedback from the facilitator on completed exercises. (Feedback includes telling the participant how well he has done the exercise and what improvements could be made).

Who 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 hospital, and generally give participants any help they need to successfully complete the course. You are not expected to teach the content of the course through formal lectures. (Nor is this a good idea, even if this is the teaching method to which you are most accustomed.)

What, then, DOES a FACILITATOR do?

As a facilitator, you do 3 basic things:

1. You INSTRUCT

- Make sure that each participant understands how to work through the materials and what he is expected to do in each module and each exercise.
- Answer the participant's question as they occur.
- Explain any information that the participant finds confusing, and help him understand the main purpose of each exercise.
- Lead group activities, such as group discussions, video exercises, and role-plays, to ensure that learning objectives are met.
- Promptly assess each participant's work and give correct answers.
- Discuss with the participant how he obtained his answers in order to identify any weaknesses in the participant's skills or understanding.
- Provide additional explanations or practice to improve skills and understanding.
- Help the participant to understand how to use skills taught in the course in his own clinic.
- Explain what to do in each clinical practice session.
- Model good clinical skills, including communication skills, during clinical practice sessions.
- Give guidance and feedback as needed during clinical practice sessions.

2. You MOTIVATE

- Compliment the participant on his correct answers, improvements or progress.
- Make sure that there are no major obstacles to learning (such as too much noise or not enough light).

3. You MANAGE

- Plan ahead and obtain all supplies needed each day, so that they are in the classroom or taken to the postnatal ward when needed.
- Make sure that movements from classroom to hospital and back are efficient.
- Monitor progress of each participant.

How do you do these things?

- Show enthusiasm for the topics covered in the course and for the work that the participants are doing.
- Be attentive to each participant's questions and need. Encourage the participants to come to you at any time with questions or comments. Be available during scheduled times.
- Watch the participants as they work, and offer individual help if you see a participant looking troubled, staring into space, not writing answers, or not turning pages. These are clues that the participant may need help.
- Promote a friendly, cooperative relationship. Respond positively to question (by saying, for example, "Yes, I see what you mean," or "That is a good question."). Listen to the questions and try to address the participant's concerns, rather than rapidly giving the "correct" answer.
- Always take enough time with each participant to answer his questions completely (that is, so that both you and the participant are satisfied).

What NOT to do...

- During times scheduled for course activities, do not work on other projects or discuss matters not related to the course.
- In discussions with participants, avoid using facial expressions or making comments that could cause participants to feel embarrassed.
- Do not call on participants one by one as in a traditional classroom, with an awkward silence when a participant does not know the answer. Instead, ask questions during indi-

vidual feedback.

- Do not lecture about the information that participants are about to read. Give only the introductory explanations that are suggested in the Facilitator Guide. If you give too much information too early, it may confuse participants. Let them read it for themselves in the modules.
- Do not review text paragraph by paragraph. (This is boring and suggests that participants cannot read for themselves.) As necessary, review the highlights of the text during individual feedback or group discussions.
- Avoid being too much of a showman. Enthusiasm (and keeping the participants awake) is great, but learning is most important. Keep watching to ensure that participants understand the materials. Difficult points may require you to slow down and work carefully with individuals.
- Do not treat participants as if they are children. They are adults.
- Do not talk too much. Encourage the participants to talk.
- Do not be shy, nervous, or worried about what to say. This Facilitator Guide will help you remember what to say. Just use it!

How can this FACILITATOR GUIDE help you?

This Facilitator Guide will help you teach the course modules, including the video segments.

For each module, this Facilitator Guide includes the following:

- A list of the procedures to complete the module, 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 exercises,
 - Points to make in group discussions or individual feedback.
- Answer sheets (or possible answer) for most exercises
- A place to write down points to make in addition to those listed in the guidelines

On pages 7 to 9 of this Facilitator Guide is a section titled "Guidelines for All Modules" (session I). This section describes training techniques to use when working with participants during the course.

It also includes important techniques to use when:

- Participants are working individually.
- You are providing individual feedback,
- You are leading a group discussion,
- You are coordinating a role-play

To prepare yourself for each module, you should:

- Read the module and work the exercises,
- Read in this Facilitator Guide all information provided about the module,
- Plan exactly how work on the module will be done and what major points to make,
- Collect any necessary supplies for exercises in the module, and prepare for any demonstrations or role-plays,
- Think about sections that participants might find difficult and questions they may ask,
- Plan ways to help with difficult sections and answer possible questions,
- Think about the skills taught in the module and how they can be applied in participants' own practice.

Ask participants questions that will encourage them to think about using the skills in their practice. Questions are suggested in appropriate places in the Facilitator Guide.

Guidelines for All Modules

When Participants are working

- Look 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.

Kap Questionnaire (for attitude and practices only) PRE Workshop

This questionnaire has been designed for the 'Evaluation of impact of Nursing Training on the knowledge, practices and neonatal outcome'. You have been chosen as one of the respondents to this questionnaire which will serve as baseline information and as future reference to newborn care in your country. We hope that you will answer the questions as best as you can. We assure you that information will be kept confidential and will in no way jeopardize your career.

1. Do you teach mothers to assess baby's temperature by touching feet and abdomen?

[] Yes
[] No

2. Do you practice skin-to-skin contact for stable LBW(<2500gms) babies admitted in the nursery?

[] Yes
[] No

If yes, how does this practice help LBW baby?

3. Do you see babies who are otherwise stable in nursery, developing hypothermia (skin temp < 36°C)?

[] Yes
[] No

If yes, do you try to find out why this has happened in that particular baby?

[] Yes
[] No

If yes, enumerate the possible reasons:

4. How much duration do you hand wash before entering baby care area?

[] 15 seconds
[] 2 minutes
[] 5 minutes

5. Does your unit have a continuous supply of tap water 24 hours a day?

[] Yes
[] No

If no, how do you perform handwashing before entering the nursery?

[] Do not handwash
[] Use tumbler and bucket
[] Other utensils
[] Perform hadwash once inside the unit

6. For inserting an intravenous line , do you wear gloves after hand washing?

- [] Yes
 [] No

7. Do you check with mothers / parents before they enter nursery whether they have active infection or not?

- [] Yes
 [] No

8. Does anyone spend time with mothers explaining the importance of hand washing?

- [] Yes
 [] No

9. Do you provide cord care personally?

- [] Yes
 [] No

If yes, how?

- [] Soak cord with alcohol
 [] Apply Gentian Violet
 [] Apply Mercurochrome
 [] Put antibiotic powder
 [] No application

10. Do you think that a baby should be kept warm after birth?

- [] Yes
 [] No

If yes, how do you keep baby warm?

- [] Use of bulb
 [] Wrap baby in a blanket
 [] Use hot water bottles
 [] Use Warmer or incubator
 [] Skin to skin contact
 [] No measure taken

11. Do you feel that hypothermia causes significant neonatal morbidity and mortality?

- [] Yes
 [] No

If yes, how important is this contribution?

- [] Very strong
 [] Strong
 [] Somewhat
 [] Minimal

12. Which route do you use for recording temperature of sick LBW babies admitted to the nursery?

- [] Rectal
 [] Axillary
 [] Groin
 [] Skin
 [] Mouth
 [] Ear

13. Do you know how to warm a sick LBW baby with severe hypothermia (< 32°C)?

- Yes
 No

If yes, how will you warm the baby?

- Cover adequately so as to prevent ongoing heat loss
 Cover adequately so as to prevent ongoing heat loss and warm quickly to 36.5°C
 Cover adequately so as to prevent ongoing heat loss and warm quickly (up to 34°C) followed by gradual warming (up to 36.°C) (uncover if using radiant warmer for warming)

14. Do you insert IV lines on baby?

- Yes
 No

How do you prepare the skin before inserting an IV line?

15. Do you take the help of another staff while starting an IV line?

- Yes
 No

If yes, does your colleague assisting you help in comforting the baby?

- Yes
 No

If yes, what action does she take?

16. How frequent do you change site of intravenous cannula?

- Daily
 48 hours
 72 hours
 As long as it works

17. What do you advise the initial feeding to be?

- Breastmilk
 formula milk
 sugar water
 Honey
 Others, specify _____

18. How much time do you spend talking to a mother whose baby is admitted in the nursery?

- Not at all
 Only to ask for supplies
 Tell general condition, progress
 Tell general condition, progress and help in expression of breast milk and taking care of the baby

19. Are you happy with your present skills and knowledge on providing care to sick newborn?

- Yes
 No

If no, are you willing to undergo further training to augment your present skills and knowledge?

- Yes
 No

Following are attitude & practice questions. There are no Yes, No Choices

Please circle the appropriate answer for each statement

	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
1. I feel comfortable initiating IV line alone	1	2	3	4	5
2. Handwashing should be done before entering nursery	1	2	3	4	5
3. Skin-to-skin contact with mothers is a good practice for LBW babies	1	2	3	4	5
4. I prefer babies under my care receiving expressed breastmilk rather than formula milk	1	2	3	4	5
5. I feel comfortable using warmer and incubator for premature babies	1	2	3	4	5
6. I feel that I can help a mother initiate breastfeeding who complains of insufficient milk supply	1	2	3	4	5
7. Nursing practices play an important role of prevention of infection in admitted newborn	1	2	3	4	5
8. I feel that a written policy and procedure manual will help my day-to-day practice in the nursery	1	2	3	4	5

Kap Questionnaire (for attitude and practices only) POST Workshop

This questionnaire has been designed for the 'Evaluation of impact of Nursing Training on the knowledge, practices and neonatal outcome'. You have been chosen as one of the respondents to this questionnaire, which will serve as baseline information and as future reference to newborn care in your country. We hope that you will answer the questions as best as you can. We assure you that information will be kept confidential and will in no way jeopardize your career.

1. Will you teach mothers to assess baby's temperature by touching feet and abdomen?
[] Yes
[] No
2. Will you implement practice of skin-to-skin contact for stable LBW(<2500gms) babies admitted in the hospital?
[] Yes
[] No

If yes, how this practice will help LBW baby?

3. After your training do you think that otherwise stable babies in nursery, still will develop hypothermia (skin temp <36° C)?
[] Yes
[] No

If yes, will you try to find out why this has happened in that particular baby?

- [] Yes
[] No

If yes, enumerate the possible reasons:

4. Enumerate duration you will hand wash before entering baby care area?
[] 15 seconds
[] 2 minutes
[] 5 minutes
5. Will you ensure a continuous supply of tap water 24 hours a day in your baby care area?
[] Yes
[] No

If no, how do you propose handwashing before entering the nursery?

- [] Do not handwash
[] Use tumbler and bucket
[] Other utensils
[] Perform handwash once inside the unit

6. For inserting an intravenous line, will you wear gloves after hand washing?
[] Yes
[] No
7. It is important to check with mothers / parents before they enter nursery whether they have active infection or not?
[] Yes
[] No
8. Will you spend time with mothers explaining the importance of hand washing?
[] Yes
[] No
9. Will you provide cord care personally?
[] Yes
[] No

If yes, how you propose to do this?

- [] Soak cord with alcohol
[] Apply Gention Violet
[] Apply Mercurochrome
[] Put antibiotic powder
[] No application

10. Will you ensure that a baby is kept warm after birth?
[] Yes
[] No

If yes, how do you will keep baby warm?

- [] Use of bulb
[] Wrap baby in a blanket
[] Use hot water bottles
[] Use Warmer or incubator
[] Skin to skin contact
[] No measure taken

11. Do you feel that hypothermia causes significant neonatal morbidity and mortality?
[] Yes
[] No

If yes, how important is this contribution?

- [] Very strong
[] Strong
[] Somewhat
[] Minimal

12. Which route you will use for recording temperature of sick LBW babies admitted to the nursery?
- Rectal
 - Axillary
 - Groin
 - Skin
 - Mouth
 - Ear

13. Do you know how to warm a sick LBW baby with severe hypothermia (< 32oC)?
- Yes
 - No

If yes, how will you warm the baby?

- Cover adequately so as to prevent ongoing heat loss
- Cover adequately so as to prevent ongoing heat loss and warm quickly to 36.5° C
- Cover adequately so as to prevent ongoing heat loss and warm quickly (up to 34°C) followed by gradual warming (up to 36.oC) (uncover if using radiant warmer for warming)

14. Do you feel confident in inserting IV lines on baby?
- Yes
 - No

How do you prepare the skin before inserting an IV line?

15. Will you take the help of another staff while starting an IV line?
- Yes
 - No

If yes, will you ensure that your colleague assisting you help in comforting the baby?

- Yes
- No

If yes, what action does she/he take?

16. How frequently will you change site of intravenous cannula?
- Daily
 - 48 hours
 - 72 hours
 - As long as it works

17. What will you advise the initial feeding to be?
- Breastmilk
 - formula milk
 - sugar water
 - Honey
 - Others, specify _____
18. How much time do you propose spending talking to a mother whose baby is admitted in the nursery?
- Not at all
 - Only to ask for supplies
 - Tell general condition, progress
 - Tell general condition, progress and help in expression of breast milk and taking care of the baby
19. Are you happy after the course with your present skills and knowledge on providing care to sick newborn?
- Yes
 - No
- If no, are you willing to undergo further training to augment your present skills and knowledge?
- Yes
 - No

Following are attitude & practice questions. There are no Yes, No Choices

Please circle the appropriate answer for each statement

	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
1. I feel comfortable initiating IV line alone	1	2	3	4	5
2. Handwashing should be done before entering nursery	1	2	3	4	5
3. Skin-to-skin contact with mothers is a good practice for LBW babies	1	2	3	4	5
4. I would prefer babies under my care receiving expressed breastmilk rather than formula milk	1	2	3	4	5
5. I feel comfortable using warmer and incubator for premature babies	1	2	3	4	5
6. I feel that I can help a mother initiate breastfeeding who complains of insufficient milk supply	1	2	3	4	5
7. I believe Nursing practices play an important role of prevention of infection in admitted newborn	1	2	3	4	5
8. I feel that a written policy and procedure manual will help my day-to-day practice in the nursery	1	2	3	4	5

**Essential Newborn Nursing
Learner's Course**

Course Schedule

Hours	Activities
Day 1	
09.00 - 09.30	Registration
09.30 - 10.00	Inauguration
10.00 - 10.30	Introduction to the course and administrative tasks Pre-test (Knowledge & Practices)
10.30 - 11.00	Tea Break
11.00 - 12.30	MODULE I - Kangaroo Mother Care
12.30 - 13.30	Lunch Break
13.30 - 15.00	MODULE II - Thermoregulation
15.00 - 15.30	Tea Break
15.30 - 17.00	MODULE III - Feeding of Healthy & Low Birth Weight Babies
Day 2	
09.00 - 10.00	MODULE III - Feeding of Healthy & Low Birth Weight Babies (contd.)
10.00 - 13.00	Clinical Demonstration
13.00 - 14.00	Lunch Break
14.00 - 15.30	MODULE IV - Prevention of Infection
15.30 - 16.00	Tea Break
16.00 - 17.00	MODULE V - Procedures in Nursery-I
Day 3	
09.00 - 11.30	MODULE VI - Neonatal Resuscitation
11.30 - 11.45	Tea Break
11.45 - 13.45	Clinical Demonstration
13.45 - 14.15	Lunch Break
14.15 - 16.00	MODULE VII - Management of the 'Normal', 'At Risk & Sick Neonate' Procedure-II
16.00 - 16.30	Valedictory Function
16.30 - 17.00	High Tea

Day - 2 Programme

Time	Ward	Class Room
09.00 - 10.00 AM	-	A, B, C, (Module III contd.)
10.00 - 11.30 AM	A	B & C (Module IV Asepsis)
11.30 - 12.00 AM	Tea Break	
12.00 - 13.30 PM	B	A & C (Module Asepsis & Procedures I)
13.30 - 14.30 PM	Lunch Break	
14.30 - 16.00 PM	C	A (Procedure I)B (Procedure I)
16.00 - 16.30 PM	Tea Break	
16.30 - 17.30 PM	-	A,B,C (Procedure II)

Workshop On Essential Newborn Nursing

Feedback Questionnaire

NB: Please do not write your name: Put (✓) on your responses.

What is nature of your responsibility in your unit?

1. Did the programme meet your expectation?
(a) Very much (b) Somewhat (c) No (d) Not sure
2. Did the Workshop improve your knowledge?
(a) Very much (b) Somewhat (c) No (d) Not sure
3. Did the workshop improve your skills?
(a) Very much (b) Somewhat (c) No (d) Not sure
4. Did the programme allow for audience faculty interaction?
(a) Very much (b) Somewhat (c) No (d) Not sure
5. Indicate by putting (✓)

Session	Excellent	V. Good	Good	Fair	Poor
KMC					
Thermal protection					
Feeding of normal and LBW babies					
Resuscitation of newborn					
Clinical demonstration I					
Prevention of infection					
Clinical demonstration II					
Procedures I					
Procedures II					
Monitoring of normal, at-risk, sick newborn					

6. Specify other resources material that should have been provided?

7. Did you find the arrangement satisfactory?
(a) Very much (b) Somewhat (c) No (d) Not sure

8. Indicate below the problems in arrangements, if any, faced by you?

9. How do you propose to use the knowledge/skills gained in the workshops in improving your services:

10. In your opinion, what other areas of new born care need to be taken up for skill-oriented workshops

11. Will you use module for making change in your practice in your hospital?

Yes

No

Not sure

12. What single key message you carry home after this workshop?

13. Any other suggestions/comments:
