Forward

The single most powerful conclusion from the analysis of child survival and intervention packaging is the realization of the potential of newborn care interventions in reducing child mortality (Lawn, 2005; Darmstadt et al., 2005). Childhood mortality can be reduced by eliminating neonatal death from preventable causes i.e. severe infection, asphyxia and preterm and low birth weight (Bang et al., 2005).

In Africa, about 265,000 women die each year from complications of pregnancy and childbirth. In addition, around 1.12 million newborns die before they complete their first month of life and another one million babies are stillborn every year. It is believed that there are a lot more maternal and neonatal deaths and stillbirths occurring at home - unseen and uncounted in official statistics. Despite the high maternal and neonatal mortality, the current provision of care in the first hours, days and weeks of life is low in most Sub-Saharan African countries regardless of whether babies are born in the health facility or at home.

In Kenya, maternal and newborn mortality is a public health concern. Results of the Kenya Demographic and Health Survey (KDHS 2008/09) showed that the Maternal Mortality Ratio is 488/100,000, Infant Mortality Rate is 52/1000 and Neonatal Mortality Rate is 31/1000. Contrary to results observed in previous demographic surveys, urban-rural differentials for post neonatal and infant mortality show a reversed pattern, with mortality in urban areas exceeding that in rural areas. Infant mortality is 9 percent higher in urban areas (63 per 1,000) than in rural areas (58 per 1,000) (KNBS, 2008).

Evidence-based high impact interventions to reduce neonatal mortalities have been well articulated in this manual. The purpose of this Essential Newborn Care training manual is to build capacity of health service providers in the current newborn care management protocols. In order to keep abreast with the rapidly changing knowledge and evidence on newborn health, it is important that these manuals are updated regularly.

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Abbreviations

APGAR	Activity, Pulse, Grimace, Appearance, and Respiration.
ARV	Anti Retroviral Therapy
ARV	Anti Retroviral
BCG	Bacillus Calmette-Guérin
BVM	Baby Valve Mask
CP	Clinical Practice
CPR	Cardiopulmonary Resuscitation
DCAH	Division of Child & Adolescent Health
DEPT	Department
DFH	Department of family Health
DRH	Division of Reproductive Health
ECC	Emergency Cardiac Care
EPI	Expanded programme on immunization
G6PD	Glucose-6-phosphate dehydrogenase deficiency
HAART	Highly Active antiretroviral Therapy
HBB	Helping Babies Breathe
INH	Isoniazid
IU	International Units
IYCF	Infant and Young Child feeding
LBW	Low Birth Weight
MOMS	Ministry of Medical Services
MOPHS	Ministry of Public Health and Sanitation
NBU	Newborn Unit
NG TUBE	Nasogastric Tube
OPV	Oral Polio Vaccine
PCV	Packed cell volume
PMTCT	Prevention of Mother To Child Transmission
TEO	Tetracycline eye ointment
VDRL	Venereal disease reactive
WHO	World Health Organisation

Contents Page

SESSION 1:

UNIVERSAL STANDARD PRECAUTION FOR INFECTION PREVENTION

Learning Objectives

To be familiar with precautions that will protect the mother, baby, health worker and the community from infections.

1. Hand washing

- Wash hands with soap and water:

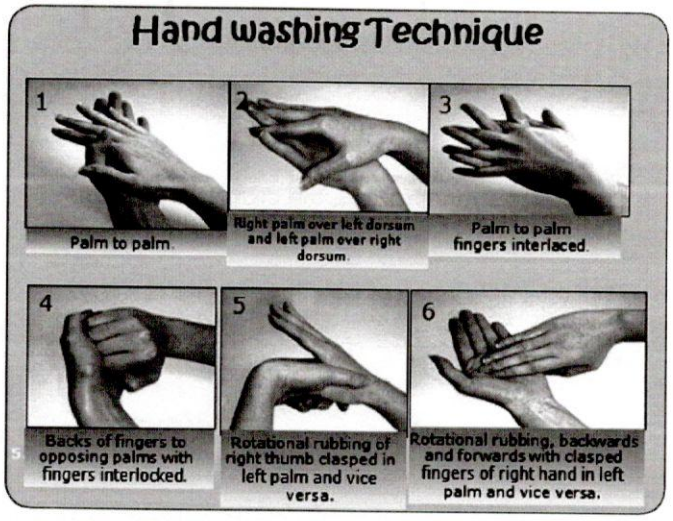
  I. Before and after caring for a woman or newborn, and before any treatment procedure.

  II. Whenever the hands (or any other skin area) are contaminated with blood or other body fluids.

  III. After removing the gloves, because they may have holes.

  IV. After changing soiled bed sheets or clothing.

- Keep nails short.



NB// Do not forget to include the wrists and dry well using paper towels.

2. Wearing gloves

Wear sterile gloves when performing vaginal examination, delivery, cord cutting, repair of episiotomy or tear, blood drawing.

- Wash hands before gloving
- Wear long sterile gloves for manual removal of placenta.
- Wear clean gloves when handling and cleaning instruments.
  - Handling contaminated waste.
  - Cleaning blood and body fluid spills.

How to put on sterile gloves

Gloves are cuffed to make it easier to put them on without contaminating them. When putting on sterile gloves, remember that the first glove should be picked up by the cuff only. The second glove should then be touched only by the other sterile glove.

Step 1
Prepare a large, clean, dry area for opening the package of gloves. Either open the outer glove package and then perform a surgical scrub or perform a surgical scrub and ask someone else to open the package of gloves for you.

Step 2
Open the inner glove wrapper, exposing the cuffed gloves with the palms up.

Step 3
Pick up the first glove by the cuff, touching only the inside portion of the cuff (the inside is the side that will be touching your skin when the glove is on).

Step 4
While holding the cuff in one hand, slip your other hand into the glove. (Pointing the fingers of the glove toward the floor will keep the fingers open.) Be careful not to touch anything, and hold the gloves above your waist level.

NOTE: If the first glove is not fitted correctly, wait to make any adjustment until the second glove is on. Then use the sterile fingers of one glove to adjust the sterile portion of the other glove.

Step 5
Pick up the second glove by sliding the fingers of the gloved hand under the cuff of the second glove. Be careful not to contaminate the gloved hand with the ungloved hand as the second glove is being put on.

3. Protect yourself from blood and other body fluids during deliveries

Wash hands, cover any cuts, abrasions or broken skin with a waterproof bandage then wear gloves. Take care when handling any sharp instruments (use good light); and practice safe sharps disposal.

- Wear a long apron made from plastic or other fluid resistant material, and shoes.
- Use protective eye wear to protect your eyes from splashes of blood. Practice safe disposal of sharps objects.

Keep a safety box/ puncture resistant container nearby.

- Use each needle and syringe only once.
- Do not recap, bend or break needles after giving an injection.
- Drop all used (disposable) needles, plastic syringes and blades directly into this container, without recapping, and without passing to another person.
- Send for incineration when the container is three-quarters full.

4. Practice safe waste disposal

Dispose of placenta or blood, or body fluid contaminated items, in leak-proof containers.

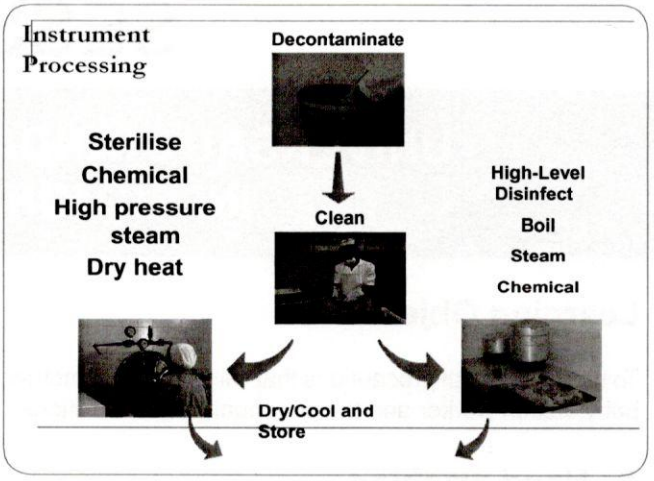
- Incinerate or bury contaminated solid waste.
- Wash hands, gloves and containers after disposal of infectious waste.
- Pour liquid waste down a drain or flushable toilet.
- Wash hands after disposal of infectious waste.
- Burn waste papers

5. Deal with contaminated laundry

- Collect clothing or sheets stained with blood or body fluids and keep them separately from other laundry, wearing gloves or use a plastic bag. DO NOT touch them directly.
- Remove the big particles.
- Decontaminate, clean with soap and rinse.

6. Sterilize and clean contaminated equipment

- Decontaminate, disinfect, clean, rinse and do the drying any equipment which comes into contact with intact skin (according to instructions).
- Use bleach for cleaning bowls and buckets, and for blood or body fluid spills.



NB: Only boil items that cannot be autoclaved e.g. feeding cups

If using heavy duty gloves for cleaning, decontaminate, wash with soap and water then rinse.

How to dilute chrlorine solution for decontamination (0.5%)

Fomular

$$\left(\frac{\text{Available strength}}{\text{Desired strength}}\right) - 1$$

Example:
If available strength is 4%, the dilution will be (4/0.5) - 1 = 7

Dilution – 1:7 (1 part of Chlorine: 7 parts of water)

SESSION 2:

COMMUNICATION SKILLS

Session Objectives

At the end of this session participants will be able to:

1. Use good communication skills.
2. To explain the importance of good communication skills

Session Content

- Communication is a process by which information is exchanged between individuals through a common system of symbols or signs or behaviour. It is a technique of exchanging ideas effectively

- Communication is universal. We use it in all aspects of our everyday lives. It is the basis of all the relationships we have with our families, our friends, our colleagues, those we care for and the wider world.

- The power of communication through language cannot be overestimated.

There are two types of communication verbal and no- verbal.

- Verbal communication (spoken language) can have positive and negative effects on us. It can excite us, frighten us and influence our moods, the way we respond to people and the way we behave.

- Communication is much more than just spoken language; it is all the other ways we relate to the world around us, that is, the "nonverbal" language we use. For example, our facial expressions, our movements and how we use touch. Our "body language" alone can indicate if we are happy, angry, bored, considerate, interested or not interested in something.

- As health workers it is vital that we understand the "power" of "verbal" and "non-verbal" communication in relation to our work. We need to learn certain "skills" of communication to help us interact with new mothers, their family and their friends, and with colleagues.

- We need to become effective communicators. There are a number of simple ways to achieve this.

- If we make people feel "good" they are likely to be more confident, more cooperative, accept advice and give us information. "Praising" something about what a mother or father does for their baby can help to gain their confidence. For example, to tell a mother of a sick baby, "You made a good decision to bring your baby to the hospital so that we can help him," will make the mother feel better than saying to her, "Why didn't you bring your baby to us before?"

Conducting an examination

The importance of communication skills

- You will see two role plays of a health worker carrying out an examination of a baby just before he goes home.

Listen to, and watch for:

- The questions the health worker asks the mother
- The information the mother gives to the health worker
- The way the health worker treats the mother and baby
- The 'non-verbal' body language the health worker uses

Role play 1

Dialogue
The action takes place in a postnatal ward at the side of Maria's bed. There are two chairs near the bed.

Health Worker (HW): *Do not look up; continue to read the baby's notes as you approach the mother's bed, then look up briefly.*

The mother, Maria, stands up.
The Health Worker gives instructions and asks the questions quickly, as if she is in a hurry.

HW: *"Undress the baby."*

HW: *(Do not look at the mother.) "How old is the baby?"*

Mother: *"Almost 1 day."*

HW: *"Are you breastfeeding?"*

M: *"Yes."*

HW: *(Continue to not look at the mother.) "Have you fed your baby in the last hour?"*

M: *"No."*

HW: *"Tell me when you feed next time. I need to see you breastfeed. Are you having any difficulty?"*

M: *"Not really."*

HW: *"How many times has your baby breastfed in the last 24 hours?"*
(Looks up at the mother and baby for the first time.)

M: *"About 3 times."*

HW: *(Reach out and feel the baby's feet.) "You can sit down if you wish. Hmm! Your baby feels quite cold.*
Is your baby satisfied with the feeds?" (Look at the baby's eyes.)

M: *"I think so." (Look at the baby's abdomen.)*

HW: *"Have you given your baby any other foods or drink?" (Turns away from the mother to write in the baby's notes. Look at the baby moving and then feel the head and body.)*

M: *"No."*

HW: *"Has your baby passed meconium yet?" (Look at the umbilicus.) A long pause.*

M: *(Look puzzled.) "I'm sorry. What is that?"*

HW: *"Black, sticky stool."*

M: *"Oh! Yes, just after he was born. Is that normal?"*

HW: *"Yes. How do your breasts feel?"*

M: *"A bit sore."*

HW: *(Open the mother's blouse and look at her breasts and feel them.) "Hmm! A bit red, but they are soft. All mothers get sore in the first few days, that's normal" (Looks at her watch, obviously rushed.) "Have you any concerns about your baby?"*

M: *"Not really."*

HW: *"Good, come back in three to seven days and again in six weeks' time to get your baby immunized.*
Arrange a date with the nurse."

*The **HW's** mobile telephone rings and she rushes away.*

Write down:

- Two things you learned about the mother.
- Two things you learned about the baby.
- Any examples of technical language you can remember the health worker used and what the mother did not understand.
- Anything you liked or disliked about the way the health worker behaved towards the mother.

Role play 2

Dialogue

Health Worker (HW): *(Looking at Jonah's notes as she approaches Maria's bed.)*
The mother, Maria, stands up.

HW: *(Look up at the mother, smile at her and her baby.) "Hello, Maria. I'm Dr Bora. Do sit down. I've come to examine Jonah before you go home. Is this a convenient time? What a lovely baby you have."*

M: *(Nod your head to show this is a convenient time and smile at the* ***HW.****)*

HW: *(Touch the mother gently on the arm (if this is appropriate). Look at the mother as you ask): "Do you mind if I sit down?"*

M: *(Nods her head.)*

HW: *"How is Jonah?" (Look at the way the baby moves. Gently touch his cheek.)*

M: *"He seems well."*

HW: *(Eye contact with the mother.) "Good! How old is he now?"*

M: *"Almost 1 day."*

HW: *"I see he was a good weight when he was born, 3.5 kilograms, and he was well at birth. How are you feeding him now?"*

M: *"I'm breastfeeding him."*

HW: *"Good, that will help keep you both healthy. When did you last feed Jonah?"*

M: *"About half an hour ago."*

HW: *"Are you or Jonah having any difficulty with feeding?"*

M: *"Not really." (Then hesitantly): "I'm a bit sore."*

HW: *"When Jonah feeds next time I would like to watch, if you do not mind, and then maybe we can find out why you are sore."*

M: *"Thank you. Jonah is my first baby, so I've never breastfed before."*

HW: *"It takes a few days, sometimes a few weeks, to establish breastfeeding. You seem to be managing very well up to now. How many times has Jonah fed since he was born?"*

M: *"Three times."*

HW: *"How does he behave after you have feed him?"*

M: *"He just goes to sleep."*

HW: *"Has Jonah had any special foods or drinks since he was born?"*

M: *"No, not really. He had some honey … but all babies have that, don't they?"*

HW: *"It is true that a lot of babies are given honey. It is better for Jonah if he only has your milk from now on and nothing else. You should feed him for six months without giving him any other foods. Your milk is all the food he needs right now."*

M: *"Jonah had quite a long time between his second feed and this last feed. Is that alright?"*

HW: *"Jonah is only 15-hours-old and is doing very well. Some babies on the day they are born only feed five or six times. After the first day, babies often feed about eight times in 24 hours."*

M: *"So three times up to now is alright?"*

HW: *"Yes, that is good. You said your breasts felt a bit sore? May I look at them please?" (Examining the mother's breasts): "Yes, your nipples are red, they must be very sore. We must look at how Jonah feeds, I'm sure we can help him to breastfeed so that you will not get so sore."*

M: *"Thank you, I will be very happy if you can help me."*

HW: *(Mobile telephone rings. Look at it and put it away.) "I am sorry about that. May I just examine your breasts?"*
M: *(Nods.)*

HW: *(Gently feel both breasts.) "They are soft, which is good. Over the next two days you will probably notice that your breasts may feel fuller and harder. Just keep feeding Jonah as often and for as long as he wants, both in the day and at night, and you won't have any problems. You may also notice that your milk looks thinner and there is more of it, this is normal. Your milk is always just right for your baby." "Do you have any other concerns about feeding or anything else?"*

M: *"Not really, except when he passes stools. (Local terminology, e.g. poops?) It's black. Is that normal?"*

HW: *"Yes. In the next two days you will notice the colour changes to brown and then to yellow, when it will be very soft as well. I would like you to bring Jonah back to see me in seven days when you come for your first check up after delivery (postnatal examination). Can you also make an appointment with the nurse to bring him back in six weeks so that we can give him his second immunization? But bring him back to me at any time if you are worried about him." (Looking in her desk drawer.) "Maria, have you been given these two information sheets?" (**HW** gives Maria the "Breastfeeding" and the "Care for the Baby after Birth" information sheets.)*

M: *"No, I've not seen them before."*

HW: *"The form on breastfeeding will help you. The other sheet, on care of your baby, gives you information on everyday care and a list of the 'danger signs'. If Jonah has any of these signs, if he feels cold or too hot or has difficulty breathing, bring him straight to the hospital. I suggest you read the sheets before you go home."*

Write down:

- Two things you learned about the mother.
- Two things you learned about the baby.
- Any technical terms used.
- Anything you liked or disliked about the way the health worker behaved towards the mother.

The importance of asking the "right" questions

- The purpose of asking questions is to obtain information. Sometimes this is to confirm information already obtained, when it may be correct to ask questions that have "yes" or "no" answers. This type of question is called a "closed" question.

- To obtain more detailed information questions should be asked so that the person answering has the opportunity to give a full and detailed answer. Questions which give this kind of information often begin with words such as "how", "why", "where", "what" or "when". These questions are called "open" questions because they provide a person the opportunity to give relevant information.

Giving bad news

- Sometimes it is necessary to give a mother or her family bad news. Maybe the baby is ill, he may need to be referred to another hospital, he may have died, or maybe there is a problem with the mother.

- Defining what "bad" news is depends upon what it means to the person receiving the news. Therefore be aware that a health worker may not consider some information as "bad news" but it may have important consequences for a mother or a family. For example, if a baby is jaundiced and needs phototherapy treatment and has to stay in hospital but a mother has to return to her home several days away from the hospital.

- If information we have to give to a mother or family can have negative consequences for them, be aware that the way we communicate the information can help them to accept what has happened.

- Depending upon what the bad news is, if a mother is alone, arrange for a relative or friend to come and be with her.

- Where we give the news is important

- After what has been covered so far in this session how would you approach a mother to give her bad news about her baby's condition?

"Non-verbal" skills to use:

- Being kind and gentle in actions.
- If the mother is sitting down, sit down with her.
- Touch her appropriately.
- Do not leave the mother alone.
- Allow the mother to react in her own way.
- Let her touch or hold the baby.
- Let the mother or father and other members of the family be with the baby

"Verbal" skills to use:

- Give a simple clear explanation of what is wrong. Do not use technical terms.
- Make sure the mother understands what you are telling her by using "open" questions to encourage her to repeat back to you what you have told her.
- Give her time to ask questions.
- Speak softly.
- Respect her cultural beliefs and customs.
- Ask if there is anyone near to the hospital/clinic who can be with her.
- Express regret.

Role play 3 (optional)

Giving bad news

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

Place: A clinic in the hospital.
Situation: A mother has brought her 4-day-old baby boy for a sick newborn visit.
He has been taken to the emergency room.

Problem: The baby:
- has breathing difficulties with rapid respirations and chest in drawing;
- feels very hot;
- Is not feeding well after the first two days.

The mother:
- Gave birth alone at home.
- She lives a 5-hours' walk away from the hospital.
- She had a long labour.

Scene:
The mother is sitting in the out-patients clinic with other patients.
- A health worker comes to her.

The (bad) news:
- The baby has died.
- Treatment was given.

Instructions to the mother and health worker

- "Mother" to sit in front row of the class with participants as if in clinic.
- Give the "mother" the news about her baby while the mother is sitting.
- Do not sit down.
- Give the basic information only then leave.

Giving bad news after a baby's death

- Inform the parents as soon as possible after the baby's death.
- Show the baby to the mother; give the baby to the mother to hold, where culturally appropriate.
- Offer the parents and family to be with the dead baby in privacy as long as they need.
- Discuss with them the events before the death and the possible causes of death.
- Advise the mother on breast care
- Counsel on appropriate family planning method
- Provide certificate of death and notify authorities as required.

QUESTIONS:

COMMUNICATION SKILLS

1. *Write down at least three things that you can say to a mother to make her feel GOOD?*

2. *Write down at least three things that you can say to a mother that could make her feel BAD?*

If we make people feel good they are likely to be more confident, more cooperative and accept advice and give us information. Praising something about what a mother or father does for their baby can help to gain their confidence. For example, to tell a mother of a sick baby, "You made a good decision to bring your baby to the hospital so that we can help him," will make the mother feel much better than to say to her, "You should have brought your baby to us before now."

3. *Describe two "non-verbal" ways you can make a mother feel you are interested in her.*

4. *Describe two "non-verbal" ways you can make a mother feel you are not interested in what she is saying to you.*

5. *The purpose of asking questions is to obtain information. If this is to confirm information already obtained, then it may be correct to ask questions that have "yes" or "no" as answers.*

6. *What is this type of question called?*

7. *To obtain more detailed information, questions should be asked so that the person answering has the opportunity to give a full and detailed answer. Questions which give this kind of information often begin with words such as "how", "why", "where", "what" and "when". These questions are called open questions, because they give a person the opportunity to give relevant information.*

8. *Will you learn more information from closed or open questions?*

9. *Write down three examples of open questions.*

10. *Write down three examples of closed questions.*

SESSION 3:

IMMEDIATE CARE OF THE NEWBORN

Learning Objectives

- To describe and carry out routine care of a newborn baby at the time of birth and prevent complications
- Demonstrate evidence based immediate care of the newborn baby
- Teach the mother how to look after her baby and what to do if her baby has any health problems

Content

1. Basic needs of the newborn are:
- To breathe
- To be warm
- To be fed
- To be protected

2. What should be done for a baby at the time of birth and in what order?

3. Call out time of birth.
- Deliver baby onto the mother's abdomen.
- Dry the baby with a warm, clean towel or piece of cloth.
- Wipe eyes.
- Assess the baby's breathing while drying.
- Clamp and cut the umbilical cord.
- Put the baby between the mother's breasts for skin-to-skin contact.
- Place an identity label on the baby.
- Cover the mother and baby with a dry clean warm cloth.
- Cover the baby's head.

4. Cord Care:
- Change gloves. If not possible, wash gloved hands.
- Clamp and cut the cord:
- Put ties tightly around the cord at 2cm and 5cm from the baby's abdomen.
- Cut between the ties with a sterile instrument.
- Observe for oozing of blood.
- Do not apply any substance to the stump
- Do not bandage or bind the stump

5. Eye Care

A baby's eyes should be wiped as soon as possible after birth and an antimicrobial eye medicine should be applied within 1 hour of birth.

- 1% tetracycline ointment

Is the drug which can be used to prevent infection at the time of birth;

It should not be washed away

6. Skin-to-skin contact
- A baby's skin temperature falls within seconds of being born.
- If the temperature continues to fall the baby will become ill (hypothermia) and may die.
- This is why a baby MUST be dried immediately after birth and delivered onto a warm towel or piece of cloth, and loosely wrapped before being placed (naked) between the mother's breasts.
- It also explains why the mother and baby should be covered with a warm and dry cover if the room temperature is lower than 25° C.
- The position of the baby between the mother's breasts ensures the baby's temperature is kept at the correct level for as long as the skin contact continues.
- This first skin-to-skin contact should last uninterrupted for at least one hour after birth or until after the first breastfeed.
- Skin-to-skin contact can re-start at any time if the mother and baby have to be parted for any treatment or care procedures.

7. Early initiation of breastfeeding

Help the mother to initiate breastfeeding within 1 hour, when baby is ready

- After birth, let the baby rest comfortably on the mother's chest in skin-to-skin contact.
- Tell the mother to help the baby to her breast when the baby seems to be ready, usually within the first hour. Signs of readiness to breastfeed are:
  - Baby looking around/moving.
  - Mouth open.
  - Searching.
- Check that position and attachment are correct at the first feed. Offer to help the mother at any time.
- Let the baby release the breast by her/himself; then offer the second breast.
- If the baby does not feed in 1 hour, examine the baby to rule out any problem.
- If healthy, leave the baby with the mother to try later. Assess in 3 hours, or earlier if the baby is small.
- If the mother is ill and unable to breastfeed, help her to express breast milk and feed the baby by cup.
- If mother cannot breastfeed at all, use one of the following options:
  - home-made or commercial formula

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DIRECTOR OF MEDICAL SERVICES

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Abbreviations

APGAR	Activity, Pulse, Grimace, Appearance, and Respiration.
ARV	Anti Retroviral Therapy
ARV	Anti Retroviral
BCG	Bacillus Calmette-Guérin
BVM	Baby Valve Mask
CP	Clinical Practice
CPR	Cardiopulmonary Resuscitation
DCAH	Division of Child & Adolescent Health
DEPT	Department
DFH	Department of family Health
DRH	Division of Reproductive Health
ECC	Emergency Cardiac Care
EPI	Expanded programme on immunization
G6PD	Glucose-6-phosphate dehydrogenase deficiency
HAART	Highly Active antiretroviral Therapy
HBB	Helping Babies Breathe
INH	Isoniazid
IU	International Units
IYCF	Infant and Young Child feeding
LBW	Low Birth Weight
MOMS	Ministry of Medical Services
MOPHS	Ministry of Public Health and Sanitation
NBU	Newborn Unit
NG TUBE	Nasogastric Tube
OPV	Oral Polio Vaccine
PCV	Packed cell volume
PMTCT	Prevention of Mother To Child Transmission
TEO	Tetracycline eye ointment
VDRL	Venereal disease reactive
WHO	World Health Organisation

Contents Page

SESSION 1:

UNIVERSAL STANDARD PRECAUTION FOR INFECTION PREVENTION

Learning Objectives

To be familiar with precautions that will protect the mother, baby, health worker and the community from infections.

1. Hand washing

- Wash hands with soap and water:

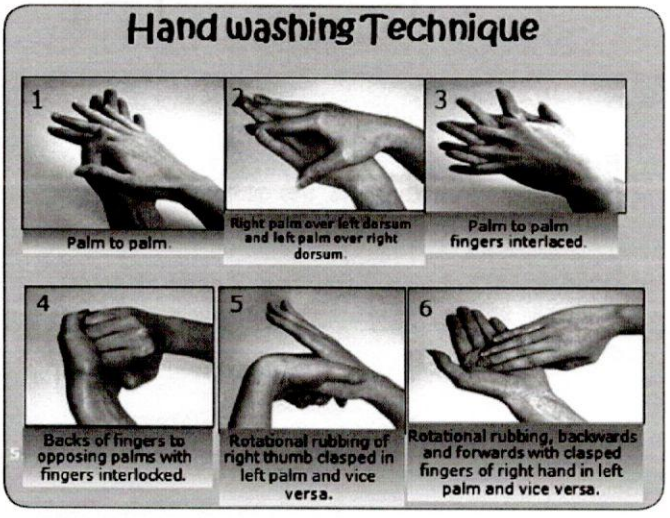
  I. Before and after caring for a woman or newborn, and before any treatment procedure.

  II. Whenever the hands (or any other skin area) are contaminated with blood or other body fluids.

  III. After removing the gloves, because they may have holes.

  IV. After changing soiled bed sheets or clothing.

- Keep nails short.



NB// Do not forget to include the wrists and dry well using paper towels.

2. Wearing gloves

Wear sterile gloves when performing vaginal examination, delivery, cord cutting, repair of episiotomy or tear, blood drawing.

- Wash hands before gloving
- Wear long sterile gloves for manual removal of placenta.
- Wear clean gloves when handling and cleaning instruments.
  - Handling contaminated waste.
  - Cleaning blood and body fluid spills.

How to put on sterile gloves

Gloves are cuffed to make it easier to put them on without contaminating them. When putting on sterile gloves, remember that the first glove should be picked up by the cuff only. The second glove should then be touched only by the other sterile glove.

Step 1
Prepare a large, clean, dry area for opening the package of gloves. Either open the outer glove package and then perform a surgical scrub or perform a surgical scrub and ask someone else to open the package of gloves for you.

Step 2
Open the inner glove wrapper, exposing the cuffed gloves with the palms up.

Step 3
Pick up the first glove by the cuff, touching only the inside portion of the cuff (the inside is the side that will be touching your skin when the glove is on).

Step 4
While holding the cuff in one hand, slip your other hand into the glove. (Pointing the fingers of the glove toward the floor will keep the fingers open.) Be careful not to touch anything, and hold the gloves above your waist level.

NOTE: If the first glove is not fitted correctly, wait to make any adjustment until the second glove is on. Then use the sterile fingers of one glove to adjust the sterile portion of the other glove.

Step 5
Pick up the second glove by sliding the fingers of the gloved hand under the cuff of the second glove. Be careful not to contaminate the gloved hand with the ungloved hand as the second glove is being put on.

3. Protect yourself from blood and other body fluids during deliveries

Wash hands, cover any cuts, abrasions or broken skin with a waterproof bandage then wear gloves. Take care when handling any sharp instruments (use good light); and practice safe sharps disposal.

- Wear a long apron made from plastic or other fluid resistant material, and shoes.
- Use protective eye wear to protect your eyes from splashes of blood. Practice safe disposal of sharps objects.

Keep a safety box/ puncture resistant container nearby.

- Use each needle and syringe only once.
- Do not recap, bend or break needles after giving an injection.
- Drop all used (disposable) needles, plastic syringes and blades directly into this container, without recapping, and without passing to another person.
- Send for incineration when the container is three-quarters full.

4. Practice safe waste disposal

Dispose of placenta or blood, or body fluid contaminated items, in leak-proof containers.

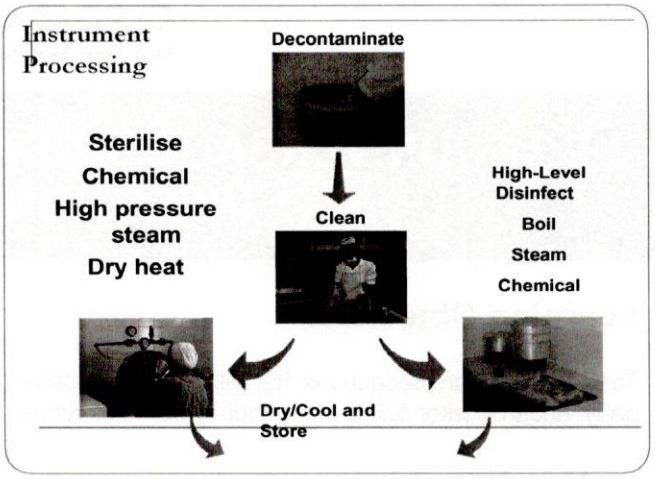
- Incinerate or bury contaminated solid waste.
- Wash hands, gloves and containers after disposal of infectious waste.
- Pour liquid waste down a drain or flushable toilet.
- Wash hands after disposal of infectious waste.
- Burn waste papers

5. Deal with contaminated laundry

- Collect clothing or sheets stained with blood or body fluids and keep them separately from other laundry, wearing gloves or use a plastic bag. DO NOT touch them directly.
- Remove the big particles.
- Decontaminate, clean with soap and rinse.

6. Sterilize and clean contaminated equipment

- Decontaminate, disinfect, clean, rinse and do the drying any equipment which comes into contact with intact skin (according to instructions).
- Use bleach for cleaning bowls and buckets, and for blood or body fluid spills.



NB: Only boil items that cannot be autoclaved e.g. feeding cups

If using heavy duty gloves for cleaning, decontaminate, wash with soap and water then rinse.

How to dilute chrlorine solution for decontamination (0.5%)

Fomular

$$\left(\frac{\text{Available strength}}{\text{Desired strength}}\right) - 1$$

Example:
If available strength is 4%, the dilution will be (4/0.5) - 1 = 7

Dilution – 1:7 (1 part of Chlorine: 7 parts of water)

SESSION 2:

COMMUNICATION SKILLS

Session Objectives

At the end of this session participants will be able to:

1. Use good communication skills.
2. To explain the importance of good communication skills

Session Content

- Communication is a process by which information is exchanged between individuals through a common system of symbols or signs or behaviour. It is a technique of exchanging ideas effectively

- Communication is universal. We use it in all aspects of our everyday lives. It is the basis of all the relationships we have with our families, our friends, our colleagues, those we care for and the wider world.

- The power of communication through language cannot be overestimated.

There are two types of communication verbal and no- verbal.

- Verbal communication (spoken language) can have positive and negative effects on us. It can excite us, frighten us and influence our moods, the way we respond to people and the way we behave.

- Communication is much more than just spoken language; it is all the other ways we relate to the world around us, that is, the "nonverbal" language we use. For example, our facial expressions, our movements and how we use touch. Our "body language" alone can indicate if we are happy, angry, bored, considerate, interested or not interested in something.

- As health workers it is vital that we understand the "power" of "verbal" and "non-verbal" communication in relation to our work. We need to learn certain "skills" of communication to help us interact with new mothers, their family and their friends, and with colleagues.

- We need to become effective communicators. There are a number of simple ways to achieve this.

- If we make people feel "good" they are likely to be more confident, more cooperative, accept advice and give us information. "Praising" something about what a mother or father does for their baby can help to gain their confidence. For example, to tell a mother of a sick baby, "You made a good decision to bring your baby to the hospital so that we can help him," will make the mother feel better than saying to her, "Why didn't you bring your baby to us before?"

Conducting an examination

The importance of communication skills

- You will see two role plays of a health worker carrying out an examination of a baby just before he goes home.

Listen to, and watch for:

- The questions the health worker asks the mother
- The information the mother gives to the health worker
- The way the health worker treats the mother and baby
- The 'non-verbal' body language the health worker uses

Role play 1

Dialogue
The action takes place in a postnatal ward at the side of Maria's bed. There are two chairs near the bed.

Health Worker (HW): *Do not look up; continue to read the baby's notes as you approach the mother's bed, then look up briefly.*

The mother, Maria, stands up.
The Health Worker gives instructions and asks the questions quickly, as if she is in a hurry.

HW: *"Undress the baby."*

HW: *(Do not look at the mother.) "How old is the baby?"*

Mother: *"Almost 1 day."*

HW: *"Are you breastfeeding?"*

M: *"Yes."*

HW: *(Continue to not look at the mother.) "Have you fed your baby in the last hour?"*

M: *"No."*

HW: *"Tell me when you feed next time. I need to see you breastfeed. Are you having any difficulty?"*

M: *"Not really."*

HW: *"How many times has your baby breastfed in the last 24 hours?"*
(Looks up at the mother and baby for the first time.)

M: *"About 3 times."*

HW: *(Reach out and feel the baby's feet.) "You can sit down if you wish. Hmm! Your baby feels quite cold.*
Is your baby satisfied with the feeds?" (Look at the baby's eyes.)

M: *"I think so." (Look at the baby's abdomen.)*

HW: *"Have you given your baby any other foods or drink?" (Turns away from the mother to write in the baby's notes. Look at the baby moving and then feel the head and body.)*

M: *"No."*

HW: *"Has your baby passed meconium yet?" (Look at the umbilicus.) A long pause.*

M: *(Look puzzled.) "I'm sorry. What is that?"*

HW: *"Black, sticky stool."*

M: *"Oh! Yes, just after he was born. Is that normal?"*

HW: *"Yes. How do your breasts feel?"*

M: *"A bit sore."*

HW: *(Open the mother's blouse and look at her breasts and feel them.) "Hmm! A bit red, but they are soft. All mothers get sore in the first few days, that's normal" (Looks at her watch, obviously rushed.) "Have you any concerns about your baby?"*

M: *"Not really."*

HW: *"Good, come back in three to seven days and again in six weeks' time to get your baby immunized.*
Arrange a date with the nurse."

*The **HW's** mobile telephone rings and she rushes away.*

Write down:

- Two things you learned about the mother.
- Two things you learned about the baby.
- Any examples of technical language you can remember the health worker used and what the mother did not understand.
- Anything you liked or disliked about the way the health worker behaved towards the mother.

Role play 2

Dialogue

Health Worker (HW): *(Looking at Jonah's notes as she approaches Maria's bed.)*
The mother, Maria, stands up.

HW: *(Look up at the mother, smile at her and her baby.) "Hello, Maria. I'm Dr Bora. Do sit down. I've come to examine Jonah before you go home. Is this a convenient time? What a lovely baby you have."*

M: *(Nod your head to show this is a convenient time and smile at the* ***HW.****)*

HW: *(Touch the mother gently on the arm (if this is appropriate). Look at the mother as you ask): "Do you mind if I sit down?"*

M: *(Nods her head.)*

HW: *"How is Jonah?" (Look at the way the baby moves. Gently touch his cheek.)*

M: *"He seems well."*

HW: *(Eye contact with the mother.) "Good! How old is he now?"*

M: *"Almost 1 day."*

HW: *"I see he was a good weight when he was born, 3.5 kilograms, and he was well at birth. How are you feeding him now?"*

M: *"I'm breastfeeding him."*

HW: *"Good, that will help keep you both healthy. When did you last feed Jonah?"*

M: *"About half an hour ago."*

HW: *"Are you or Jonah having any difficulty with feeding?"*

M: *"Not really." (Then hesitantly): "I'm a bit sore."*

HW: *"When Jonah feeds next time I would like to watch, if you do not mind, and then maybe we can find out why you are sore."*

M: *"Thank you. Jonah is my first baby, so I've never breastfed before."*

HW: *"It takes a few days, sometimes a few weeks, to establish breastfeeding. You seem to be managing very well up to now. How many times has Jonah fed since he was born?"*

M: *"Three times."*

HW: *"How does he behave after you have feed him?"*

M: *"He just goes to sleep."*

HW: *"Has Jonah had any special foods or drinks since he was born?"*

M: *"No, not really. He had some honey … but all babies have that, don't they?"*

HW: *"It is true that a lot of babies are given honey. It is better for Jonah if he only has your milk from now on and nothing else. You should feed him for six months without giving him any other foods. Your milk is all the food he needs right now."*

M: *"Jonah had quite a long time between his second feed and this last feed. Is that alright?"*

HW: *"Jonah is only 15-hours-old and is doing very well. Some babies on the day they are born only feed five or six times. After the first day, babies often feed about eight times in 24 hours."*

M: *"So three times up to now is alright?"*

HW: *"Yes, that is good. You said your breasts felt a bit sore? May I look at them please?"*
(Examining the mother's breasts): "Yes, your nipples are red, they must be very sore. We must look at how Jonah feeds, I'm sure we can help him to breastfeed so that you will not get so sore."

M: *"Thank you, I will be very happy if you can help me."*

HW: *(Mobile telephone rings. Look at it and put it away.) "I am sorry about that. May I just examine your breasts?"*
M: *(Nods.)*

HW: *(Gently feel both breasts.) "They are soft, which is good. Over the next two days you will probably notice that your breasts may feel fuller and harder. Just keep feeding Jonah as often and for as long as he wants, both in the day and at night, and you won't have any problems. You may also notice that your milk looks thinner and there is more of it, this is normal. Your milk is always just right for your baby." "Do you have any other concerns about feeding or anything else?"*

M: *"Not really, except when he passes stools. (Local terminology, e.g. poops?) It's black. Is that normal?"*

HW: *"Yes. In the next two days you will notice the colour changes to brown and then to yellow, when it will be very soft as well. I would like you to bring Jonah back to see me in seven days when you come for your first check up after delivery (postnatal examination). Can you also make an appointment with the nurse to bring him back in six weeks so that we can give him his second immunization? But bring him back to me at any time if you are worried about him." (Looking in her desk drawer.) "Maria, have you been given these two information sheets?" (**HW** gives Maria the "Breastfeeding" and the "Care for the Baby after Birth" information sheets.)*

M: *"No, I've not seen them before."*

HW: *"The form on breastfeeding will help you. The other sheet, on care of your baby, gives you information on everyday care and a list of the 'danger signs'. If Jonah has any of these signs, if he feels cold or too hot or has difficulty breathing, bring him straight to the hospital. I suggest you read the sheets before you go home."*

Write down:

- Two things you learned about the mother.
- Two things you learned about the baby.
- Any technical terms used.
- Anything you liked or disliked about the way the health worker behaved towards the mother.

The importance of asking the "right" questions

- The purpose of asking questions is to obtain information. Sometimes this is to confirm information already obtained, when it may be correct to ask questions that have "yes" or "no" answers. This type of question is called a "closed" question.

- To obtain more detailed information questions should be asked so that the person answering has the opportunity to give a full and detailed answer. Questions which give this kind of information often begin with words such as "how", "why", "where", "what" or "when". These questions are called "open" questions because they provide a person the opportunity to give relevant information.

Giving bad news

- Sometimes it is necessary to give a mother or her family bad news. Maybe the baby is ill, he may need to be referred to another hospital, he may have died, or maybe there is a problem with the mother.

- Defining what "bad" news is depends upon what it means to the person receiving the news. Therefore be aware that a health worker may not consider some information as "bad news" but it may have important consequences for a mother or a family. For example, if a baby is jaundiced and needs phototherapy treatment and has to stay in hospital but a mother has to return to her home several days away from the hospital.

- If information we have to give to a mother or family can have negative consequences for them, be aware that the way we communicate the information can help them to accept what has happened.

- Depending upon what the bad news is, if a mother is alone, arrange for a relative or friend to come and be with her.

- Where we give the news is important

- After what has been covered so far in this session how would you approach a mother to give her bad news about her baby's condition?

"Non-verbal" skills to use:

- Being kind and gentle in actions.
- If the mother is sitting down, sit down with her.
- Touch her appropriately.
- Do not leave the mother alone.
- Allow the mother to react in her own way.
- Let her touch or hold the baby.
- Let the mother or father and other members of the family be with the baby

"Verbal" skills to use:

- Give a simple clear explanation of what is wrong. Do not use technical terms.
- Make sure the mother understands what you are telling her by using "open" questions to encourage her to repeat back to you what you have told her.
- Give her time to ask questions.
- Speak softly.
- Respect her cultural beliefs and customs.
- Ask if there is anyone near to the hospital/clinic who can be with her.
- Express regret.

Role play 3 (optional)

Giving bad news

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

Place: A clinic in the hospital.
Situation: A mother has brought her 4-day-old baby boy for a sick newborn visit.
He has been taken to the emergency room.

Problem: The baby:
- has breathing difficulties with rapid respirations and chest in drawing;
- feels very hot;
- Is not feeding well after the first two days.

The mother:
- Gave birth alone at home.
- She lives a 5-hours' walk away from the hospital.
- She had a long labour.

Scene:
The mother is sitting in the out-patients clinic with other patients.
- A health worker comes to her.

The (bad) news:
- The baby has died.
- Treatment was given.

Instructions to the mother and health worker

- "Mother" to sit in front row of the class with participants as if in clinic.
- Give the "mother" the news about her baby while the mother is sitting.
- Do not sit down.
- Give the basic information only then leave.

Giving bad news after a baby's death

- Inform the parents as soon as possible after the baby's death.
- Show the baby to the mother; give the baby to the mother to hold, where culturally appropriate.
- Offer the parents and family to be with the dead baby in privacy as long as they need.
- Discuss with them the events before the death and the possible causes of death.
- Advise the mother on breast care
- Counsel on appropriate family planning method
- Provide certificate of death and notify authorities as required.

QUESTIONS:

COMMUNICATION SKILLS

1. *Write down at least three things that you can say to a mother to make her feel GOOD?*

2. *Write down at least three things that you can say to a mother that could make her feel BAD?*

If we make people feel good they are likely to be more confident, more cooperative and accept advice and give us information. Praising something about what a mother or father does for their baby can help to gain their confidence. For example, to tell a mother of a sick baby, "You made a good decision to bring your baby to the hospital so that we can help him," will make the mother feel much better than to say to her, "You should have brought your baby to us before now."

3. *Describe two "non-verbal" ways you can make a mother feel you are interested in her.*

4. *Describe two "non-verbal" ways you can make a mother feel you are not interested in what she is saying to you.*

5. *The purpose of asking questions is to obtain information. If this is to confirm information already obtained, then it may be correct to ask questions that have "yes" or "no" as answers.*

6. *What is this type of question called?*

7. *To obtain more detailed information, questions should be asked so that the person answering has the opportunity to give a full and detailed answer. Questions which give this kind of information often begin with words such as "how", "why", "where", "what" and "when". These questions are called open questions, because they give a person the opportunity to give relevant information.*

8. *Will you learn more information from closed or open questions?*

9. *Write down three examples of open questions.*

10. *Write down three examples of closed questions.*

SESSION 3:

IMMEDIATE CARE OF THE NEWBORN

Learning Objectives

- To describe and carry out routine care of a newborn baby at the time of birth and prevent complications
- Demonstrate evidence based immediate care of the newborn baby
- Teach the mother how to look after her baby and what to do if her baby has any health problems

Content

1. Basic needs of the newborn are:
- To breathe
- To be warm
- To be fed
- To be protected

2. What should be done for a baby at the time of birth and in what order?

3. Call out time of birth.
- Deliver baby onto the mother's abdomen.
- Dry the baby with a warm, clean towel or piece of cloth.
- Wipe eyes.
- Assess the baby's breathing while drying.
- Clamp and cut the umbilical cord.
- Put the baby between the mother's breasts for skin-to-skin contact.
- Place an identity label on the baby.
- Cover the mother and baby with a dry clean warm cloth.
- Cover the baby's head.

4. Cord Care:
- Change gloves. If not possible, wash gloved hands.
- Clamp and cut the cord:
- Put ties tightly around the cord at 2cm and 5cm from the baby's abdomen.
- Cut between the ties with a sterile instrument.
- Observe for oozing of blood.
- Do not apply any substance to the stump
- Do not bandage or bind the stump

5. Eye Care

A baby's eyes should be wiped as soon as possible after birth and an antimicrobial eye medicine should be applied within 1 hour of birth.

- 1% tetracycline ointment

Is the drug which can be used to prevent infection at the time of birth;

It should not be washed away

6. Skin-to-skin contact
- A baby's skin temperature falls within seconds of being born.
- If the temperature continues to fall the baby will become ill (hypothermia) and may die.
- This is why a baby MUST be dried immediately after birth and delivered onto a warm towel or piece of cloth, and loosely wrapped before being placed (naked) between the mother's breasts.
- It also explains why the mother and baby should be covered with a warm and dry cover if the room temperature is lower than 25° C.
- The position of the baby between the mother's breasts ensures the baby's temperature is kept at the correct level for as long as the skin contact continues.
- This first skin-to-skin contact should last uninterrupted for at least one hour after birth or until after the first breastfeed.
- Skin-to-skin contact can re-start at any time if the mother and baby have to be parted for any treatment or care procedures.

7. Early initiation of breastfeeding

Help the mother to initiate breastfeeding within 1 hour, when baby is ready

- After birth, let the baby rest comfortably on the mother's chest in skin-to-skin contact.
- Tell the mother to help the baby to her breast when the baby seems to be ready, usually within the first hour. Signs of readiness to breastfeed are:
  - Baby looking around/moving.
  - Mouth open.
  - Searching.
- Check that position and attachment are correct at the first feed. Offer to help the mother at any time.
- Let the baby release the breast by her/himself; then offer the second breast.
- If the baby does not feed in 1 hour, examine the baby to rule out any problem.
- If healthy, leave the baby with the mother to try later. Assess in 3 hours, or earlier if the baby is small.
- If the mother is ill and unable to breastfeed, help her to express breast milk and feed the baby by cup.
- If mother cannot breastfeed at all, use one of the following options:
  - home-made or commercial formula

Questions

Care of the newborn baby at the time of delivery
Work through the following exercises and write your answers in the spaces provided.

The basic needs of the baby at birth
At birth a baby is totally dependent upon its mother and other caregivers.

1. What are a baby's immediate needs in order to stay alive and keep healthy? These are the basic needs of all babies at the time of birth.

2. Where can you find information on immediate care at birth.

3. What should be done for a baby at the time of birth and in what order?

4. Does a baby need help with its breathing if he is crying?

5. When should resuscitation begin if a baby is not breathing or only gasping after birth?

6. Describe what "skin-to-skin" contact means.

7. **To be warm** is an immediate and basic need of the newborn baby.
How can a baby be kept warm after delivery?

8. Describe immediate cord care.

9. When, after delivery, should eye care be carried out?

10. What information does this section give you about eye care?

11. Which drugs can be used for eye care?

12. What information is given on these pages about monitoring the baby?

13. For how long should the mother and baby be monitored?

Skin-to-Skin contact and breastfeeding

14. Where can you find information on breastfeeding after delivery?

15. Why is the baby's first feed important?

16. Describe what should be done if a baby does not feed within one hour after birth.

17. How can a baby be fed if the mother is ill and unable to breastfeed?

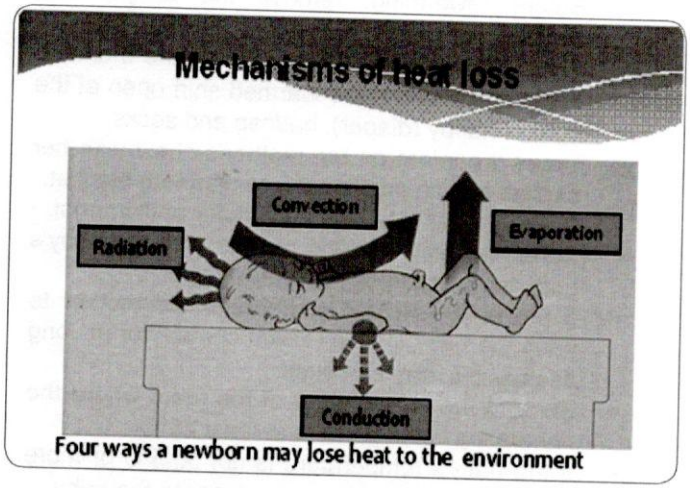
18. What options are there for a mother who cannot breastfeed?

Check List
Care of the baby at time of birth

Date	Delivery number	1	2	3	4
Observed cephalic deliveries and immediate newborn care					
PREPARATION IN THE DELIVERY ROOM					
1. **Observe preparation of the delivery room: MUST include:**					
▪ Resuscitation equipment near delivery bed.					
▪ Resuscitation equipment checked and ready to use.					
▪ Warm delivery room (25° C) with no draught.					
▪ Others.					
2. **Can describe immediate care of newborn baby after delivery**					
▪ Note time of delivery/deliver onto abdomen.					
▪ Dry the baby, wipe eyes, change cloth/assess.					
▪ Clamp and cut cord.					
▪ Start skin-to-skin contact.					
▪ Cover with cloth, and hat on head.					
▪ Initiate breastfeeding.					

SESSION 4:

KEEPING THE BABY WARM



Four ways a newborn may lose heat to the environment

Learning Objectives

- To describe how to keep a baby warm.
- To explain the factors which contribute to heat loss and how they can be prevented.
- To teach a mother how to keep her baby warm.

Causes of hypothermia

- The room is too cold.
- The baby is exposed to cold draught.
- Wet clothing.
- The baby is uncovered , even for short time.
- The baby is not feeding well.
- The baby is placed on a cold surface or near cold wall or window.
- The baby has an infection.
- Baby has birth asphyxia and does not have energy to keep warm.
- Mother & baby are not together or under care giver.

The warm chain

- Warm delivery room.
- Immediate drying.
- Skin-to-skin contact.
- Breastfeeding.
- Bathing and weighing postponed.
- Appropriate clothing and bedding.
- Mother and baby together.
- Warm transportation (skin-to-skin).
- Warm resuscitation.
- Training and awareness.

Signs and symptoms of hypothermia

Examine the baby`s temperature and activity.
Look for:

- Low temperature (<36.5C).
- Limp-floppy.
- Poor sucking or feeding.
- A weak cry.
- Slow or shallow respiration <30/min, slow heart rate (< 100/min).
- Baby's skin cold, baby's cold extremities.
- Cover adequately - remove cold clothes and replace with warm clothes.
- Warm the room/bed.
- Take measures to reduce heat loss.
- Ensure skin-to-skin contact with mother; if not possible, keep next to mother after fully covering the baby.
- Breast feeding.
- Provide extra heat.
- Room heater.
- Radiant warmer.
- Incubator.
- Apply warm towels.

At birth and within the first hour

- Warm delivery room: For the birth of the baby the room temperature should be 25-28°C, no draught.
- Dry baby: Immediately after birth, place the baby on the mother's abdomen or on a warm, clean and dry surface.
- Dry the whole body, head and hair thoroughly, with a dry cloth.
- Skin-to-skin contact: Leave the baby on the mother's abdomen (before cord cut) or chest (after cord cut) after birth for at least 2 hours.
- Cover the baby with a soft dry cloth.
- If the mother cannot keep the baby skin-to-skin because of complications, wrap the baby in a clean, dry, warm cloth and place in a cot.
- Cover with a blanket: Use a radiant warmer if room not warm or baby small.

Subsequently (First Day)

- Explain to the mother that keeping baby warm is important for the baby to remain healthy.
- Dress the baby or wrap in soft dry clean cloth. Cover the head with a cap for the first few days especially if baby is small.
- Ensure the baby is dressed or wrapped and covered with warm clothes.
- Keep the baby within easy reach of the mother. Do not separate them (rooming-in).
- If the mother and baby must be separated, ensure baby is dressed or wrapped and covered with a blanket.
- Assess warmth every 4 hours by touching the baby's feet, if feet are cold, use skin-to-skin contact, add an extra blanket and reassess (see Rewarm the Newborn).
- Keep the room for the mother and baby warm. If the room is not warm enough, always cover the baby with a blanket and/or use skin-to-skin contact.

At home

- Explain to the mother that babies need one more layer of clothes than other children or adults.
- Keep the room or part of the room warm, especially in a cold climate.
- During the day, dress or wrap the baby.
- At night, let the baby sleep with the mother or within easy reach to facilitate breastfeeding.
- Do not put the baby on any cold or wet surface.
- Do not bath the baby at birth. Wait at least 6 hours before bathing.
- Do not swaddle (wrap too tightly). Swaddling makes them cold.
- Do not leave the baby in direct sun.

Keeping a small baby warm

- The room for the baby should be warm (not less than 25°C) with no draught.
- Explain to the mother the importance of warmth for a small baby.
- After birth, encourage the mother to keep the baby in skin-to-skin contact as long as possible.
- Advise to use extra clothes, socks and a cap, blankets, to keep the baby warm or when the baby is not with the mother.
- Wash or bath a baby in a very warm room, in warm water. After bathing, dry immediately and thoroughly. Keep the baby warm after the bath. Avoid bathing small babies.
- Check frequently if feet are warm. If cold, rewarm the baby (see below).
- Seek care if the baby's feet remain cold after rewarming.
- Rewarm the baby by skin-to-skin contact
- Before rewarming, remove the baby's cold clothing.
- Place the newborn skin-to-skin on the mother's chest dressed in a pre-warmed shirt open at the front, a nappy (diaper), hat/cap and socks.
- Cover the infant on the mother's chest with her clothes and an additional (pre-warmed) blanket.
- Check the temperature every hour until normal.
- Keep the baby with the mother until the baby's body temperature is in normal range.
- If the baby is small, encourage the mother to keep the baby in skin-to-skin contact for as long as possible, day and night.
- Be sure the temperature of the room where the rewarming takes place is at least 25°C.
- If the baby's temperature is not 36.5°C or more after 2 hours of rewarming, reassess the baby.
- If referral needed, keep the baby in skin-to-skin position/contact with the mother or other person accompanying the baby.

Hyperthermia Symptoms

- Baby is irritable
- Has increased HR> 160 min & RR > 60/min
- Has a flushed face
- Skin is hot and dry
- Late stages apathetic, lethargic and then comatosed

SESSION 5:

BREASTFEEDING THE NEWBORN

Session Objectives

- To describe how breastfeeding works
- To recognise signs of good positioning and attachment of a baby feeding at the breast.

Babies

- Exclusive breastfeeding on demand provides all the nutrition a baby needs in the first 6 months. Breastmilk contains vitamin A. Babies low in vitamin A have poor appetite, eye problems, and more infections.
- Breastmilk is a clean source of food. Water used to mix formula and to wash bottles may have germs that can cause diarrhoea. This is a major cause of death.
- Breastmilk contains antibodies which the baby requires for the first six months; it makes the immune system stronger.
- Breastmilk protects babies against allergies.
- Breastmilk helps the baby's body and brain develop and grow.
- Breastmilk helps low birth weight babies, especially those who are premature.
- Breastmilk is the easiest food for the baby to digest.
- Breastmilk provides nutrients ideally suited for growth and development.
- Breastmilk helps to prevent a serious disease of the intestines that affects low birth weight babies (necrotizing enterocolitis).
- Breastfeeding helps stabilize the baby's temperature.
- Breastfeeding helps the baby's mouth, teeth, and jaw develop properly.
- Milk from the breast is always the perfect temperature for the baby.

Mothers

- Breastfeeding helps facilitate placental separation
- Breastfeeding helps the uterus return to its normal size.
- Breastfeeding reduces anaemia because the mother starts her menses later.
- Exclusive breastfeeding helps suppress ovulation, so it can delay another pregnancy.
- Breastfeeding strengthens the relationship between a mother and her baby.
- Breastfeeding saves money. The mother does not need to buy other milk to feed the baby or pay for health care when her baby gets sick more often.

How breastfeeding works

There are three important things to understand on how breastfeeding works:

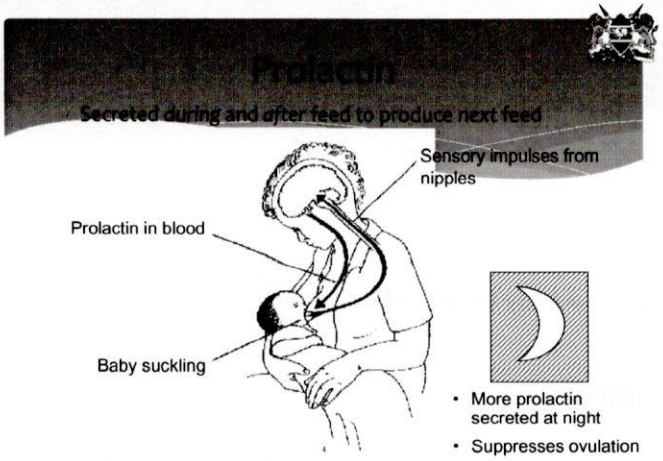


Figure: Prolactin secretion

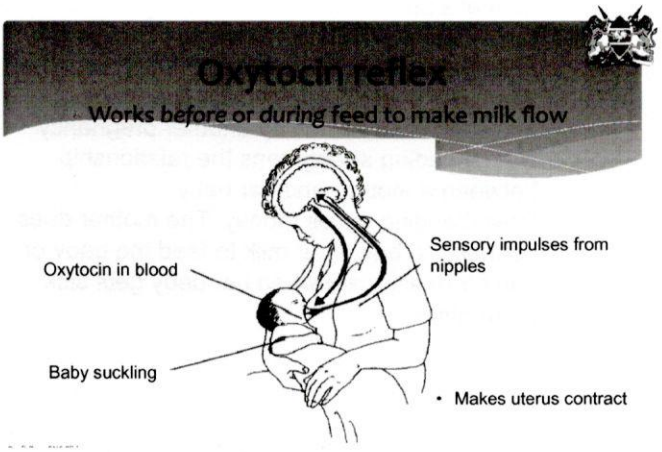


Figure: Oxytocin reflex

Mother's brain controls production of breast milk:
When the baby suckles at the breast, sensory impulses go from the nipple to the brain. In response the pituitary gland at the base of the brain secretes prolactin and oxytocin hormones.

Prolactin makes the breast milk cells produce milk. The more the baby suckles at the breast, the more breast milk is produced. Oxytocin makes the muscle cells around the areola contract thus ejecting the milk into the mouth of the baby (milk ejection reflex/let-down reflex)

The following make the signal from the mother's brain to her breasts stronger, resulting in more breast milk production:

- Thinking lovingly of baby.
- Sounds of baby.
- Looking at the baby.
- Touching the baby.
- Confidence that she can breastfeed the baby.

On the other hand, the following make the signal from the mother's brain to her breasts weaker, resulting in less breast milk production:

- Worry.
- Pain.
- Doubts about being able to breastfeed the baby.

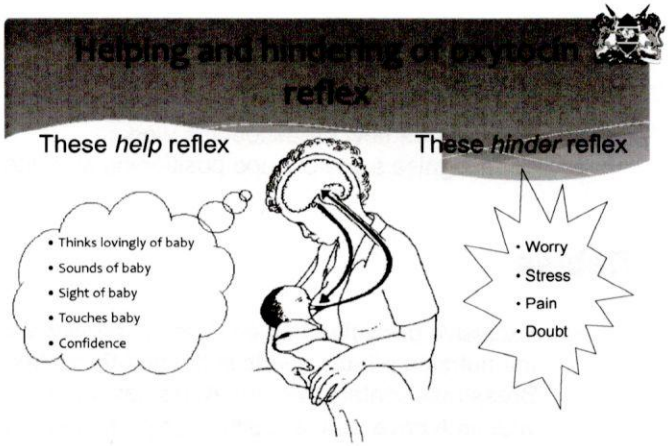
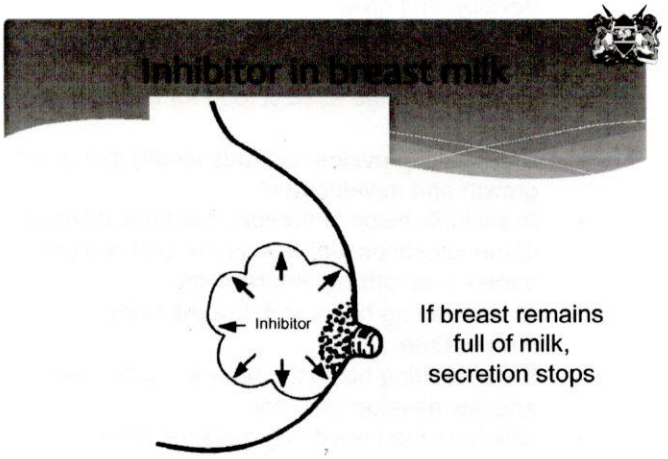


Figure: Helping and hindering of oxytocin reflex

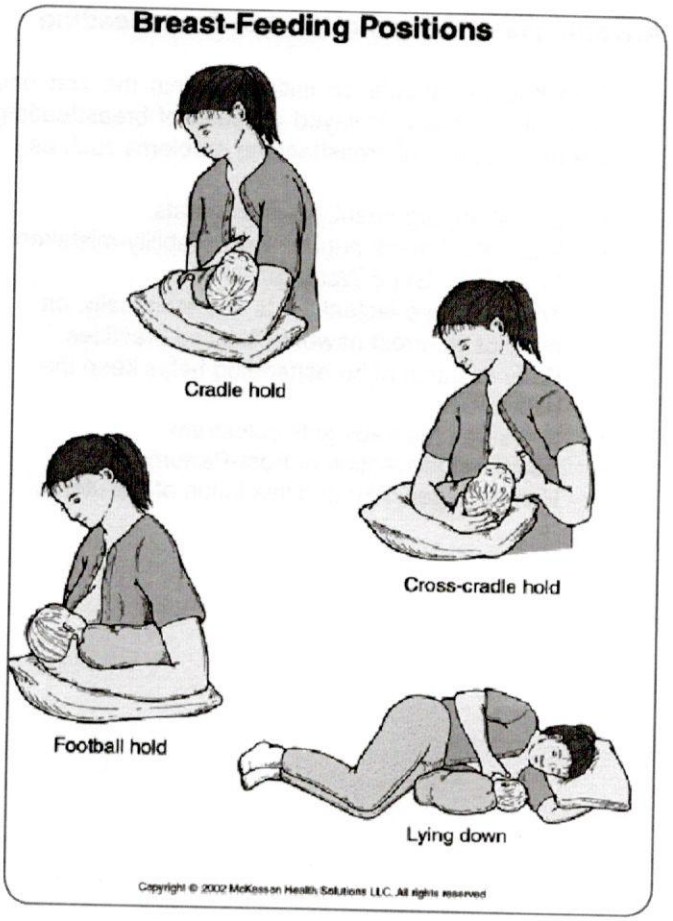
Milk continues to be produced when the baby empties the breast as the effect of prolactin lasts even after the child has stopped breastfeeding. If the breasts remain full, more milk will not be produced as the prolactin effect is depressed.



Baby gets milk by suckling on the areola not on the nipple.

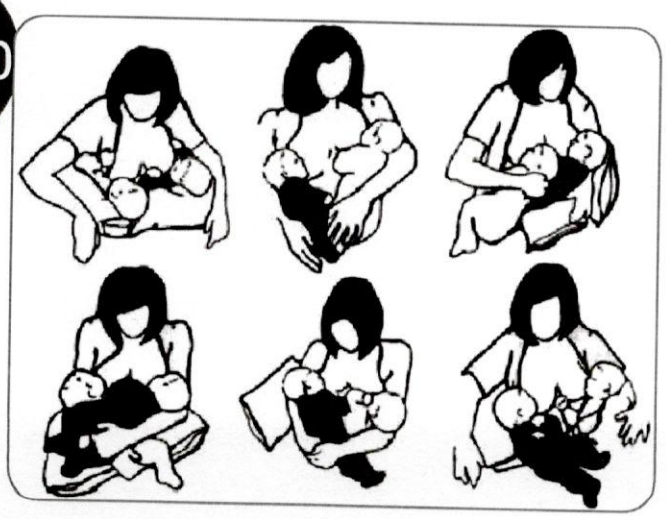
Milk is stored in spaces under the areola (the dark area of the breast around the nipple) the baby has to suckle on this area in order to get the milk from the breast. If the baby only sucks from the nipple, he/she will not get any milk.

Key points to good attachment and positioning.
In order for breastfeeding to be successful, we need to establish correct positioning and good attachment. Whatever positions the mother uses to breastfeed her baby, the following points should apply for good positioning and good attachment.



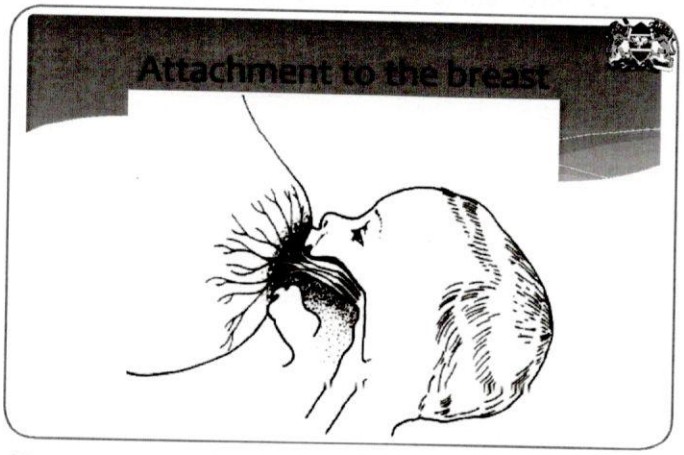
Key signs of good positioning

- The mother is relaxed and comfortable.
- The baby's head and body are in a straight line.
- The baby is facing the breast, the baby's nose is opposite her nipple.
- The baby's body is held close to the mother's body.
- The baby's whole body, not just the neck and shoulders is supported.
- Look for signs of good attachment and effective suckling (that is, slow, deep sucks, sometimes pausing). If the attachment or suckling is not good, try again. Then reassess.
- If breast engorgement, express a small amount of breast milk before starting breastfeeding to soften nipple area so that it is easier for the baby to attach.



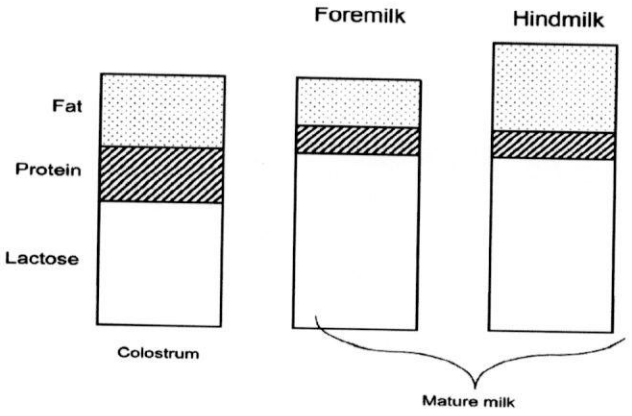
Key points to good attachment

- The mouth is widely open
- The lower lip is turned outwards
- The chin is touching the breast
- More areola is visible above the baby's mouth than below it



Breast Milk

Breast milk varies according to the age of the baby starting with colostrum and transitioning to mature milk. It also varies from the beginning to the end of the feeds as shown in the graph below.



Colostrum

Colostrum is the milk that is produced in the first days after delivery. It is thick and yellowish or clear in colour. It contains more protein than the later milk. After a few days, colostrum changes to mature milk. This is produced in large amounts than colostrum.

Fore milk

It is the thinner milk that is produced early in a feed. It is produced in large amounts and provides plenty of proteins, lactose, water and other nutrients; hence babies do not need other drinks or water before they are six months old even in a hot climate.

Hind Milk

Is the whiter milk that is produced later in milk feed. It contains more fat than fore milk that's why it looks whiter. This fat provides much of the energy of a breast feed. It is important not to take the baby off the breast too quickly. It is therefore important for a baby to have both fore and hind milk to get a complete "meal" which includes all the water they need.

Advantages of Early Initiation of Breastfeeding

Breastfeeding should be initiated within the first one hour after delivery. Delayed initiation of breastfeeding is a major cause of breastfeeding problems such as:

- Breast engorgement; painful breasts.
- Poor attachment; hunger and irritability-mistaken for illness - Gripe Water Syndrome.
- Triggering pre-lacteal feeds and eventually, an array of incorrect newborn feeding practices.
- Early initiation of breastfeeding helps keep the baby warm.
- It ensures the baby gets colostrum.
- Assists in prevention of Post-Partum Hemorrhage(PPH) and involution of the uterus

BREASTFEEDING OBSERVATION FORM FOR ASSESSMENT

Breastfeed Observation Job Aid

Mother's name..... Date.....

Baby's name..... Baby's age.....

Signs that breastfeeding is going well:	Signs of possible difficulty:
GENERAL	
Mother:	*Mother:*
☐ Mother looks healthy	☐ Mother looks ill or depressed
☐ Mother relaxed and comfortable	☐ Mother looks tense and uncomfortable
☐ Signs of bonding between mother and baby	☐ No mother/baby eye contact
Baby:	*Baby:*
☐ Baby looks healthy	☐ Baby looks sleepy or ill
☐ Baby calm and relaxed	☐ Baby is restless or crying
☐ Baby reaches or roots for breast if hungry	☐ Baby does not reach or root
BREASTS	
☐ Breasts look healthy	☐ Breasts look red, swollen, or sore
☐ No pain or discomfort	☐ Breast or nipple painful
☐ Breast well supported with fingers away from nipple	☐ Breasts held with fingers on areola
☐ Nipple stands out, protractile	☐ Nipple flat, not protractile
BABY'S POSITION	
☐ Baby's head and body in line	☐ Baby's neck and head twisted to feed
☐ Baby held close to mother's body	☐ Baby not held close
☐ Baby's whole body supported	☐ Baby supported by head and neck
☐ Baby approaches breast, nose opposite nipple	☐ Baby approaches breast, lower lip to nipple
BABY'S ATTACHMENT	
☐ More areola seen above baby's top lip	☐ More areola seen below bottom lip
☐ Baby's mouth open wide	☐ Baby's mouth not open wide
☐ Lower lip turned outwards	☐ Lips pointing forward or turned in
☐ Baby's chin touches breast	☐ Baby's chin not touching breast
SUCKLING	
☐ Slow, deep sucks with pauses	☐ Rapid shallow sucks
☐ Cheeks round when suckling	☐ Cheeks pulled in when suckling
☐ Baby releases breast when finished	☐ Mother takes baby off the breast
☐ Mother notices signs of oxytocin reflex	☐ No signs of oxytocin reflex noticed

NOTES
IF YOU OBSERVED ANY SIGNS SHOWING POSSIBLE DIFFICULTY WITH BREASTFEEDING, WRITE DOWN HOW YOU WOULD HELP THIS MOTHER:

QUESTIONS:

Breastfeeding: Ensuring a good start

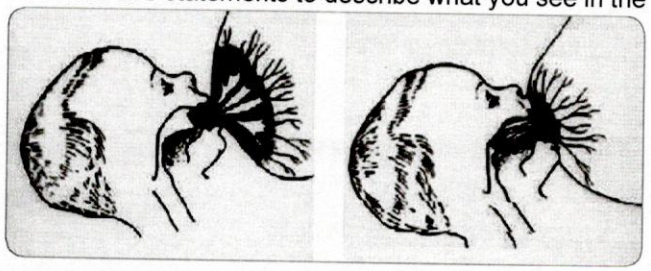
Understanding "how" breastfeeding works helps to explain:

- Why correct attachment and positioning are important to effective breastfeeding.
- The causes of many of the common breast problems.
- How to manage common breast problems.

1. Why are the lactiferous sinuses important to good attachment of the baby to the breast?
2. Look at these two pictures. Which of these two babies will get milk?

Good and poor attachment
Take a closer look at these two pictures.

3. Write five statements to describe what you see in the



first picture.

4. Write five statements to describe what you see in the second picture.

5. Based on your answers to questions 3 and 4, what do you think are the KEY points to GOOD attachment?

Positioning a baby to breastfeed

There is NO one "correct" position for breastfeeding. There are many different positions that mothers can use in different situations.

6. Why may a mother need to use different positions to breastfeed her baby?

7. You have to advise a mother over the telephone on how to position her baby at the breast. What five key points can you tell her?

8. What other signs of good attachment may you see or hear of?

9. How long should a breastfeed last?

10. Is it normal for a mother to feel pain when she first starts breastfeeding her baby?

11. 11. What should she do if she feels pain at the beginning of a feed?

12. 12. Why should a mother take her baby off the breast if breastfeeding is uncomfortable?

Look at the next photographs and answer the questions accompanying them.

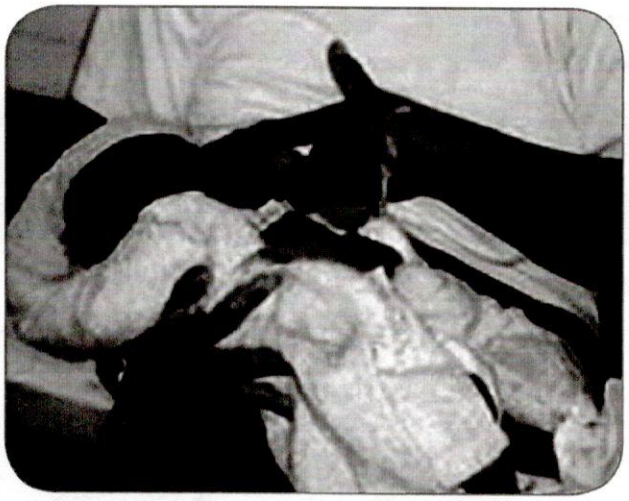
13. Is this good or poor positioning?

14. What signs are clearly evident?

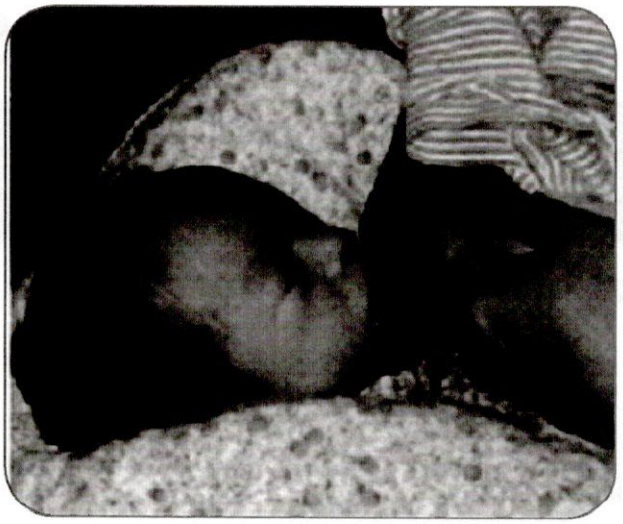
15. What help could you give this mother?

16. What do you think of this attachment? Describe the signs you see.

17. What would you say to this mother?



18. How could you help this mother correct her positioning?



19. What signs are clearly seen in this photo?

20. How could you help this mother?

SESSION 6:

OVERCOMING DIFFICULTIES IN BREASTFEEDING

Session Objectives

1. To help a mother breastfeed her newborn baby
2. To help a mother prevent common problems
3. To understand why breastfeeding is important

Introduction

- Breast feeding helps to reduce the risk of a baby becoming ill in the first weeks and months of life.
- It is therefore important for a mother to know how to care for her breasts and how to prevent problems from occurring which may stop her breastfeeding and prevent her baby from receiving her milk.

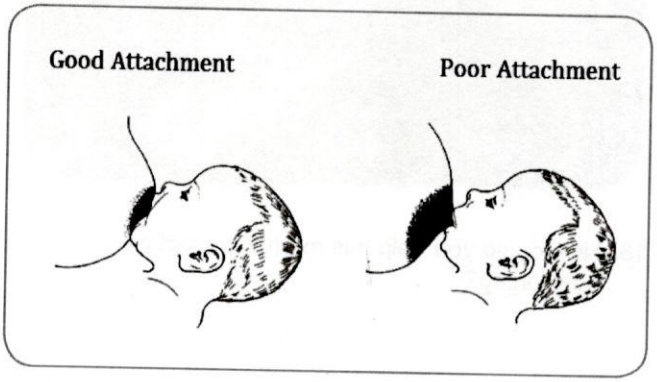
To keep her breasts healthy a mother needs to know the following:

- How to correctly position and attach her baby at the breast.
- How to express her milk.
- How to prevent or treat common problems.
- Why only breast milk should be given to her baby for the first 6 months of his life.
- When to come for help.

The importance of correct attachment and positioning

- Proper attachment and appropriate positioning at the breast means a baby can get milk without difficulty and the mother's milk supply can be adequately maintained.
- Attachment to the breast, if correct, should not be painful. Some mothers in the first few days after birth may describe the sensation of breastfeeding as 'uncomfortable', but this usually passes.

Attachment



Most breastfeeding difficulties arise from incorrect positioning and poor attachment. These are mainly for baby and mother.

IT is IMPORTANT to examine a mother's breasts

- However, if a mother complains of nipple or breast pain, examination of her breasts should be carried out.
- A postnatal breast examination can be carried out before, during or after a feed depending on the nature of the problem.

When examining the mother's breast, follow the following:

Ask the mother 'How do your breasts feel?

Look at the breasts, look for:

- Sore or fissured nipples.
- Flat or inverted nipples.
- Swelling, shininess, redness of the breast.
- Any scars, rashes or dry skin.

Feel gently for the painful part of the breast. Take the mother's temperature. Observe a breastfeed if not yet done Classify, treat and advice using the table on" Breastfeeding Problems and Treatment" at the end of the session.

Sore nipples

Other causes of cracked nipples are poor positioning and attachment. The other commonly documented cause is candidiasis. These are the extra things you can do;

Look for a cause and check the baby's position to the breast

- Check the baby's attachment to the breast.
- Examine the breasts – engorgement, fissures, candidiasis.
- Check the baby for oral candidiasis.

Give appropriate treatment

- Build the mother's confidence.
- Improve the baby's attachment and continue breastfeeding.
- Reduce engorgement, feed frequently, express breast milk.
- Treat candidiasis.

Advice the mother to:

- Wash breasts only once a day. Avoid using soap
- Avoid medicated lotions and ointments.
- Gently apply hind milk into nipple and areola after a breastfeed.

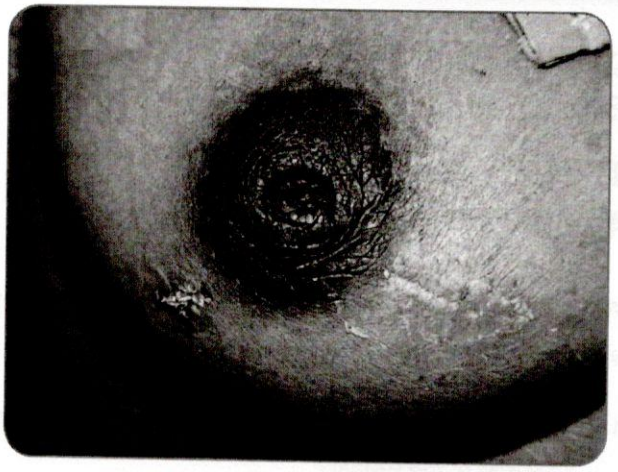
Inverted/Flat Nipples

It occurs in normal women though not commonly
Management:

- Antenatal treatment is probably not helpful.
- Most nipples improve around the time of delivery without any treatment and soon after delivery when the baby starts breastfeeding.
- It is important to build the mothers confidence and help her position and attach her baby correctly.

Full = Normal Breast

- A mother may have full breasts in the first two or three days after delivery, when her milk supply is increasing.



- This is normal and her milk will continue to flow easily as long as the baby can breastfeed without difficulty.
- Both breasts are affected.
- Although it causes discomfort, it is normal but if not managed properly, can lead to breast engorgement.

Engorged = Abnormal Breast

This can also occur with poor attachment and positioning and infrequent emptying (Check the annexes on breastfeeding problems).

Mastitis

The mother may feel as if she has 'flu'. She will have a high fever and feel ill. Mastitis happens if there is a blocked tube (duct) and the milk does not flow from that part of the breast. It can be caused by infections entering a fissured or damaged nipple, not feeding often enough, tight clothing, or the mother holding the breast during a feed – as we discussed in the last session on breastfeeding.

It can also be caused by the baby being poorly attached and not removing the milk properly from all parts (lobes) of the breast. If no treatment is given and the milk is not removed by feeding or expression, the mother may develop an abscess.

SUMMARY OF DIFFERENCES BETWEEN FULL AND ENGORGED BREASTS

FULL BREAST	ENGORGED BREAST
• NORMAL 36/72 hours after birth. • Hot, heavy, may be hard. • Milk flowing. • Fever uncommon.	• ABNORMAL can occur at any time during breast-feeding. • Painful, Oedematous. • Tight, especially nipple area. • Shiny. • May look red. • Milk NOT flowing. • Fever may occur. Engorgement may cause a decrease in milk supply if it happens often.

QUESTIONS:
Breastfeeding and the newborn baby: Overcoming difficulties

The importance of correct attachment and positioning

When a baby is not well attached to the breast, the baby and the mother may develop a number of problems.

1. What sort of problems may a baby have if it is poorly attached at the breast?
2. What sort of problems may the mother have if her baby is poorly attached to her breast?
3. What help and advice can you give to a mother with sore/cracked nipples?
4. How can she prevent her breasts from also becoming engorged?

Read the following information and then answer questions 5 and 6.

A mother comes to you because her breasts are very painful, which has made feeding difficult. Her breasts have become very full and feel hard. Both breasts are affected. They feel hot and look red. Milk is no longer flowing easily.

5. What is the condition this mother is suffering from?
6. What advice would you give to this mother?
7. Sometimes a mother may experience a well-defined, red, sore and swollen area in one of her breasts. She may have a high fever and feel ill, as if she has "flu".

In the following paragraph fill in the (underlined) missing words:

This condition can also be caused by the baby not taking the milk properly from different parts (lobes) of the breast. This condition is called _____. If the milk is not removed by feeding or expression, then the mother may go on to develop an _____

_____

8. What advice would you give to this mother?
9. What advice would you give to a mother who is HIV-positive and who has mastitis in her right breast?

General information

10. How often should a mother feed her baby in a 24-hour period?
11. Does a baby need to be given additional water to drink?

If not, why not?

12. When can a mother who has had a caesarean section breastfeed?
13. What kind of help will you need to give a mother (who has had a caesarean section) during the first few days after delivery?

Read the following case study and answer questions 14 and 15.

Case study

- Selim is three weeks old.
- He is not gaining weight.
- His mother, Fatma, is breastfeeding him four times a day and also giving him watered down cow's milk.
- You observe a breastfeed and he is well attached and positioned and feeds hungrily.

14. You assess a breastfeed, Selim is classified as "feeding difficulty". Why?
15. How do you advise Fatma?

Reference Materials

- Breastfeeding Counselling: A training course
- The optimal duration of exclusive breastfeeding. A Systematic Review, WHO (WHO/FCH/CAH/01.23)
- Mastitis: Causes and management, WHO
- Quantifying the Benefits of Breastfeeding: A summary of the evidence, Linkages, 2002
- WHO, 2006: PCPNC
- National Newborn Care Guidelines 2011, Kenya

SESSION 7:

EXAMINATION OF THE NEWBORN

Learning objectives

- To describe and carry out the examination of a newborn baby soon after birth, before discharge from the facility, during the first week of life and at routine follow up or sick newborn visit.
- To identify any conditions that need specific care, treatment or follow up.
- To assess, classify and treat a newborn baby using the "Examine the Newborn" charts.

1. Why is it important to examine a baby?
2. When should a baby be examined?
3. List the steps involved in examining a baby.
4. Are these steps exactly the same for all baby examinations?
5. What does "Assess" include?
6. Where can you find information in the (annexes) refer to charts J2-J8) on what the colours green, yellow and red mean which are used in the charts?
7. Page structure and presentation as given in the chart below. Tick on the appropriate box if Yes or No New Born danger signs

Signs	Yes	No
Fast breathing (more than 60 breaths per minute).		
Birth weight 1500 g < 2500 g.		
Grunting.		
Small baby feeding well/gaining weight adequately.		
Mother known to be HIV positive.		
Not suckling (after six hours of age).		
Yellow skin on face and < 24-hours old.		
Eyes swollen and draining pus.		
Umbilicus draining pus		
Fever (temperature > 38°C)		

Case study.

- Anna was healthy before and during her pregnancy.
- She is not on any treatment for any illness.
- Her membranes ruptured one hour before giving birth.
- Her temperature was 37°C after delivery.

8. What is your first action when you carry out an examination of a baby?
9. What information can you obtain from the mother's notes?
10. What maternal situations indicate the baby requires special treatment?

More practice

11. What can you learn from listening to a baby's breathing?
12. What can you learn from counting the baby's breaths?
13. What is the significance of counting more than 60 breaths per minute in a baby?
14. Why is it important to weigh a baby?
15. When should you weigh:

    a) A normal baby.

    b) A small baby.

EXAMINATION RECORDING FORM

Name (of mother) _____ Date _____

How old is the baby? _____ Hours / days _____

Does the mother have any concerns about the baby? _____

How is the baby feeding? _____

ASK, CHECK RECORD	LOOK, LISTEN, FEEL	SIGNS (CIRCLE IF PRESENT)
Is the baby preterm (<37 weeks or >1 month early)?		
Breech birth?		
Difficult birth?		
Resuscitated at birth?		
Is the baby one of twins?		Twin.
Has the baby had convulsions?		Danger sign.
Is the mother very ill or trans-ferred?		Mother not able to care for the baby.
	Assess breathing (baby must be calm). Grunting. Breathing: - More than 60 breaths per minute - Less than 30 breaths per minute)? Chest in-drawing	Danger sign. Danger sign. Danger sign. Danger sign.
	Look at the movements: Are they normal and symmetrical?	
	Look at the presenting part – is there swelling and bruises?	Swelling, bruises or malformation
	Look at the abdomen for pallor.	Danger sign.
	Look for malformations	Swelling, bruises or malformation.
	Feel the tone: Is the baby floppy or stiff?	Danger sign.
	Feel for warmth. If cold, or very warm, measure temperature. Is the temperature: - >38°C or <35°C? - 35-36.4°C?	Danger sign. Body temperature 35-36.4oC.

	Look for bleeding from stump or cut.	Danger sign
	Weigh the baby. Is the weight <2500 g?	Birth weight <2500 g.
Has the mother had within 2 days of delivery: - Fever >38 oC? - Infection treated with antibiotics?		Special treatment needs. Special treatment needs.
Membranes ruptured >18 hours before delivery?		Special treatment needs.
Mother tested RPR positive?		Special treatment needs.
Mother tested HIV positive? - Has she received infant feeding counseling?		Special treatment needs.
Is the mother receiving TB treatment which began <2 months ago?		Special treatment needs.
	Look at the skin, is it yellow? - if baby is <24 hours old, look at skin on the face - if baby is >24 hours old, look at palms and soles	Jaundice. Danger sign. Danger sign.
	Look at the eyes. Are they swollen or draining pus?	Local infection.
	Look at the skin, particularly around the neck, armpits, inguinal area: - Are there <10 pustules? - Are there >10 pustules, or bullae, swelling, redness or hardness of the skin?	Local infection. Danger sign.
	Look at the umbilicus: - Is it red? - Draining pus? - Does the redness extend to the skin?	Local infection. Danger sign. Danger sign.
Assess breastfeeding (as described on page J4) and classify feeding: - Is the baby not able to feed? - Does the baby have feeding difficulty?		Danger sign. Not feeding well.

If you have not circled any of the signs, classify the baby as a WELL BABY and provide care (as described on page J2).

If you have circled any of the signs, go to the appropriate page to assess, classify, and treat and advise:

- Preterm, birth weight <2500 g or twin : J3
- Not feeding well : J4
- Special treatment needs : J5
- Jaundice or local infection : J6
- Danger sign : J7
- Swelling, bruises or malformation : J8

If mother complained of breast or nipple pain during breastfeeding assessment, assess the mother's breasts

: J9

PARTICIPANTS NAME_____ Clinical TASK name and number _____

Additional notes:

SESSION 8:

ROUTINE CARE OF THE NEW BORN

I. Learning objectives

At the end of this session, participants will be able to:

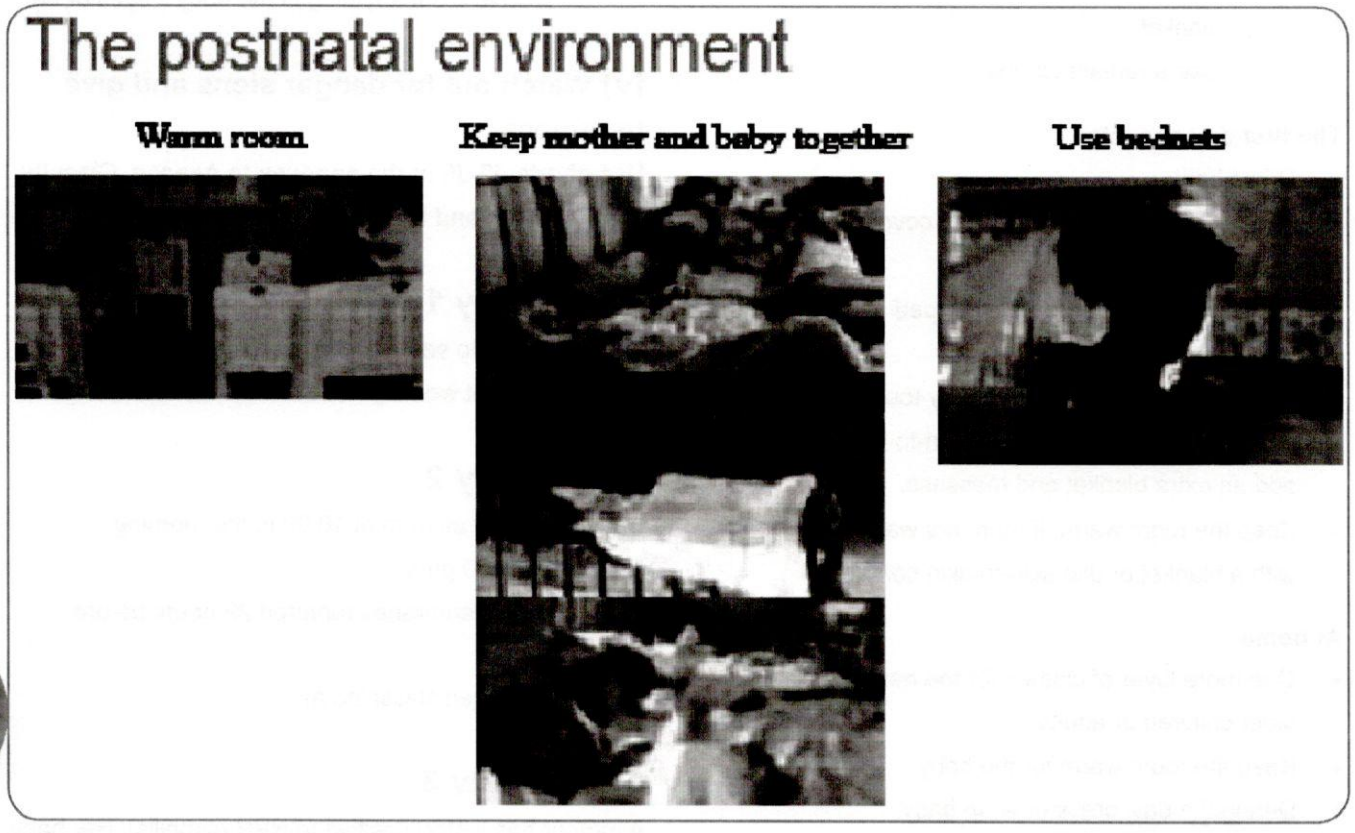
- Demonstrate evidence-based everyday care of the newborn baby.
- Teach the mother how to look after her baby and what to do if her baby has any health problems.

II. Overview of the section

The care of a mother and baby needs can be divided into four sections.

- The postnatal environment.
- Everyday care of the baby.
- Looking for danger signs and giving treatment.
- Preparation for discharge.

The Postnatal Environment



- Keep the baby in the same room with the mother, in her bed or within easy reach.
- Provide long lasting Insecticide Treated Nets (LLITN) for the mother and baby to sleep under. This will protect them against mosquitos and other insects.

EVERY DAY CARE

(i) Exclusive Breast feeding

- Support exclusive breastfeeding for the first six months on demand day and night.
- Ask the mother to get help if there is a breastfeeding difficulty.

(ii) Keeping the baby warm

Within the first hours

If skin-to-skin contact NOT possible:

- Wrap the baby in a clean dry warm cloth
- Place the baby in a cot and cover with a blanket.
- Use a radiant warmer.

The first day and later

- Dress baby.
- Wrap in soft dry clean cloth and cover head with cap.
- Ensure baby is dressed or wrapped and covered with a blanket
- Assess warmth every 4 hours by touching baby's feet; if feet are cold, place in skin-to-skin contact and add an extra blanket and reassess.
- Keep the room warm; if room not warm, cover baby with a blanket or use skin-to-skin contact.

At home

- One more layer of clothes for the new-born than older children or adults.
- Keep the room warm for the baby.
- During the day, dress or wrap baby.
- At night let baby sleep with mother or close by for breastfeeding.

(iii) Giving cord care

Wash hands before and after cord care

- Do not apply anything on the stump.
- Fold napkin/diaper below stump.
- Keep stump loosely covered with clean clothes
- If the stump is wet, wash with clean water and soap, dry with clean cloth.
- If umbilicus is red or draining pus or blood, give appropriate treatment (refer to Neonatal Infection Module)

(iv) Hygiene

- Wash or bathe a baby in a WARM, draught-free room.
- Wash the face, neck, underarms DAILY.
- Wash the buttocks when soiled. Dry thoroughly.
- Bathe when necessary.
- Use warm water for bathing.
- Thoroughly dry the baby, dress and cover after the bath.
- Use cloth on baby's bottom to collect stool. Dispose as for woman's pads.
- WASH HANDS

DO NOT bathe a baby before 6 hours of age.

DO NOT put anything in the baby's eyes or ear.

(v) Watch out for danger signs and give treatment

Use charts J2-J5 in the annexes to Assess, Classify, Treat, Advice and Follow up.

Case study 1

You are called to see a baby that has a difficulty in breathing. What would you do?

Case study 2

Baby Michael was born at 10:00 in the morning.
He weighs 3200 gms.
His mother's membranes ruptured 22 hours before delivery.
Michael has been classified as .....

Case Study 3

A mother has tested positive to RPR (syphilis). Her baby, Sophie, was born at 12:00 midday, weighing 3000 g. Use J5 to classify.

I. Which drug is prescribed for Sophie?
II. How often does it need to be given?
III. What dose should she be given?

SESSION 9:

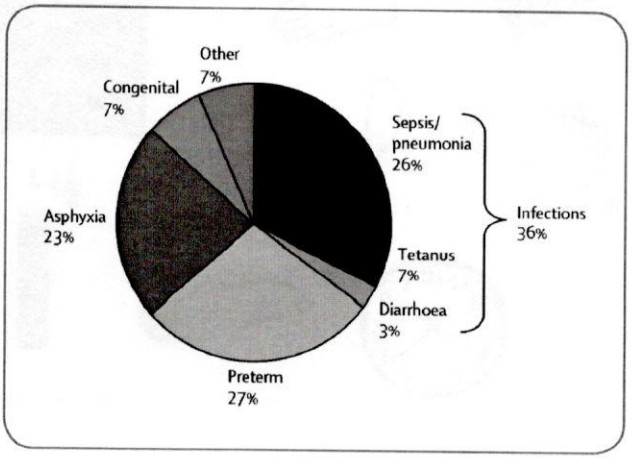
NEONATAL RESUSCITATION

Learning objectives

1. To assess a newborn baby at birth.
2. To perform resuscitation of a newborn baby using standard approach.
3. To learn principles of aftercare for a baby who requires resuscitation at birth.

Introduction

Newborn deaths are mainly caused by asphyxia, infections and prematurity as shown below:



4 million newborn deaths annually, almost all these causes are due to preventable conditions.

Asphyxia causes a ¼ of all neonatal deaths

Appropriate preparation and having a structured approach at resuscitation can greatly reduce these deaths.

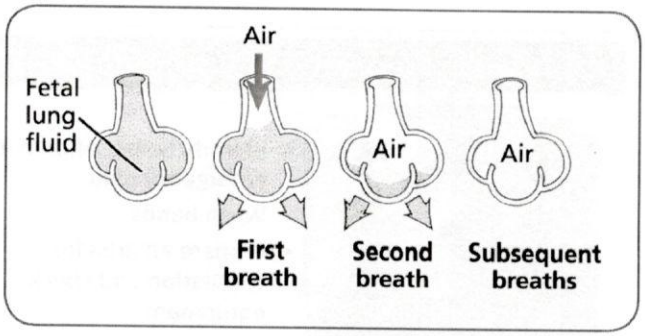
Risk Factors Associated with the Need for Resuscitation	
Maternal Risk Factors Before Birth:	**Risk Factors During Labor:**
• Ruptured membranes over 18 hours. • Pre-eclampsia and eclampsia. • Maternal infection – malaria, HIV, etc. • Premature labor. • Multiple births. • Others.	• Excessive bleeding. • Breech presentation. • Meconium aspiration . • Abnormal fetal heart tones. • Prolapsed or nuchal cord. • Rapid, hard labor. • Foul smelling fluid. • Prolonged labor. • Shoulder dystocia.

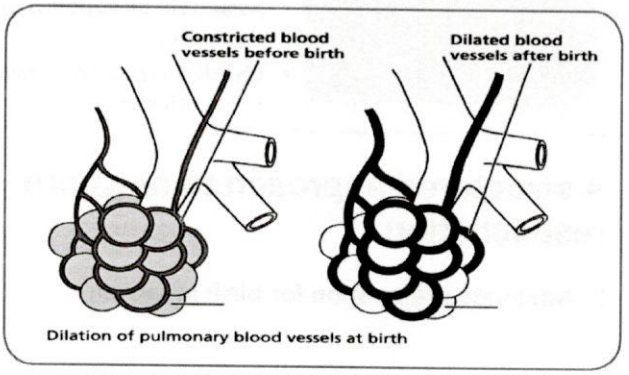
Blood Flow Changes at Birth

- Lungs fill with air.
- Fetal lung fluid leaves air sacs (alveoli).
- Fluid replaced by air in alveoli.

Blood Flow Changes at Birth

- Umbilical cord clamped.
- Increased oxygen in alveoli.
- Blood vessels in the lung tissue relax.
- Blood flow in the lungs increases.

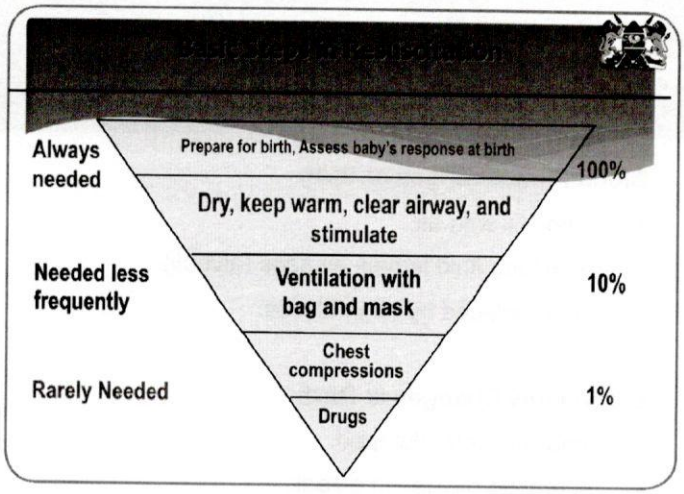




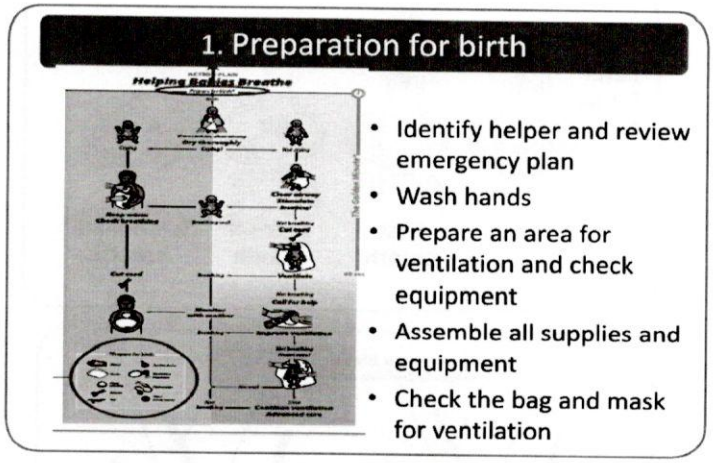
The Golden Minute

- Normal transition results in a crying infant in less than one minute.
- If the infant is not crying by one minute, there is an abnormal transition.
- Action is needed for abnormal transition.
- If needed, assisted ventilation must begin by one minute after birth.

The inverted pyramid shows the interventions required at birth



Newborn care at birth requires a structured approach using an action plan like the one shown below:



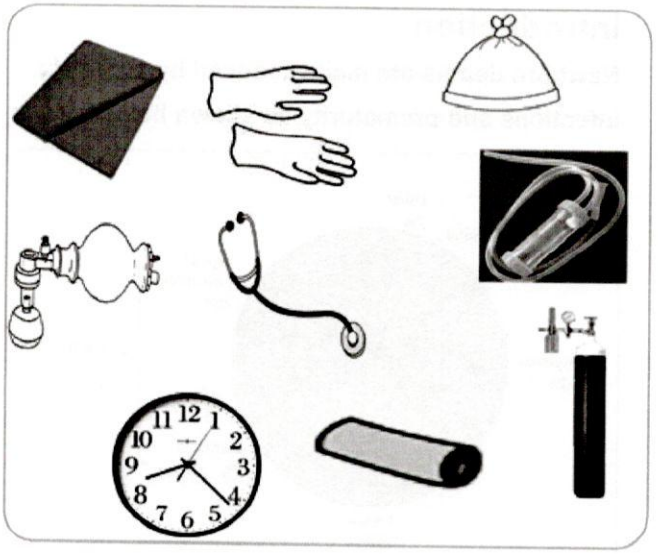
A structured approach to newborn resuscitation

1. Adequate preparation for birth involves:

- Identify helper and review emergency plan.
- Wash hands.
- Prepare an area for ventilation and check equipment.
- Assemble all supplies and equipment.
- Check the bag and mask for ventilation.

The equipments that are commonly required include:

- Radiant heater (if available).
- Two clean, warm towels/clothes.
- Self inflating bag - newborn size.
- Infant masks in two sizes - normal and small newborn.
- Suction device.
- Oxygen (if available).
- Clock, gloves.



2. When the baby is born the routine cares comprises of:

a). Dry Thoroughly.

- **Dry the baby thoroughly at birth.**

Drying helps keep the baby warm and stimulates breathing. If there is meconium in the amniotic fluid, clear the airway before drying.

b). Evaluate the baby

- **About 1 in 10 babies needs help to breathe.** Rapid assessment at birth is the best way to know if a baby needs help to breathe. The baby who is crying needs routine care. A baby who does not cry may need help to breathe.

If the baby is crying:

Position the baby skin-to-skin on the mother's abdomen. Cover the baby with a warm, dry cloth and a cap or other head covering. Check breathing. Cut the cord . Encourage breastfeeding after routine care. Postpone bathing and weighing and keep the area warm

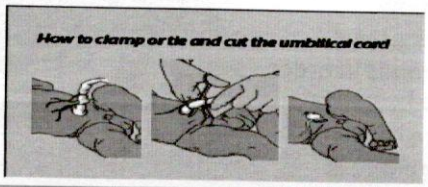
3. How to clamp or tie & cut the umbilical cord

Place two clamps or ties around the cord.

Place the first clamp or tie around the cord about 2 fingerbreadths from the baby's abdomen. Place another clamp or tie about 5 fingerbreadths from the abdomen. **Cut between the clamps or ties with a clean scissors or blade**. Look for any bleeding or oozing of blood. If bleeding occurs, place a second clamp or tie between the first one and the baby's skin. **Leave the cut end of the cord open to the air to dry.**

How to clamp or tie & cut the umbilical cord

- ***Place two clamps or ties around the cord.*** Place the first clamp or tie around the cord about 2 fingerbreadths from the baby's abdomen. Place another clamp or tie about 5 fingerbreadths from the abdomen.
- ***Cut between the clamps or ties with a clean scissors or blade.*** Look for any bleeding or oozing of blood. If bleeding occurs, place a second clamp or tie between the first one and the baby's skin.
- ***Leave the cut end of the cord open to the air to dry.*** Everything that touches the umbilical cord should be clean to avoid infection. Wear clean gloves when clamping or tying and cutting the cord.



Everything that touches the umbilical cord should be clean to avoid infection. Wear clean gloves when clamping or tying and cutting the cord.

If there is meconium stained liquor the steps to follow are:

I. Clear airway first.

- Suction out only what you can see.
- Suction must be gentle.
- Suction first the mouth then the nose.
- Suction not to exceed 3 seconds in each area.

II. Dry thoroughly.

III. Recognize crying.

IV. Keep warm.

V. Check breathing.

VI. Clamp or tie and cut the umbilical cord.

VII. Place on mother's chest to encourage breastfeeding.

If the baby is not crying, the steps to follow are:

- **Keep warm**
- **Position the head**- Position the baby with the neck slightly extended to help keep the airway open

If baby is not Crying...

Steps

- ***Keep warm***
- ***Position the head-*** Position the baby with the neck slightly extended to help keep the airway open
- ***Clear the airway***

Clear the mouth and then the nose with a clean suction device or wipe

- ***Stimulate breathing***

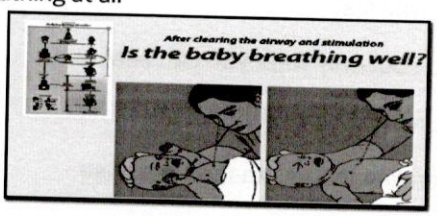
- **Clear the airway** -Clear the mouth and then the nose with a clean suction device or wipe.
- **Stimulate breathing**
- A baby who is breathing well will be crying Or breathing quietly and regularly
- A baby who is not breathing well will be gasping taking a single deep breath followed by a long pause or several deep, irregular breaths followed by a pause or not breathing at all.

If the baby is not crying, EVALUATE

Evaluate the baby if breathing well?

A baby who is breathing well will be Crying Or Breathing quietly and regularly

* A baby who is **not breathing well** will be Gasping - taking a single deep breath followed by a long pause or several deep, irregular breaths followed by a pause or Not breathing at all



Ventilation with bag and mask

Is the most effective way to help the baby who is not breathing or is gasping.

- Ventilation opens the lungs with air.
- Place the baby on a clean, warm, and dry area with good light to assess the baby.
- **Stand at the baby's head-** You will need to control the position of the head and look for movement of the chest.
- **Select the correct mask-** The mask should cover the chin, mouth & nose, but not the eyes. The mask should make a tight seal on the face so air will enter the baby's lungs.

How to ventilate with bag and mask

- Position the head slightly extended
- Position the mask on the face
- Make a firm seal between the mask and the face while squeezing the bag to produce a gentle movement of the chest
- Give 40 (range 30-50) breaths per minute

- Position the head slightly extended.
- Position the mask on the face.
- Make a firm seal between the mask and the face while squeezing the bag to produce a gentle movement of the chest.
- Give 40 (30-50) breaths per minute.
- If the baby is not breathing; call for help but improve on ventilation.

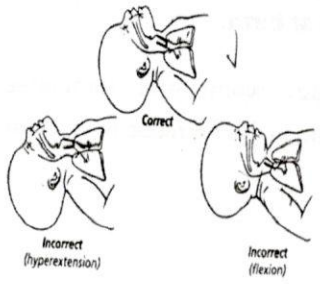
Correct Repositioning/face Mask

CORRECT size face mask

Use the that covers:

- The nose
- The mouth
- The tip of the chin

but NOT the eyes



If the baby is not breathing, continue ventilation and call for help.

- **Head: -** Reapply the mask to the face to form a better seal. Reposition the head with the neck slightly extended.
- **Mouth: -** Check the mouth, the back of the throat, and the nose for secretions and clear as necessary.
- Open the baby's mouth slightly before reapplying the mask.
- **Bag: -** Squeeze the bag harder to give a larger breath.

Evaluate during ventilation if Baby breathing well?

* Decide what care the baby needs after beginning ventilation.
* Stop ventilation when the baby is breathing well.
* A baby who is not breathing well (gasping or not breathing at all) needs continued ventilation with bag and mask.

If the baby is not breathing well after improved ventilation

Check if heart rate normal or slow?

* Check if heart rate normal or slow
* Decide if the heart rate is normal or slow.
* Pause ventilation for several seconds in order to hear the heartbeat
* A heart rate of >100 beats per minute is normal.

Monitor the baby who is breathing after ventilation

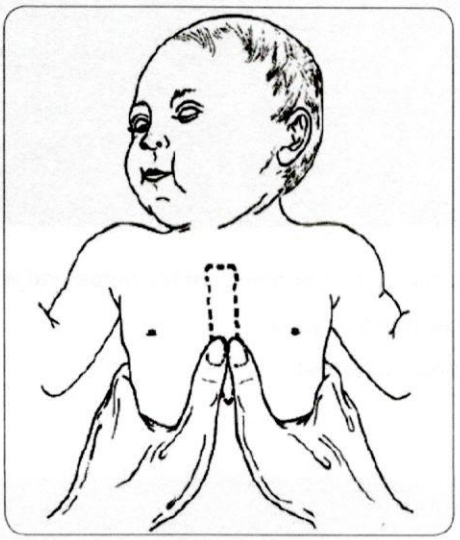
- Monitor the baby with the mother.
- Extended skin-to-skin care may be of special value to the small or sick baby who required ventilation.
- Monitor vital signs including breathing, heart rate, temperature, and color.
- A baby who received ventilation with bag and mask may need assistance with feeding.
- Talk with mother and the birth companion about the baby and the plan of care.

Resuscitation - ventilation and circulation - with very slow or no heart rate

- Assessing the pulse: Use the base of the umbilical cord at the baby's abdomen.
- If the pulse is absent or less than 60/min, begin chest compressions with assisted ventilations.
- The most important and effective action is to ventilate the baby's lungs. Do not interrupt ventilation for long

Chest compression

- Compression to ventilation ratio is 3:1 at a rate of 90 compressions and 30 ventilations delivered per minute.
  - Two people are required to perform CPR.
  - Ventilate with BVM, maintaining airway positioning.



- Encircle chest thumbs meet on the sternum below the inter-nipple line, 1 finger-breadth below nipple line.
- 1/3rd the depth of the chest- the sternum should move about 1.5cm downwards when you press.
- Continue chest compressions until the heart rate reaches 60/min.
- Continue assisted ventilations until the heart rate is sustained at 100/min., and the child is breathing without assistance at 40-60/min.

Drugs and oxygen

- About ¼ of resuscitated babies may need oxygen after 4-5 minutes of resuscitation.
- Drugs are not recommended. Adrenaline (Epinephrine) can be given at 0.1ml/kg of the 1:10,000 concentrations if effective resuscitation is done and patient remains with slow or no heart rate.

NB// In Kenya, adrenaline 1:1000 is commonly available. Dilute 1 ml of adrenaline by adding 9 mls of sterile water for injection to make a 10mls solution (1:10,000).

- Priority is ventilation – do not stop resuscitation to look for oxygen.

Conclusion.

All deliveries should be attended by a skilled birth attendant for optimum outcome. Newborn resuscitation involves a good preparation, routine cares, early identification of breathing problems and intervening to support ventilation.

SESSION 10:

THE SMALL BABY

Objectives.

At the end of this session you should be able to:

- Describe and provide routine care of the small baby.
- Demonstrate to the mother how to care for her small baby.

Define the "small baby"

A "small baby" is a baby:

- Born PRETERM between 32 and 36 weeks gestation, OR
- 1 to 2 months early, OR
- With a birth weight between 1500 g and 2500 g.

A "very small baby" is a baby:

- Born VERY PRETERM at less than 32 weeks gestation, OR
- More than 2 months early, OR
- With a birth weight of less than 1500 g.

Charts J and K found in the annexes will be used for the case studies below.

Case study 1

- Adam has just been born.
- He weighs 1350 g.
- His mother thinks she was pregnant for about 33 weeks.

Use the table in section J to correctly classify Adam and identify the correct treatment and advise:

What is the correct treatment and advice for Adam?
What form should accompany Adam to hospital?

Case study 2

Otieno and his mother Pamela
Read the following Case Study and answer the questions:

Fill in an Examination Recording Form.

- Otieno was born 55 minutes ago at 35 weeks gestation.
- He had no problems at delivery.
- Before giving Otieno to his mother to hold, a nurse weighed and dressed him.
- He weighed 2000 g.
- His mother had colostrum leaking from her nipples.
- After 15 minutes, the nurse told Pamela it was time to try and feed Otieno.
- The nurse held Pamela's breast and tried to attach Otieno. Otieno showed no interest in feeding.
- After 10 minutes of trying to breastfeed, the nurse took Otieno away from Pamela, wrapped him up and put him in a cot next to Pamela's bed.

1. You are asked to do Otieno's first examination.

What have you learned from his notes and what his mother has told you?

From Otieno's notes:

- 35 weeks gestation
- No problems at delivery
- Birth weight 2000 g
- Has not breastfed (not interested)
- Now in a cot. Otieno's Mother has told you:
- No skin-to-skin contact after delivery
- Otieno was dressed when given to her
- Her breasts are leaking milk (colostrum)
- The nurse tried to attach Otieno
- After a few minutes

Otieno was tired and looked as if he was going to sleep.

2. Name the three parts of the newborn examination:

3. You have now finished assessing Otieno and in addition to information from his notes and given by his mother what have you found?

Classify Otieno using the chart in the annexes J and K

4. What colour are the sections of the chart where these signs were found?

5. Your next step is to follow the "Treat and advise" column. What will be the first treatment and advice you will give to Otieno and his mother? Why?

6. What other treatment and advice will you give to Otieno and his mother?

3. You have to reassess Otieno daily. What will you assess?

4. Two days after birth Otieno is beginning to breastfeed. You observe Pamela feeding him. What advice can you give to Pamela?

Cup feeding of small babies

Steps:

1. Wash hands
2. Measure quantity: Refer to the section on alternative feeding
3. Hold baby in semi-upright position
4. Rest cup lightly on lower lip
5. Tip cup so that milk just reaches the baby's lips but do not pour milk into the baby's mouth.

Case study 3

Anna and Jill: Weight

- Anna had a birth weight of 1975 g.
- She is weighed daily.
- She loses 70 g in the first 4 days after delivery.
- Now on day 6 her weight is 1920 g, she has gained approximately 15 g over the past 2 days.
- Her mother wants to take her home.

Is this an acceptable weight gain? What advice will you give to the mother?

Advise Jill to leave the health facility when:

- The baby is breastfeeding adequately and is gaining 15g daily.

What advice do you give Jill about when to return with Anna for a follow-up visit?

Anna and Jill: Immunizations

- Anna was given BCG, OPV-0, during the week after birth (Refer to the Immunization schedule).
- These immunizations are recorded on an immunization card and child records.
- Anna is ready for discharge from hospital on day 11.
- She has been gaining approximately 16 g/day weight for 4 days.
- When should Anna return for further immunizations?
- What other information should Jill be given about seeking care for Anna?

Use the chart provided K14

Which information and counseling sheets should be given to Jill?

Keep your newborn clean

- Wash your baby's face and neck daily. Bathe her/him when necessary. After bathing, thoroughly dry your baby and then dress and keep her/him warm.
- Wash baby's bottom when soiled and dry it thoroughly.
- Wash your hands with soap and water before and after handling your baby, especially after touching her/his bottom.

Care for the newborn's umbilical cord

- Keep cord stump loosely covered with a clean cloth. Fold diaper and clothes below stump.
- Do not put anything on the stump.
- If stump area is soiled, wash with clean water and soap. Then dry completely with clean cloth.
- Wash your hands with soap and water before and after care.

Keep your newborn warm

- In cold climates, keep at least an area of the room warm.
- Newborns need more clothing than other children or adults.
- If cold, put a hat on the baby's head. During cold nights, cover the baby with an extra blanket.

Other advice

- Let the baby sleep on her/his back or side.
- Keep the baby away from smoke.

When to seek care for danger signs

Go to hospital or health centre **immediately, day or night, DO NOT** wait, if your baby has any of the following signs:

- Difficulty breathing.
- Fits.
- Fever.
- Feels cold.
- Bleeding.
- Stops feeding.
- Diarrhoea.
- Difficulty feeding.
- Feeds less than every 5 hours.
- Pus coming from the eyes.
- Irritated cord with pus or blood.
- Yellow eyes or skin.

Breastfeeding: Refer to section on breastfeeding

NOTE:

Small babies are at risk of:

- Hypothermia,
- Sepsis,
- Difficult in feeding,
- Hypoxeamia,
- Apnoea,

To manage these, refer to the relevant sections: Neonatal Infections, Neonatal Resuscitation, Jaundice, Alternative Feeding, Keeping the Baby Warm.

SESSION 11:

KANGAROO MOTHER CARE

Session Objectives

At the end of this session participants will be able to:

- Describe when and how to use kangaroo mother care.
- Demonstrate how to assist and support a mother using kangaroo mother care.

Session Content

Definition/Introduction

- Kangaroo mother care(KMC) is a way of providing a well preterm or low birth-weight baby with the benefits of incubator care, by keeping the mother and baby together with body contact (skin-to-skin) both day and night.
  This kind of care has many advantages.
- It also emphasizes the important central role the mother plays in the survival and well-being of her baby.

The advantages of kangaroo mother care to the baby

The baby is next to the mother's breasts.

This helps to:

- Keep the baby warm and his temperature stable, so the baby uses less energy.
- May reduce hypothermia, i.e. babies becoming clinically cold.
- Keep the baby's heart and breathing rates stable.
- Keep oxygenation, oxygen consumption and blood glucose levels equal or better than infants receiving conventional treatment? In other words, in an incubator.
- Maintains sleep patterns.
- Reduced stress in preterm and low-birth-weight babies, which results in less crying.
- Larger daily weight gains whilst in hospital.
- The baby has ready access to the breast.

The advantages of KMC to the mother and the rest of the family

- It helps the mother to form strong emotional bonds with her baby.
- The mother feels more confident in handling her baby.
- The mother feels good about herself and the care she can give her baby.
- The mother feels less stressed during kangaroo mother care.
- The mother is more likely to exclusively breastfeed her baby.

Any mother who has given birth to a small baby, whether or not kangaroo mother care is being considered, should be encouraged to start expressing her breast milk within 30mins of delivery. The father and other relatives can be involved in providing kangaroo mother care if the mother is sick or needs to be away from her baby.

The benefits of KMC to the health services

- Lower capital investment and recurrent costs.
- There is less need for incubators.
- Earlier discharge times are possible for small babies; reduced readmission rates.
- The mother and family are involved, leaving staff free to provide medical and nursing care.

When to start Kangaroo mother care (KMC)

- When to begin kangaroo mother care depends upon the condition of both the mother and the baby.

It is necessary to look at each mother/baby pair separately as they will each have their own unique set of circumstances to be considered.

- The care of a small baby will depend on his condition. The more preterm the baby and the lower the birth weight, the more problems that are likely to occur. Experience indicates that babies of 1800 g and above can in most cases start KMC after birth, if they are in a stable condition. Babies below this weight commonly have problems that need hospital care and treatment for several days or weeks. The more premature the longer it takes before the baby is stable enough to begin KMC.
- However, kangaroo mother care may provide a sick baby with his best and in some cases, only chance of survival in a situation where referral to a specialized newborn unit is not possible.

Before starting KMC, the following issues should be considered.

It is important that the mother and father do not smoke. Tell the parents of the dangers of other people smoking near their baby or in the same house – this particularly applies to other family members and friends.

The ability to coordinate sucking and swallowing is **NOT** an essential requirement as both preterm and low - birth-weight babies can be fed by gastric tube and later by cup or another feeding method.

- The baby must be free of life-threatening disease or life-threatening malformations. (The management of these conditions has priority over kangaroo mother care, though skin-to-skin contact will still be beneficial until KMC is possible.)

Before starting KMC

The mother needs to be well-prepared.

Discussion should cover the following points:

- The need for continuous skin-to-skin contact;
- How her baby will be fed;
- How to position and attach her baby for breastfeeding;
- How to express her breast milk;
- How she will care for her baby; and
- What she can and cannot do.

Which mothers qualify for KMC?

All mothers can do it. Their age, number of children, education, cultural background, religion and social position are not important.

- She must be willing to do it.
- She must be available all the time to provide the care needed.
- Her general health must be good.
- She has to be near the baby and hospital to start Kangaroo Mother Care when her baby is ready.
- She needs a supportive family and community.

Which babies qualify for KMC?

- The baby must be able to breathe on its own.
- The baby must be free of life-threatening disease or malformations.
- The ability to coordinate sucking and swallowing is not essential; other methods of feeding can be used until the baby can breastfeed.
- Kangaroo mother care can begin at birth, after initial assessment and any basic resuscitation.

What should the baby wear?

- If the surrounding temperature is 22° C - 24° C. then the baby should be naked inside the 'pouch' except for a diaper, a warm hat and socks.
- If the temperature is below this, in addition to the diaper, warm hat and socks, the baby should wear a sleeveless cotton shirt. Emphasize that the shirt should be open in the front to allow the baby's face, chest, abdomen and arms and legs to remain in skin-to-skin contact with the mother's chest and abdomen. The mother then covers herself and her baby with her usual clothes.

What should the mother wear?

- The mother should wear whatever she finds most comfortable and warm for the surrounding temperature. She should ensure that her clothes are big enough to accommodate the baby and that skin-to skin contact can be maintained. In the slide / overhead you will see mothers wearing special clothes, but these are not necessary unless traditional garments are too tight.
- Temperatures below 18 °C may not be high enough to keep the mother warm and her clothing may not provide enough warmth for her baby. In this situation, the room they are in will need to be warmed.

How to place the baby in kangaroo position

- The baby's head should be turned to one side and slightly extended. This slightly extended head position keeps the airway open and allows eye contact between the mother and baby.
- The top of the binder is just beneath the baby's ear.
- Tie the cloth firmly enough so that when the mother stands up the baby cannot slide out.
- Ensure that the tight part of the cloth is over the baby's chest.
- The baby's abdomen should not be constricted and should be somewhere at the level of the mothers stomach. This way the baby has enough room to breathe. The mother's breathing helps stimulate the baby.
- The hips should be flexed and extended in a "frog like" position; the arms should also be flexed.

Moving the baby.

- Whenever the baby is taken out or put back into the pouch or binder it should be as stress free as possible and comfortable for the baby.

This can be done in the following way:

- Demonstrate this manoeuvre with a doll and a participant playing the role of the mother.
- Hold the baby with one hand placed behind the neck and on the back.
- Lightly support the lower part of the jaw with your thumb and fingers to prevent the head from slipping down and blocking the airway when the baby is in an upright position.
- Place the other hand under the baby's buttocks.

The mother's activities during KMC

Once the baby is positioned correctly, during the day the mother can do whatever she likes; she can walk, stand, sit or engage in different activities, recreational, educational or income-generating.

- The only requirements she has to meet are cleanliness and hygiene, including washing her hands frequently, maintaining a low level of noise and regular feeding of the baby.
- When the mother wants to rest or sleep, a reclined or semi-sitting position is best, as in the slide/ overhead. Pillows or cushions or folded blankets can help achieve this on a bed. A semi-sitting position helps the baby to breathe normally.
- If the mother finds the semi-sitting position uncomfortable and cannot sleep she should sleep in her usual position because the advantages of KMC are greater than the risk of her baby developing breathing problems.

Feeding the baby.

- Initially, many KMC babies need to use an alternative feeding method. Some require gastric tube feeding. An ideal size tube is a number 5 to 8 French gauge, which can be left in the baby's stomach between feeds. It needs to be well secured with tape by the side of the baby's nose.

- Before a baby is able to totally breastfeed, some babies need the help of other methods of feeding such as a cup, spoon, syringe or dropper, while other babies are able to move straight from milk expressed into their mouths or from tube feeding to breastfeeding. This transition takes varying amounts of time; about a week is the usual time period.

- Explain to the mother that she can breastfeed her baby in a kangaroo position using the same directions as for direct expression of expressed breast milk into the baby's mouth; although for the first breastfeeds, the baby should be taken out of the pouch and wrapped so that he does not get cold.
- It is helpful to teach the mother about attachment and positioning in advance, otherwise, at this point, teach her the key points to correct positioning and attachment.
- Ask the mother to breastfeed at regular intervals, every 2 to 3 hours during the night and during the day. Continue with frequently scheduled exclusive breastfeeding until the baby shows a satisfactory growth (15 g/day or more) or until the baby reaches 1800 g of weight. Then tell the mother to breastfeed on demand.
- If the mother notices the baby seems to be tired or looks blue or dusky or his colour is not right, then tell her to stop feeding and let the baby rest. Check the baby's breathing after a few minutes.

How long should KMC last?

- Kangaroo Mother Care can be used for babies until they are about 2.5 kg or 40 weeks post-conceptual age. It should continue at least until the baby can maintain a stable body temperature.
- Kangaroo Mother Care should last for as long as possible each day. It may be difficult for the mother to have skin-to-skin contact with her baby continuously for 24 hours a day.

The wider family can help with KMC.

The father or another relative or a close friend can be asked to take over. In this slide/overhead you can see a grandmother, a husband and a mother's brother.

- If the mother needs to have a bath and the air temperature is not too low, the baby can be wrapped in warm towels, cloths and laid on the mother's bed for 10–20 minutes without any harm.
- It is important to reassure the mother that most of the care the baby needs can be done while the baby is in skin-to-skin contact. The only routine reasons the baby will need to be taken from skin-to-skin contact are:
    - For clinical assessment.
    - Cord care.
    - Cleaning and nappy (diaper) change.
    - Sometimes for feeding, especially for cup feeding.

Group exercise

Demonstrating how to place a baby in the KMC position.

Reference Materials

- PCPNC Guide Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential Practice
- Kangaroo Mother Care: A Practical guide. Geneva, WHO, Dept. of Reproductive Health and Research (RHR), 2002

SESSION 12:

ALTERNATIVE FEEDING METHODS

Learning objectives.

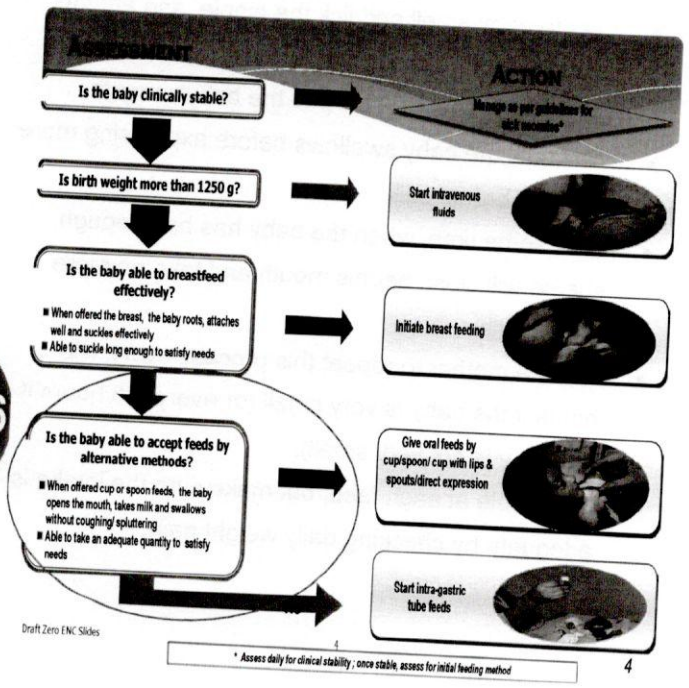
- To describe the options available for alternative methods of feeding.
- To Teach a mother how to use an alternative feeding method.
- To explain how to express breast milk.

Indications of alternative feeding methods are:

Baby - Not breastfeeding effectively
- Not sucking effectively
(e.g. preterm, ill, cleft lip/palate)

Mother - If too ill
- Has flat/inverted nipple or engorged breast
- Is HIV positive and decides not to breastfeed

Alternative feeding methods include:



1. Expression of breast milk.
2. Cup feeding.
3. Expressing breast milk directly into a baby's mouth

Expression of breast milk.

- The mother needs clean containers to collect and store the milk.
- A wide necked jug, jar, bowl or cup can be used.
- Once expressed, the milk should be stored with a well-fitting lid or cover.

Teach the mother to express breast milk:

- To provide milk for the baby when she is away.
- To feed the baby if the baby is small and too weak to suckle
- To relieve engorgement and to help baby to attach
- To drain the breast when she has severe mastitis or abscesses.
- Teach the mother to express her milk by herself. **DO NOT** do it for her.

- **Teach her how to:**
  - Wash her hands thoroughly.
  - Sit or stand comfortably and hold a clean container underneath her breast.
  - Put her first finger and thumb on either side of the areola, behind the nipple.
  - Press slightly inwards towards the breast between her finger and thumb.
  - Express one side until the milk flow slows. Then express the other side.
  - Continue alternating sides for at least 20-30 minutes.
  - If milk does not flow well:
  - Apply warm compresses.
  - Have someone massage her back and neck before expressing.
  - Teach the mother breast and nipple massage.
  - Feed the baby by cup immediately. If not, store expressed milk in a cool, clean and safe place.
- If necessary, repeat the procedure to express breast milk at least 8 times in 24 hours. Express as much as the baby would take or more, every 3 hours.

- When not breastfeeding at all, express just a little to relieve pain.
- If mother is very ill, help her to express or do it for her.

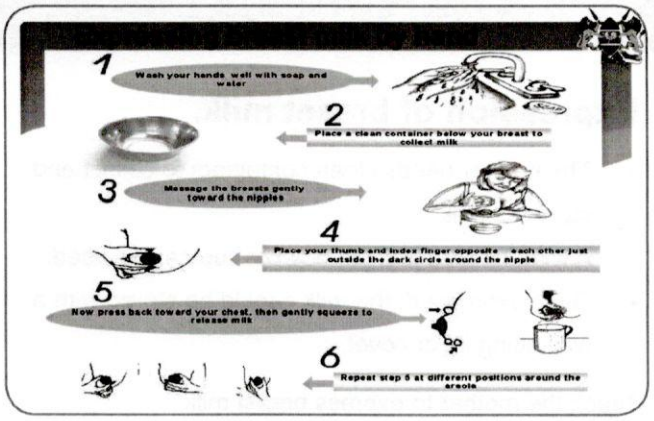
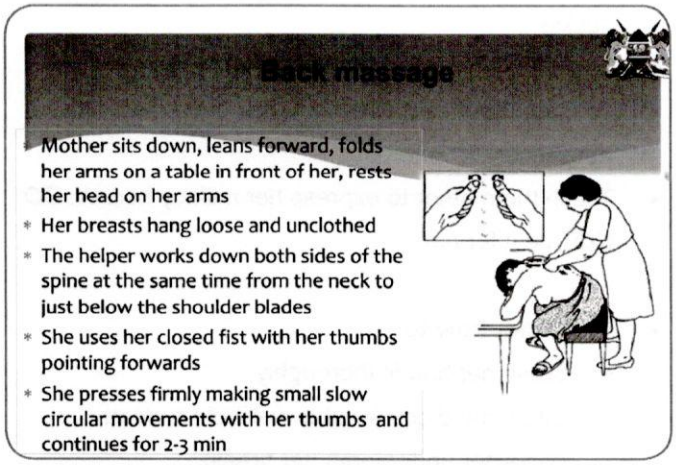


Illustration of Back massage



Cup feeding expressed breast milk

Teach the mother to feed the baby with a cup. Do not feed the baby yourself. The mother should:

- Measure the quantity of milk in the cup
- Hold the baby sitting semi-upright on her lap
- Hold the cup of milk to the baby's lips:
  - Rest cup lightly on lower lip
  - Touch edge of cup to outer part of upper lip
  - Tip cup so that milk just reaches the baby's lips
  - But do not pour the milk into the baby's mouth.
- Baby becomes alert, opens mouth and eyes, and starts to feed.
- The baby will suck the milk, spilling some.
- Small babies will start to take milk into their mouth using the tongue.
- Baby swallows the milk.
- Baby finishes feeding when mouth closes or when not interested in taking more.
- If the baby does not take the calculated amount:
  - Feed for a longer time or feed more often
  - Teach the mother to measure the baby's intake over 24 hours, not just at each feed.
- If mother does not express enough milk in the first few days, or if the mother cannot breastfeed at all, use one of the following feeding options:
  - Home-made or commercial formula.

Feed the baby by cup if the mother is not available to do so.

- Baby is cup feeding well if required amount of milk is swallowed, spilling little, and weight gain is maintained.

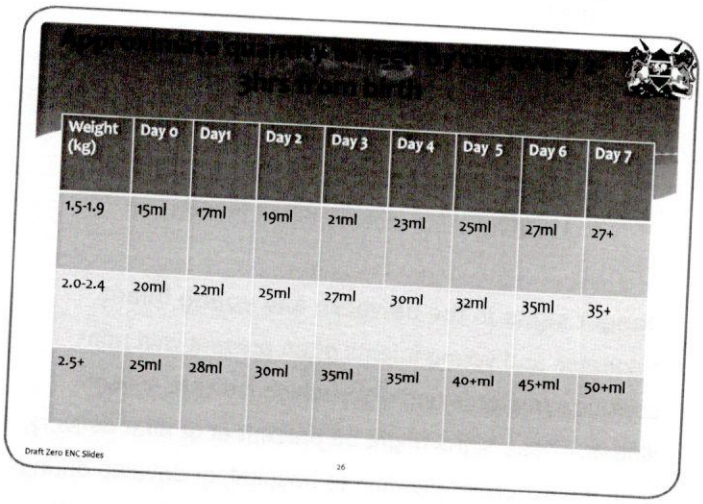
Hand express breast milk directly into the baby's mouth

- Teach the mother to express breast milk.
- Hold the baby in skin-to-skin contact, the mouth close to the nipple.
- Express the breast until some drops of breast milk appear on the nipple.
- Until the baby is alert and opens mouth and eyes, or stimulate the baby lightly to awaken her/him.
- Let the baby smell and lick the nipple, and attempt to suck.
- Let some breast milk fall into the baby's mouth.
- Wait until the baby swallows before expressing more drops of breast milk.
- After some time, when the baby has had enough, she/he will close her/his mouth and take no more breast milk.
- Ask the mother to repeat this process every 1-2 hours if the baby is very small (or every 2-3 hours if the baby is not very small).
- Be flexible at each feed, but make sure the intake is adequate by checking daily weight gain.

Quantity to feed by cup

- Start with 80 ml/kg body weight per day for one day.
- Increase total volume by 10-20 ml/kg per day, until baby takes 200 ml/kg/day. See table below.
- Divide total into 8 feeds. Give every 2-3 hours to a small size or ill baby.
- Check the baby's 24 hour intake. Size of individual feeds may vary.
- Continue until baby takes the required quantity.
- Wash the cup with water and soap after each feed.

APPROXIMATE QUANTITY TO FEED BY CUP (IN ML) EVERY 2-3 HOURS FROM BIRTH (BY WEIGHT)



Weight (kg)	Day 0	Day1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1.5-1.9	15ml	17ml	19ml	21ml	23ml	25ml	27ml	27+
2.0-2.4	20ml	22ml	25ml	27ml	30ml	32ml	35ml	35+
2.5+	25ml	28ml	30ml	35ml	35ml	40+ml	45+ml	50+ml

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Signs that baby is receiving adequate amount of milk.

- Baby is satisfied with the feed.
- Weight loss is less than 10% in the first week of life.
- Baby gains at least 160 g in the following weeks or a minimum 300 g in the first month.
- Baby wets every day as frequently as baby is feeding.
- Baby's stool is changing from dark to light brown or yellow by day 3.

References:

- Integrated management of pregnancy and childbirth
- WHO Essential newborn care course participant's workbook

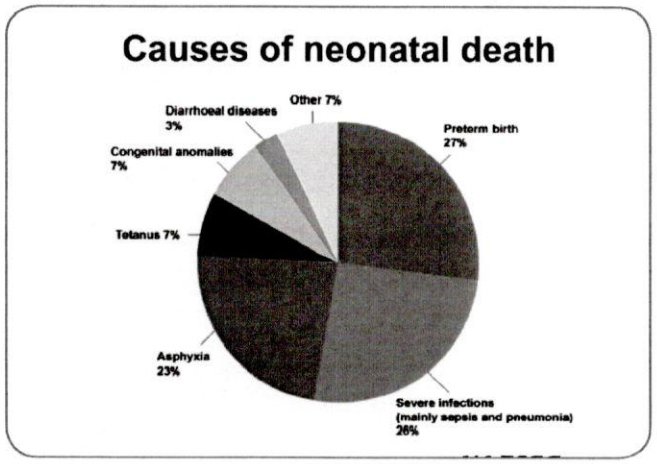
SESSION 13:

NEONATAL INFECTION AND JAUNDICE

Learning Objectives

1. To List methods of prevention of neonatal infection
2. To Identify danger signs in newborn and young infants.
3. To list risk factors of serious bacterial infection
4. To identify treatment of neonatal infection
5. How to manage Jaundice

Introduction to neonatal infection



Risk factors for serious bacterial infections.

- Maternal fever (temperature >37.9 Celsius before delivery or during labour).
- Membranes ruptured more than 18 hours before delivery.
- Foul smelling amniotic fluid.

Prevention of Neonatal Infections

Many early neonatal infections can be prevented by:

- Good basic hygiene and cleanliness during delivery of the baby.
- Special attention to cord care
- Eye care.

Many late neonatal infections are acquired in hospital.

These can be prevented:

- Exclusive breastfeeding
- Strict procedures for hand washing for all staff and for families before and after handling babies
- Not using water for humidification in incubators (where Pseudomonas can easily colonize) or by avoiding incubators (using kangaroo mother care instead
- Strict sterility for all procedures
  - Clean injection practices
  - Removing intravenous drips when they are no longer necessary
  - Avoiding unnecessary blood transfusion

Danger signs in the newborn and young infant

Neonates and young infants often present with non-specific symptoms and signs which indicate severe illness. These signs might be present at or after delivery, or in a newborn presenting to hospital, or develop during hospital admission. Initial management of the neonate presenting with these signs is aimed at stabilizing the child and preventing deterioration.

Signs include:

- Unable to breastfeed.
- Convulsions.
- Lethargic or drowsy.
- Unconscious.
- Respiratory rate less than 20/min or apnoea (cessation of breathing for >15 secs).
- Respiratory rate greater than 60/min (normal 40-60 breaths/min).

Others

- Deep jaundice.
- Severe abdominal distension.

Signs of localized infection are:

- Painful joints, joint swelling, reduced

movement, and irritability if these parts are handled.

- Many of the severe skin pustules.
- Umbilical redness extending to the peri-umbilical skin or umbilicus draining pus.
- Bulging fontanelle.

Suspect meningitis if the following are present:

General signs

- Drowsy, lethargic or unconscious.
- Reduced feeding.
- Irritable.
- High pitched cry.
- Apnoeic episodes.

More specific signs

- Convulsion
- Bulging fontanelle

Do a Lumbar Puncture (LP) if you suspect meningitis, unless the baby is having apnoea or there is no motor response to stimuli.

Treatment

Antibiotic Therapy.

- Admit to hospital.
- Where blood cultures are available, obtain blood cultures before starting antibiotics.
- For any of these signs, give ampicillin give(or penicillin 50,000 iu/kg/bwt 12 hourly) and gentamicin 5mg/kg 12 hourly for 5 days.
- Give cloxacillin (if available) instead of penicillin if there are extensive skin pustules or abscesses as these might be signs of Staphylococcus infection.
- Most serious bacterial infections in neonates should be treated with antibiotics for at least 10 days.
- If not improving in 2–3 days, the antibiotic treatment may need to be changed, or the baby referred.

If meningitis is suspected or confirmed

- Give crystapen penicillin 50,000 iu per kg 12 hourly and gentamicin 5mg/kg once daily or a third generation cephalosporin, such as ceftriaxone (50 mg/kg every 12 hours - might cause biliary sludge leading to jaundice) or cefotaxime (50 mg/kg every 6 hours) for 2-3 weeks.
- Alternative antibiotics are penicillin and gentamicin

Localised infections

- For management of pus draining from eyes (tetracycline/ ointment 4 times daily for 5 days Plus Ceftriaxone 50mg/kg once or Kanamycin).
- For infection of the umbilicus swab, the umbilicus and the area around it with 0.5% gentian violet 4 times a day until there is no pus coming from the umbilicus.
- If the area of redness and swelling extends more than 1 cm beyond the umbilicus, treat with IV Cloxacillin.

Other treatment

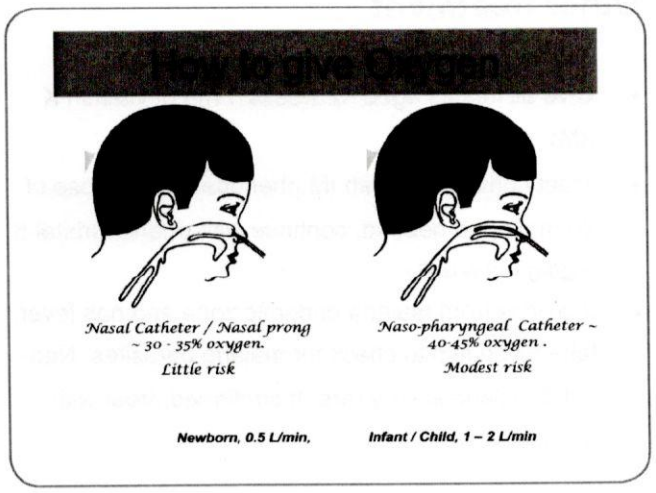
- Give all infants aged <2 weeks 1 mg of vitamin K (IM).
- Treat convulsions with IM phenobarbital (1 dose of 20 mg/kg). If needed, continue with phenobarbital 5 mg/kg once daily.
- If child is from malaria endemic zone and has fever, take blood film to check for malaria parasites. Neonatal malaria is very rare. If confirmed, treat with quinine.

Supportive Care

Supportive care for the sick neonate

Thermal environment

- Keep the young infant dry and well wrapped.
- A cap is helpful to reduce heat loss. Keep the room warm (at least 25 °C) Keeping the young infant in close skin-to-skin contact with the mother ("Kanga-roo Mother Care") for 24 hours a day is as effective as using an incubator or external heating device to avoid chilling.
- Pay special attention to avoid chilling the infant during examination or investigation.
- Regularly check that the infant's temperature is maintained in the range 36.5–37.5 °C rectal, or 36.0–37.0 °C axillary.
- Feeding
  - Encourage the mother to breastfeed frequently to prevent hypoglycaemia. If unable to suckle, give expressed breast milk by nasogastric tube.
  - Withhold oral feeding in the acute phase in babies who are lethargic or unconscious, those having frequent convulsions or those with severe abdominal distension



Fluids.

Increase the amount of fluid given over the first 3–7 days (total amount, oral and IV).

- Day 1 60 ml/kg/day.
- Day 2 80 ml/kg/day.
- Day 3 100 ml/kg/day.
- Then slowly increase by 20ml/kg per day to 150 ml/kg/day (IV) and 200 ml/kg/day (oral).

Oxygen therapy

Oxygen is needed in young infants with any of the following:

- Central cyanosis.
- Grunting with every breath.
- Difficulty in feeding due to respiratory distress.
- Severe lower chest wall indrawing.

Neonatal Jaundice

- Definition and Types.
- Investigations.
- Treatment.

Definition of jaundice

It's the yellow coloration of the skin, mucous membranes and or the eyes. It may be physiological (normal) or pathological (abnormal). More than 50% of normal new-borns, and 80% of preterm infants, have some jaundice.

Abnormal (non physiological) jaundice is defined as:

- Jaundice starting on the first day of life.
- Jaundice lasting longer than 14 days in term, 21 days in preterm infants.
- Jaundice with fever.
- Deep jaundice: palms and soles of the baby are deep yellow.

Normal (physiological) jaundice - Skin and eyes appearing yellow but with none of the above signs.

For physiological jaundice, educate the mother/caregiver to watch out for danger signs.

- Continue breastfeeding.
- Keep warm.

Abnormal jaundice may be due to:

- Serious bacterial infection.
- Hemolytic disease due to blood group incompatibility or G6PD deficiency.
- Congenital syphilis or other intrauterine infection.
- Liver disease such as hepatitis or biliary atresia.
- Hypothyroidism.

Investigations for abnormal jaundice

The clinical impression of jaundice should be confirmed by a bilirubin measurement, where possible. The investigations depend on the likely diagnosis and what tests are available, but may include:

- Hemoglobin or PCV.
- Full blood count to look for signs of serious bacterial infection (high or low neutrophil count with >20% band forms), and to look for signs of haemolysis.
- Blood type of baby and mother, and Coombs test.
- Syphilis serology such as VDRL tests.
- Thyroid function tests.
- Liver ultrasound.

Treatment

Phototherapy if:

- Jaundice on day 1.
- Deep jaundice involving palms and soles of the feet.
- Prematurity and jaundice.
- Jaundice due to haemolysis.

Phototherapy check list.

- Shield the eyes with eye patches. - Remove periodically- during feeds.
- Keep the baby naked .
- Place the baby close to the light source – 45 cm distance is often recommended.
- Continue breastfeeding.

Monitor temperature every 4 hrs.

Periodic (12 to 24 hrs) plasma/serum bilirubin test

Treatment of jaundice based on serum bilirubin level

Treatment of jaundice based on serum bilirubin level.

Day	Phototherapy				Exchange transfusion			
	Healthy term baby		*Preterm or any risk factors*		*Healthy term baby*		*Preterm or any risk factors*	
	mg/dl	*micromol/l*	*mg/dl*	*micromol/l*	*mg/dl*	*micromol/l*	*mg/dl*	*micromol/l*
1	Any visible jaundice		Any visible jaundice		15	260	13	220
2	15	260	13	220	25	425	15	260
3	18	310	16	270	30	510	20	340
>4	20	340	17	290	30	510	20	340

Reference Materials

Pocket book of Hospital care for children- WHO .

Basic Paediatrics Protocols 2010 - Ministry of health-Kenya

SESSION 14:

SPECIAL TREATMENT FOR NEWBORNS AT RISK OF HIV / TB / SYPHILLIS

Objectives.

- Classification and management of babies at risk of congenitally transmitted HIV, TB and Syphillis.

These babies receive all the care at birth like all newborns. Information can be obtained from records following the format below.

Classification and treatment of babies who require special treatment

	Ask, check record.	Signs.	Classify.	Treat and advise.
1.	Mother tested RPR-positive?	Mother tested RPR-positive.	Risk of congenital syphilis	• Give baby single dose of benzathine Penicillin. • Ensure mother and partner are treated. • Follow up in 2 weeks.
2.	Mother tested HIV+?	Mother counselled & tested HIV-positive.	Risk of HIV	If mother on : i. On HAART regardless of breastfeeding status give baby Nevirapine 2mg/kg/bwt once daily for 6/52. ii. On prophylaxis two options: - If breastfeeding give baby Nevirapine 2mg/kg/bwt once daily till one week cessation of breastfeeding. - If not breastfeeding, give baby Nevirapine 2mg/kg/bwt once daily for 6/52 • Ensure mother, partner & other siblings are tested. • Follow up in 2 weeks.
3.	Is the mother receiving TB treatment which began <2 months ago?	Mother started TB treatment <2 months before delivery.	Risk of Tuberculosis.	• Give baby isoniazid 5mg/kg/bwt prophylaxis for 6 months. • Give BCG vaccination to the baby only when baby's treatment completed. • Follow up in 2 weeks. • Do check X Ray at 6/52 and review if baby has active TB.

Possible congenital syphilis

Ensure that the mother and her partner get treatment with IM Benzathine penicillin 2.4 million units in each buttock once. If allergic to penicillin, then use erythromycin 500mg 6hrly for 15 days. If the partner is allergic to penicillin, then he gets tetracycline 500mg 6hrly for 15 days, or Doxycycline 100mg 12 hrly for 15 days. The baby gets IV Crystapen 50,000 units 12 hrly for 10 days, or IM Procaine penicillin 50,000units daily for 10 days, or IM Benzathine penicillin 50,000 units once. ***Follow up in 2 weeks***

Babies at risk of HIV transmission

Explain the risks of HIV transmission through breastfeeding and not breastfeeding

- Five out of 20 babies born to known HIV-positive mothers will be infected during pregnancy and delivery without ARV medication. Three more may be infected by breastfeeding.
- The risk may be reduced if the baby is breastfed exclusively using good technique, so that the breasts stay healthy.
- Mastitis and nipple fissures increase the risk that the baby will be infected.
- The risk of not breastfeeding may be much higher because replacement feeding carries risks too:
    - Diarrhoea because of contamination from un clean water, unclean utensils or because the milk is left out too long.
    - Malnutrition because of insufficient quantity given to the baby, the milk is too watery, or because of recurrent episodes of diarrhoea. Give special counseling to mother who is breast feeding.

Support the mother in her choice of breastfeeding.

Ensure the mother is receiving HIV management and support according to national PMTCT guidelines

- Ensure good attachment and suckling to prevent mastitis and nipple damage.
- Advise the mother to return immediately if:
    - She has any breast symptoms or signs.
    - If the mother develops mastitis, she should not feed the baby on the affected breast, express milk from this breast and discard while continuing feeding the baby on the other breast.
    - The baby has any difficulty feeding.
- Ensure a visit in the first week to assess attachment and positioning and the condition of the mother's breasts.
- Arrange for further counseling to provide her with ongoing support for exclusive breastfeeding in the first 6 months and complementary feeding thereafter.
- Give psychosocial support and follow up in 2 weeks

ARV Prophylaxis for the baby

1. If mother received HAART, give Nevirapine 2mg/kg/day for 6 weeks.
2. For mothers on prophylaxis, give Nevirapine 2mg/kg/day until 1 week after complete cessation of breastfeeding.

Babies continue attending child welfare clinic as per the national guidelines. Cotrimoxazole prophylaxis should start at six weeks for all exposed children.

Babies at risk of tuberculosis.

Mothers with smear positive tuberculosis who have been on treatment for less than 2 months can infect their newborn babies. These babies will require the following:

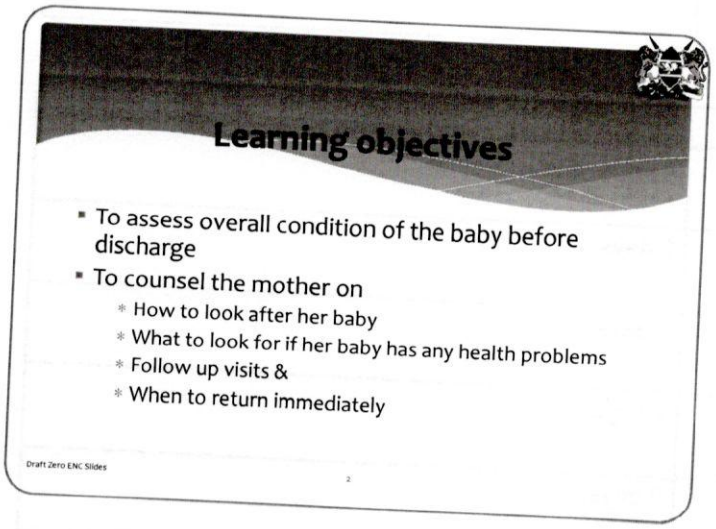
- Isoniazid prophylaxis at 5 mg/kg isoniazid (INH) orally once a day for 6 months (1 tablet = 200 mg)
- Delay BCG vaccination until INH treatment completed, or repeat BCG
- At 6 weeks, do a chest X-ray and review the baby, if there are any signs of active disease, treat for TB as per national guidelines.
- Reassure the mother that it is safe to breastfeed the baby.
- Follow up the baby every 2 weeks or according to national guidelines, to assess weight gain.

References:

1. WHO IMPAC 2003: PCPNC.
2. National Recommendations for PMTCT, IYCF and ART therapy for Children adults and adolescents; MOPHS/MOMS Circular Ref NASCOP/CTS/17 of 15/7/2010.
3. Pocket book of hospital care for children (WHO).

SESSION 15:

PRE-DISCHARGE EVALUATION OF THE NEWBORN



Assess

- Breastfeeding
- Breathing
- If passed urine
- If passed Meconium

Look

- Danger signs
- Condition of the cord
- Jaundice
- Movements: Are they normal and symmetrical.
- Birth notification.
- If received immunization.
- If received vitamin K, TEO.

Feel:

- Temperature.

For Mother:

Check if:

- Mother received vitamin A.
- Breast engorgement or
- Mastitis.

Counseling on Discharge:

Counsel parents before discharge on:

- Exclusive breastfeeding.
- Keeping the baby warm.
- Danger signs for seeking care.

FOLLOW - UP VISITS.

Routine Visits

Postnatal visit.	**Return.**
Immunization visit. (If BCG, OPV-0 given in the first week of life).	Within the first week, preferably within 2-3 days. At age 6 weeks.

FOLLOW -UP VISITS.

If the problem was:	**Return in**
Feeding difficulty.	2 days.
Red umbilicus.	2 days.
Skin infection.	2 days.
Eye infection.	2 days.
Thrush.	2 days.
Mother has either:	
• Breast engorgement or	2 days.
• Mastitis.	2 days.

When to return immediately.

Danger signs:

- Not able to breastfeed.
- Difficulty breathing.
- Convulsions.
- Fever.
- A cord stump which is red or draining pus or bleeding.
- Skin pustules.
- Floppy or stiff.
- Pallor.

Other signs:

- Pus from eyes.
- Yellow skin.
- Feeds <5 times in 24 hours.

Referral.

- Ensure safe and timely transfer.
- Explain to the family.
- Obtain consent for anticipated procedure.
- Transfer mother with baby if possible.
- Prepare the baby.
- Ensure baby's condition is stable.
- Keep baby warm.
- Give necessary treatment before transfer.
- Ensure that an IV line is present and fluids are running if possible.
- Gather essential equipment, supplies, drugs and fluids.
- Communicate with the receiving facility.
- To be accompanied by a health care provider.
- Provide care during transfer.