Essential Care for Every Baby Training Facilitators' Manual

Federal Ministry of Health

MARCH, 2016
Addis Ababa, Ethiopia

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Acknowledgment

The Federal Ministry of Health of Ethiopia would like to express its sincere appreciation for the National Child Survival Technical Working Group (NCSTWG) and the Newborn TWG for initiating the revision of the Essential Newborn Care training manual that evolved into the Essential Care for Every Baby training manual.

The FMOH would like to acknowledge American Academy of Pediatrics for making the training packages on “Helping Babies Breathe”, “Essential Care for Every Baby”, and “Essential Care for Small Baby” available for public use. This training manual highly benefited from the three training packages. The Ministry also acknowledges the support of the EU for its support in printing this training material.

The Federal Ministry of Health of Ethiopia is always grateful to all health professionals, administrative workers, facility managers and leaders, health development partners and individuals who are tirelessly working to help Ethiopian newborns to have a better opportunity to survive and thrive.

Foreword

Ethiopia is one of the few countries in the world that has achieved the targets for the Millennium Development Goal (MDG) 4 by 2012 by cutting under-five mortality rate by two-third from its 1990 level. However, the current under-five and neonatal mortality rates for the country that stand at 63 and 28 per 1,000 live births, respectively, are still high compared to global average. In addition, although the reduction in under-five mortality rate was high the neonatal mortality reduction was not as impressive. Cognizant of this, the government of Ethiopia renewed its commitment by developing a Newborn and Child Survival Strategy that aims to further reduce under-five mortality and neonatal mortality rates to 29 and 11 per 1,000 live births by 2020.

The ministry recognizes that, along with strengthening the community based newborn care programs, these ambitious targets will be achieved through strengthening the quality of newborn care provided in hospitals and health centers through equipping facilities with trained providers, equipment, drugs and supplies. To this effect the ministry has been working to organize the newborn care services provided in health facilities by different levels depending on the type of health facilities. Accordingly, hospitals will provide basic newborn care and additional care for newborns with problems through their Neonatal Intensive Care Units (NICUs), hospitals can have Level I, II or III NICU based on their category and should aspire to achieve a higher level of care. Health centers are expected to provide essential care for every baby and provide selected additional care using their newborn care corners.

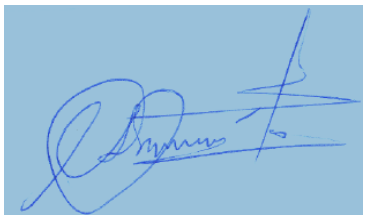
We are confident that the Essential Care for Every Baby Training manual that uses hands-on competence based training technique will strengthen quality of newborn care provided both in the hospitals and health centers. The training will also help providers to make prompt diagnosis of newborn health problems and initiate appropriate care thereby avoiding preventable deaths in the health facilities.

Dr. Ephrem Tekle
Director, Maternal and Child Health Directorate
Federal Ministry of Health

APPROVAL STATEMENT OF THE MINISTRY

The Federal Ministry of health of Ethiopia has been working towards standardization and institutionalization of In-Service Trainings (IST) at national level. As part of this initiative the ministry developed a national in-service training directive and implementation guide for the health sector. The directive requires all in-service training materials fulfill the standards set in the implementation Guide to ensure the quality of in-service training materials. Accordingly, the ministry reviews and approves existing training materials based on the IST standardization checklist annexed on the IST implementation guide.

As part of the national IST quality control process, this Essential Care for Every Baby IST package has been reviewed based on the IST standardization checklist and approved by the Ministry on March, 2016.



Dr Getachew Tollera

Human Resource Development & Administration

Directorate Director

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Acronyms

AMSTL	Active Management of Third Stage of Labour
ECEB	Essential Care for Every Baby
ECSB	Essential Care for Small Baby
ENC	Essential Newborn Care
HBB	Helping Babies Breathe
HIV	Human Immunodeficiency Virus
KMC	Kangaroo Mother Care
LBW	Low Birth Weight
MDG	Millennium Development Goal
NEC	Necrotizing Entero-Colitis
NG	Nasogastric Tube
OSCE	Objective Structured Clinical Evaluations
PROM	Premature Rupture of Membrane
SBI	Severe Bacterial Infection
WHO	World Health Organization

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Introduction and rationale
Overview of the training manual
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Newborn Health in Ethiopia

Module 1: Introduction and overview of the training manual

Module Objectives	By the end of this module, participants will be able to: • Describe the contents of the training manual • List training goals and objectives • Identify key newborn issues in Ethiopia • Demonstrate the standard precautions in delivery and newborn care • Effectively communicate with and counsel mothers and care takers
Time the session requires	1 hours and 20 minutes
Materials and methods for the sessions	Materials: • LCD projector and desktop/laptop computer • Flips charts and markers • Notebook, pen and pencils for participants • Sessions 1.1 – 1.5 Methods • Brainstorming • Small group exercise and sharing to the class • Role-plays • Demonstrations • Facilitators summarize the key points

Session 1.1: Introduction

In Ethiopia, under-five mortality rate has declined by two thirds from the 1990 figure of 204/1,000 live births to 68/1,000 live births in 2012, thus meeting the target for Millennium Development Goal 4 (MDG 4) on child survival three years ahead of time. By 2015 the estimated under five mortality of Ethiopia has decreased to 59/1,000 live births. In absolute numbers the under-five deaths in Ethiopia has declined from nearly half a million, 444,000 a year in 1990, to about 184,000 in 2015. However, the mortality reduction was not uniform across the different childhood age groups. Disaggregation of the mortality data by age reveals that the decline in neonatal mortality is not as impressive as the infant and child mortality figures. It has fallen only by 46% during the same period; from 54/1000 live births in 1990 to 28/1000 live births in 2015. According to the UNIGME 2015 report, about 47% of the childhood deaths occur within the first 28 days of life, thus increasingly accounting for a larger proportion of the under five deaths.

The main reason that prompted the provision of this course is to reduce newborn mortality by enabling health professionals to indentify, classify and treat major newborn health problems in Ethiopia

Session 1.2: Overview of training manual

Training modules:

The "Essential Care for Every Baby" training applies problem centered competency-based modular training method. The contents of the training manual are adapted from the precursor "Essential Newborn Care" training manual for Ethiopia, the APA material on "Helping Babies Breathe" learners' book, "Essential Care for Every Baby" provider guide, "Essential Care for Small Baby" provider guide, the WHO materials in the Integrated Management of Pregnancy and Childbirth (IMPAC) series, the WHO "Essential Newborn Care Course" participants' workbook and the Basics skills course reference manual on "Integrated Maternal and Newborn Care".

The "Essential Care for Every Baby" training facilitators' manual contains five modules. The first module highlights training objective and goals, introduces the situation of newborns in Ethiopia, and covers important cross-cutting issues such as standard precautions and counseling and communication. It also discusses key issues in the preparation for every birth.

The second module on "Essential Newborn Care" provides hands on training on essential newborn care provided at birth. The module also highlights other essential newborn care packages that should be provided following birth and before the newborn is discharged from the health facility.

The third module on "Helping Babies Breathe" covers the basic knowledge on respiratory adaptation and practical competency based training on neonatal resuscitation (Helping Babies Breathe). The module provides hands-on training on different levels of care that is provided to babies with breathing problems taking six possible case scenarios.

The fourth module on "Essential Care for Small Babies" discusses extra essential care that should be given to small or premature babies in addition to the essential newborn care provided at birth for every babies. The practical sessions of the module with six possible scenarios aims to equip trainees with skills to provide quality care for small or premature babies that require different level of care and referral. Continuous skin-to-skin care, expressing and feeding the breast milk by cup or nasogastric tube, and closely monitoring the babies are some of the critical issues that are addressed by the module.

The fifth module on "Management of Infection in Newborns" highlights timing and types of newborn infections; presents algorithm to assess, classify and treat newborns with infections and jaundice; and discusses antibiotic regimens treatment of serious illnesses in newborns and referral care to newborns who need advanced care at higher level.

The training goal

The main goal of the "Essential Care for Every Baby" is to deliver basic knowledge and skills to provide essential care for all babies including life saving interventions provided for babies with asphyxia, infection and prematurity.

Core competencies

After completing this skill based course the trainees are able to

- Perform delivering the newborn in to the abdomen, dry and stimulate the newborn, cord care, skin to skin contact, breast feeding, apply TTC ointment, and administer vitamin K
- Perform resuscitation for asphyxiated newborn
- Perform KMC
- Administer pre-referral treatment to newborns with sepsis

Course objectives

The aim of the course is to enable the trainees in executing the following major objectives

- Explain the physiology respiratory adaptation of the newborn
- Evaluate the baby's breathing
- Perform basic resuscitation using bag & mask for babies with difficulty of breathing
- Provide continuous resuscitation for babies who require continuous breathing support

- Provide post resuscitation care (counseling, follow-up and transfer where required).
- Evaluate and manage the LBW babies
- Provide KMC, NG tube and cup feeding of the low birth weight infants

The training participants and selection criteria

The training on "Essential Care for Every Baby" is intended for midlevel health care workers involved in obstetric and newborn care provision in health centers and hospitals in Ethiopia. To be eligible for this training participants should be currently involved in the provision of obstetric and newborn care services; have a minimum of BSc level training in relevant field (Medical Doctor, Health Officer, Midwife Nurse, Clinical nurses etc.); and have committed to provide obstetric and newborn care service for at least one year after completion of the training.

Trainer qualification/requirement

The trainer for this course should be a clinician working in the area of newborn health and has got a TOT on Essential Newborn Care training and approved by the regional health bureau or the federal Ministry of Health.

Methods of course evaluation

Participant evaluation

- Pre- and post-course knowledge assessment
- Skill assessment of observed practice during role plays, drills and practicum
- Attendance
- A trainee is certified of this training course if:
    - Scores 70% or more in the post test
    - His/her attendance during the training is 90% or more

Course evaluation

- Daily evaluation
- End course evaluation

Post training evaluation

- Integrated supportive supervision

Training duration

It takes four days to complete all the modules of the training with adequate hands-on support by well-trained facilitators. Trainees need to continue exercising the skills at their health facilities after the training to ensure they maintain some of the skills that are very

critical yet are not routinely encountered in their practice (example could be neonatal resuscitation).

Training methodology

The training is a skill based training that focuses to provide the basic skills of resuscitation, provision of essential care for every baby, care for preterm babies and for sick babies using mannequins for small and term baby, resuscitators, breast models, role plays, KMC apparatuses, wall charts, continues practices based on case scenarios and self learning and self and peer evaluation.

Trainee assessment and certification criteria

The success of the training depends on the trainee's active participation and continues self evaluation after each skill. All trainees will not pass to the next level of skill training unless they succeed to get 80% of the self evaluation and skill evaluation by the trainer. The overall passing grade will be above 80% of the total knowledge and skill evaluation.

Preparation for the training

Session 1.3: Prepare for the training

Facilitators and coordinators of the ECEB training need to be well prepared to effectively deliver the course to the selected participants. Preparation include assembling and organizing the teaching materials, preparing yourself, preparing the learners, preparing space for learning, engaging the learners, and evaluating knowledge and skills of learners.

1. Assembling and organizing the teaching materials

Make sure you have all the educational materials, equipment, and supplies needed for the training. For the training sessions learners will be organized in groups of six. Each group will use a Facilitator Flip Chart. Each learner will need a recording sheet for the Knowledge Check (multiple choice question exam) and Objective Structured Clinical Evaluations (OSCEs). All materials and supplies for the exercises should be assembled in advance. List of materials needed for each module are listed at the beginning of the modules, all need to be prepared before the training begins.

2. Prepare yourself

Essential care for every baby flipchart

Review the Facilitator side of each Flip Chart page. Each page is divided into five sections:

- Background – a brief summary of the reason why the action is an important element of essential care and other details about the action
- Educational advice – advice that will assist you in creating the ideal learning experience [Note: decide in advance what aspects of the action will be explained and which will be demonstrated.]
- Explain and demonstrate – key points that you will be expected to present to the learner
- Invite discussion – suggested questions that will provoke discussion among the learners about the unique factors related to the action in the context of local care
- Facilitate practice – guidance about how learners should practice skills required to perform each action [Note: practice of selected pairs of actions have been combined]

Familiarize yourself with other pages of the Flip Chart:

- Exercises – includes exercises that combine a series of actions to help the learner understand how to integrate these actions in the continuum of care
- Explain use of the participants' manual – guides your preparation of the learner to maintain and increase competence after completion of the course

- Mastering the Action Plans for the three modules – provides a template for practicing skills in the context of the Action Plan
- Knowledge check and OSCEs – evaluates learners by testing cognitive knowledge and skills

Familiarize yourself with treatments that are standards of care in Ethiopia:

- These treatments might include:
    - Eye care
    - Cord care
    - Immunizations and Vitamin K
    - Antibiotic usage
    - Chlorhexidine
- The decision to teach a treatment that differs from one recommended in this program should be agreed upon in advance with the course director in consultation with the health authority.
- To facilitate learning, supplemental teaching material relevant to these treatments may need to be provided.
- Facilitators are urged to prepare a table of dosages for locally used.

Neonatal Resuscitation flipchart

Use the Facilitator Flipchart to guide the presentation of knowledge and skills.

- Present and demonstrate – outlines key knowledge and skills
- Practice with the Action Plan – provides practice of separate skills and connects them to the Action Plan
- Check yourself – reviews key knowledge
- Educational background – offers extra information for the facilitator, discusses variations in practice, and provides teaching tips

Be prepared to demonstrate each of the 6 Exercises and lead Group discussions. Familiarize yourself with the neonatal mannequin (simulator) and the equipment and supplies to be used in the course. You will provide verbal information on crying, breathing, and heart rate when using a mannequin. When using a neonatal simulator, you can simulate a cry, create breathing movements, or provide an umbilical pulse. You will need to tap out the heart rate with your fingers if learners are listening with a stethoscope. You may choose to practice demonstration of the exercises with another facilitator before the course. You will need to orient learners to each Exercise. Identify the important issues that should be covered in Group discussions.

Essential care for small baby flipchart

Review the five sections of each Flip Chart page

- Explain and demonstrate – key points that you will say and show to the learner.
- Invite discussion – suggested questions that will provoke discussion among the providers about the local context of care. These questions will also help participants identify changes to improve care.

- Facilitate practice – guidance about how providers should practice skills required for each action.
- Background – a brief summary of details about the action which will help you answer questions.
- Educational advice – advice that will assist you in creating the ideal learning experience. You will need to collect and familiarize yourself with national and facility guidelines for such practices as eye care, cord care, and immunizations.

Familiarize yourself with exercises and evaluations in the Flip Chart

- Four exercises combine a series of actions to help the learner integrate the steps of a particular aspect of care. They also focus on how to communicate with the mother and teach her some of the skills.
- The Knowledge Check can be given as both a pre- and post-course evaluation if desired.
- OSCE A and B evaluate knowledge, skills, and decision-making.

Review the four sections of each Provider Guide page

- Review Key Knowledge – a summary of important facts.
- Practice Key Skills - a section to guide practice during and after the workshop.
- What to monitor - some key indicators that can be used for data collection as part of efforts to improve quality of care.
- To improve care in your facility - some questions to stimulate ideas for change and improvement.

Review the first steps in improving care for mothers and babies

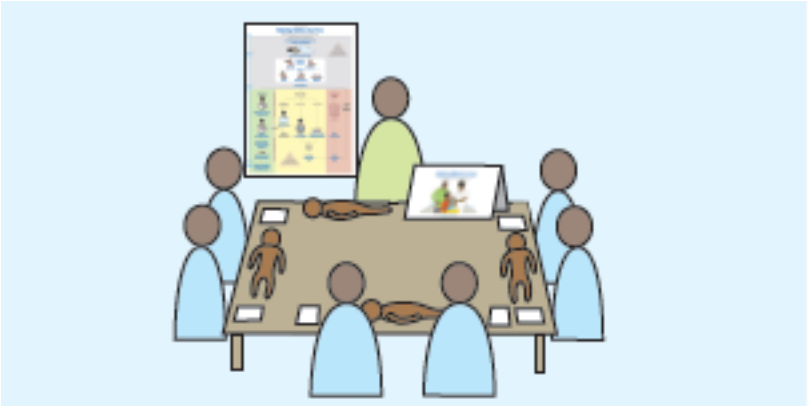
- Identify the key outcome indicators for small babies.
- Review potential process indicators for care of small babies.
- Obtain samples of the clinical information currently being collected at the facility. Participants may bring samples of recording forms or photos of newborn registers and reporting summaries.
- Identify one or two leaders or champions in the facility who will continue practice and coordinate efforts to improve care.

3. Prepare the learners

Give the Essential Care for Every Baby Training Participants' Manual to the learners on the first day of the course and urge them to review the Background material in each section.

4. Prepare the space for learning

Arrange the classroom space so that all providers can view a poster-sized Action



Plan and the learner side of the Flip Chart. Participants will ideally work in pairs with a manikin and a set of equipment and supplies; however, three participants may practice together as long as each learner performs the skill. For each group of six learners, one facilitator will assist practice. Group discussions may include the entire group of learners.

5. Engage the learners

Most classroom time should be spent on practice. Several methods can be used to encourage learners to participate actively:

- Ask them to reflect on their own performance first.
- Ask learners to summarize the key points, then reinforce or correct their responses as necessary.
- Encourage learners to practice separate skills as they are introduced.
- Invite learners to point out steps on the Action Plan and make notes in the Essential Care for Every Baby Training Participants' Manual.
- Encourage learners to ask questions and share their experiences.
- Ask learners what they have learned and what they would change in their practice.

As a facilitator you can help draw out the important lessons from experiences. Learning from one another prepares participants for continued learning outside the classroom.

Help learners practice using correct technique. Provide positive feedback first, and then offer suggestions for improvement. Be respectful and positive when correcting mistakes.

Learners should be able to complete each Exercise in a timely way without interruptions.

6. Evaluate knowledge and skill

Describe to learners how they will be evaluated.
Two tools will be used:

- Multiple choice question examination
- Objective Structured Clinical Evaluations (OSCEs)

For Module 3 Bag and mask skill evaluation will be included in addition to the two tools.

Essential care for every baby

Knowledge check
At the end of the course, ask each learner to complete the 25-question written examination.If a learner has difficulty reading, you can read the questions aloud and mark the learners' responses. Every learner should successfully complete the multiple choice questions exam by correctly answering at least 21 out of 25 questions.

OSCEs A and B
The OSCEs should be administered individually. Once the learner starts the case, do not interrupt the learner. Provide only the information that the learner requests. This information can be provided through a simulator (e.g. respiratory rate if possible) or

verbally by prompts. Every learner should successfully complete (indicated by "done") 16 of 20 actions in OSCE A and 10 of 13 actions in OSCE B. The facilitator will have to make a decision about which elements (unless specified) of each action will be used to determine successful completion of the action.

Neonatal resuscitation

Encourage learners to practice with the checklist for Mastering bag and mask ventilation until they can perform all of the steps perfectly before beginning the series of evaluations.

Written/verbal knowledge check
Provide a written copy of the questions to each learner. If a learner has difficulty reading, you can read the questions aloud one by one and mark the learner's answers.

Bag and mask skills evaluation
The learner should correctly demonstrate all steps, including measures to improve ventilation if the chest is not moving. Allow the learner to ventilate for at least 1 minute. Repeat the evaluation, if necessary, until all steps are performed correctly.

OSCE A and B
The Objective Structured Clinical Evaluations should follow successful completion of the bag and mask ventilation skill. Once the learner starts the case, do not interrupt the learner. Provide only the information that the learner requests. This information can be provided through a simulator or verbally as shown by the prompts.

Every learner should successfully complete the written/verbal knowledge check (14 out of 17 questions), bag and mask ventilation skill station (7 out of 7), Objective Structured Clinical Evaluation OSCE A (10 out of 13) and OSCE B (14 out of 18). Some items on OSCE A and B must be done correctly. These items are of critical importance for successful resuscitation.

After a learner completes an evaluation, the facilitator should provide positive feedback on items the learner did well. If a learner is not successful, the facilitator should provide specific feedback on how to improve and give time for practice before evaluating again.

Essential care for small babies

Ask each learner to complete the Knowledge Check (multiple choice questions) and then administer OSCE A and B individually. Every learner should successfully complete the OSCEs. Follow directions for prompts on the OSCE form. The number of correct items needed for successful completion is noted on each recording form.

7. Prepare participants to continue learning

Emphasize to participants the importance of continuing to practice and use the skills learned in the Essential Care for Every Baby training. If possible, arrange for participants

to have supervised clinical experience shortly after they complete the course. Develop with learners a plan for continued practice in their workplace. Encourage them to use self-reflection and discussion with other trained birth attendants to strengthen their performance.

Newborn health in Ethiopia

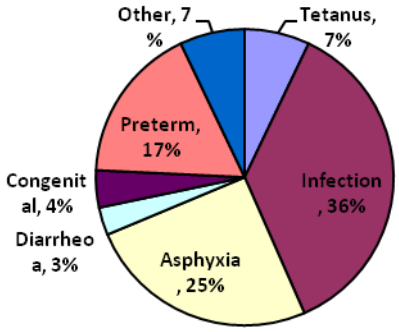
Session 1.4: Newborn Care in Ethiopia

Facilitator: It is important that participants discuss and reflect on the existing newborn health situation in Ethiopia. This exercise will be useful to reinforce their knowledge as well as prepare them to the next subsequent sessions.

Task	Activity	Time
Form groups and orientate them on the activity	Ask participants to randomly form groups of 3 people and assign chairperson and secretary to facilitate the discussion and take note that will be shared with the class. Orientate the groups on the activity that they will be performing	5 minutes
Assign Tasks (Group Work)	Each group will 1. Identify causes of neonatal deaths in Ethiopia. 2. List problems associated with lack of access and utilization of neonatal health care in Ethiopia. 3. List key high impact neonatal interventions To facilitate the discussion for the second activity the groups can structure their discussion focusing on problems associated with • *Communities*: Knowledge and access to information etc. • *Communities*: socio-cultural and religious beliefs and practices etc. • *Access to health services*: Distance, availability of transportation/road and financial barriers etc. • *Readiness of the health system*: Availability and quality of maternal and newborn care etc.	30 minutes
Ask each group to share	At the end of the group discussion each group will share what they discussed to the class. Other groups will comment or ask questions on what each group has shared.Facilitator will chip in to supplement as needed	15 minutes
Discuss Session 3 and summarize	Summarize the key points regarding situation of newborn health in Ethiopiafrom **Session 1.3** and conclude the session	10 minutes

Session 1.5: Newborn Health Situation in Ethiopia

In Ethiopia newborns primarily die from three main complications: prematurity, intrapartum complications/birth asphyxia and neonatal sepsis. In the subsequent sessions the evidence based lifesaving care that health workers should provide to newborns in the first minute and few hours after birth to prevent complications and promptly manage them if they happen.



Causes of neonatal mortality, Ethiopia

The care health workers provide to the newborns immediately after birth is critical to ensure the healthy maternal and neonatal birth outcomes. The first minute and few hours after birth is particularly critical time to provide respiratory and other essential support to the newborn if the baby has difficulty of breathing at birth and other problems.

However, there are barriers at different levels that prevent pregnant women and community from receiving care the health facility level including immediate newborn care. The table below summarizes key barriers at home, on the way to health facilities and while in pregnant mother and newborn is in the health facility.

Barriers at home/community level	**Barriers to reaching health facility**	**Barriers while in the health facility**
Knowledge and info • Lack of knowledge on availability of obstetric and newborn care at the health facility • Knowledge and recognition of danger signs • Lack of knowledge of the benefits of facility based care among decision makers at	Access to health care • Distance to higher level health facility (HC/Hospital) • Lack of access to cheap and readily available transport • Difficult terrain and lack of all season roads	Readiness of health facility • Absence of medication/ stock out • Absence of health workers or closed health facility • Unfriendliness of health facilities and providers' behavior

home (husbands, mother-in-laws, other relatives)		
Socio-cultural and religious • Supernaturally caused diseases are incurable by biomedical treatments (HP) – particularly imp for <2moths infants • Religious leaders may not approve biomedical treatments for some health problems • Prayer could be considered as first intervention to reverse the problem • Local/herbal medicine as first line drug for health problems – It is unnecessary to go to health facilities	Financial barriers • Cost of transportation • Poor saving culture • Longer time to sell off livestock, future yields or taking out loans	Financial barriers • Costs associated with medicine, laboratory and consultation

Module 2: Preparation for Birth

Standard Precaution
Counseling and communication
Preparation for birth
Essential care at birth

Module Objectives	By the end of this module, participants will be able to: • Demonstrate the standard precautions in delivery and newborn care • Effectively communicate with and counsel mothers and care takers • Explain preparation for birth • Define essential newborn care
Time the session requires	1 hours and 30 minutes
Materials and methods for the sessions	Materials: • LCD projector and desktop/laptop computer • Flips charts and markers • Notebook, pen and pencils for participants • Soap and water for hand washing • Alcohol-based formulation for hand-rub • Sessions 1 – 6 Methods • Brainstorming • Small group exercise and sharing to the class • Role-plays • Demonstrations • Facilitators summarize the key points

Standard precautions

Session 2.1: Standard Precautions

Facilitator: Standard precautions are very important components of care both for the providers and the care receivers (mothers and newborns).

Task	Activity	Time
Explain and demonstrate	• Share the key highlights on standard precautions from **Session 1.4** to participants. Make the class interactive by asking participants their experiences and encouraging them to ask questions. • Demonstrate to participants how to properly hand wash with soap and water • Demonstrate to participants how to properly hand-rub with alcohol-based formulations	20 minutes
Ask participants to practice Hand Washing and Hand Rubbing	• Ask two pairs of participants to come out forward to demonstrate each on Hand Washing and Hand Rubbing • Ask participants to take note while they observe the practice	15 minutes
Ask participants to reflect their observations on demonstrations	• At the end of the practice demonstration by the selected volunteers ask participants to reflect their observation on the demonstrations	10 minutes
Summarize	• Summarize the steps in Hand Washing and Hand Rubbing **Session 1.4** and conclude the session	5 minutes

Session 2.2: Standard Precautions

Observe these precautions to protect the woman and her baby, and you as the health provider, from infections with bacteria and viruses, including HIV.

Wash hands

- Wash hands with soap and water:
    - Before and after caring for a woman or newborn, and before any treatment procedure
    - Whenever the hands (or any other skin area) are contaminated with blood or other body fluids
    - After removing the gloves, because they may have holes
    - After changing soiled bed sheets or clothing.
- Keep nails short.
- Make sure the pregnant mother, birth assistant or companion also wash hands with soap and water

Wear gloves

- Wear sterile or highly disinfected gloves when performing vaginal examination, delivery, cord cutting, repair of episiotomy or tear, blood drawing.
- Wear long sterile or highly disinfected gloves for manual removal of placenta.
- Wear clean gloves when:
    - Handling and cleaning instruments
    - Handling contaminated waste
    - Cleaning blood and body fluid spills
    - Drawing blood.

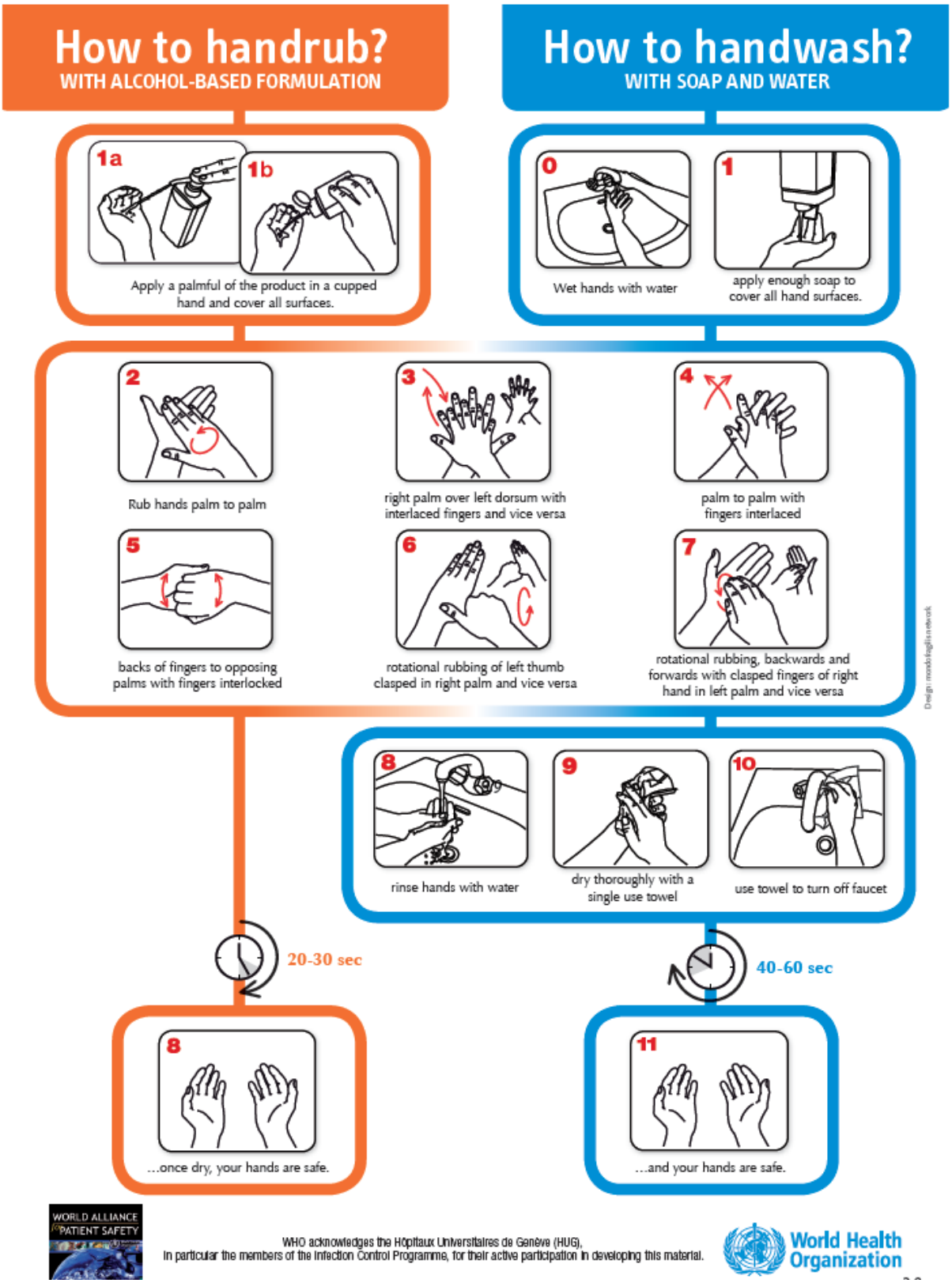
Protect yourself from blood and other body fluids during deliveries

- Wear gloves; cover any cuts, abrasions or broken skin with a waterproof bandage; 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.
- If possible, protect your eyes from splashes of blood.

Practice safe sharps disposal

- Keep a 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.
- Empty or send for incineration when the container is three-quarters full.

More resources: ***Hand washing and hand cleaning***



Practice safe waste disposal

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

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.
- Rinse off blood or other body fluids before washing with soap.

Sterilize and clean contaminated equipment

- Make sure that instruments that could penetrate the skin (such as needles) are adequately sterilized, or that single-use instruments are disposed of after one use.
- Thoroughly clean or disinfect 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.

Clean and disinfect reusable materials (feeding cup, Ambubag and mask, suction bulb, mucus extractor, suction tube)

- Use the national guideline for infection prevention to clean and disinfect the reusable materials listed above

Counseling and communication

Session 2.3: Counseling and communication

Facilitator: Counseling and effective communication are very useful yet often neglected components of maternal and newborn care. They are important to build trust between health care providers and mothers and families, improve compliance to treatment and procedures and increases continuity of care at home and in follow up contacts. Please underline this to participants.

Task	Activity	Time
Explain and demonstrate	• Share the key highlights on counseling and communication from Session 1.5 to participants. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Is counseling of mothers practiced in your health facility? • What are the challenges in counseling mothers and caretakers?	10 minutes
Practice the procedure	• Ask three participants to come forward for role play of Story 1 in the next page, one of them acting as care provider, the second one as mother and the third one as support person • Repeat the role-play with other participants (optional) • Tell participants to observe the role play and take note • At the end of the role-play ask participants to reflect their observation	15 minutes
Summarize	• Summarize the key points on counseling mothers and families from the **Session 1.5** and conclude the session	5 minutes

Story 1

Fatuma came to a Health Center at night while she was in the second stage of labor. Recognizing the cervix is fully dilated the midwife nurse on duty, Sr. Zahara, rushed Fatuma to delivery room. She quickly prepared for the birth and assisted Fatuma deliver her healthy baby girl in an hour after she reached the hospital. Immediately after birth Sr. Zahara asked Fatuma to put the baby on breast. Fatuma's mother-in-law who was allowed to be present in delivery room opposes the advice and insisted that they first yellow part of the breast milk, colostrum, should be squeezed and thrown away as it will harm the baby's immature stomach. Instead, the mother-in-law proposed, the baby girl should take butter to loosen the baby's stomach so that she feeds the breast milk better after a couple of hours. Sr. Zahara realized that she needs to counsel Fatuma and her mother-in-law on benefit of early initiation of breastfeeding and feeding colostrum. After she finished providing immediate essential care for the baby and the mother and transferred both to postnatal room she sat down with Fatuma and her mother-in-law to provide counseling on early initiation and exclusive breastfeeding.

Session 2.4: Counseling and communication

Communicating with the woman (and her companion)

- Make the woman (and her companion) feel welcome.
- Be friendly, respectful and non-judgmental at all times.
- Use simple and clear language.
- Encourage her to ask questions.
- Ask and provide information related to her needs.
- Support her in understanding her options and making decisions.
- At any examination or before any procedure:
    - Seek her permission and
    - Inform her of what you are doing.
- Summarize the most important information, including the information on routine laboratory tests and treatments.

Verify that she understands emergency signs, treatment instructions, and when and where to return. Check for understanding by asking her to explain or demonstrate treatment instructions.

Privacy and confidentiality

In all contacts with the woman and her partner:

- Ensure a private place for the examination and counseling.
- Ensure, when discussing sensitive subjects, that you cannot be overheard.
- Make sure you have the woman's consent before discussing with her partner or family.

- Never discuss confidential information about clients with other providers, or outside the health facility.
- Organize the examination area so that, during examination, the woman is protected from the view of other people (curtain, screen, wall).
- Ensure all records are confidential and kept locked away.
- Limit access to logbooks and registers to responsible providers only.

Prescribing and recommending treatments and preventive measures for the woman and/or her baby

When giving a treatment (drug, vaccine, bednet, contraceptive) at the clinic, or prescribing measures to be followed at home:

- Explain to the woman what the treatment is and why it should be given.
- Explain to her that the treatment will not harm her or her baby, and that not taking it may be more dangerous.
- Give clear and helpful advice on how to take the drug regularly:
    - For example: apply Chlorhexidineevery morning for 7 days, if the baby has taken the first dose in the facility.
- Demonstrate the procedure.
- Explain how the treatment is given to the baby.
- Watch her as she does the first treatment in the clinic.
- Explain the side effects to her. Explain that they are not serious, and tell her how to manage them.
- Advise her to return if she has any problems or concerns about taking the drugs.
- Explore any barriers she or her family may have, or have heard from others, about using the treatment, where possible:
    - Has she or anyone she knows used the treatment or preventive measure before?
    - Were there problems?
    - Reinforce the correct information that she has, and try to clarify the incorrect information.
- Discuss with her the importance of buying and taking the prescribed amount. Help her to thinkabout how she will be able to purchase this.

Preparation for the birth

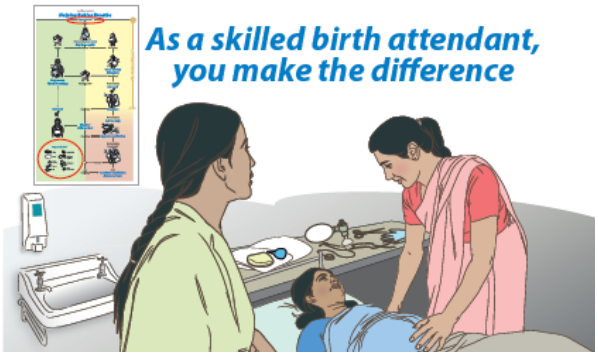
Session 2.5: Preparation for the birth

Facilitator: As it is difficult to identify which labor could end up in complications providers should be always well prepared to provide comprehensive care and referral for all births.

Task	Activity	Time
Explain and demonstrate	• Share the key highlights on preparation for birth from Session 1.6 to participants. • Make the class interactive by asking participants their experiences and encouraging them to ask questions between the slides. • Demonstrate on how delivery attendant should be prepared	10 minutes
Invite discussion	• Ask how participants prepare for birth in their facilities • Ask participants the challenges and how they think they can be addressed	10 minutes
Practice the procedure	• Ask participants to pair each other and practice preparing for birth. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	15 minutes
Summarize	• Summarize the key points on preparation for birth from the **Session 1.6** and conclude the session	5 minutes

Session 2.6: Preparation for birth

How do you prepare for birth?



All equipment necessary for immediate newborn care and resuscitation must be available and operational at every delivery. The equipment needs to be examined before the delivery to ensure it is in working order. At every birth, you should be prepared to provide immediate newborn care and resuscitate a newborn because the need for resuscitation can come as a complete surprise. For this reason, **ideally every birth should be attended by at least one person skilled in neonatal resuscitation whose sole responsibility is providing care for the newborn.**

With careful recognition of risk factors, more than half of all newborns that will need resuscitation can be identified prior to birth. If you anticipate the possible need for neonatal resuscitation, you can recruit additional skilled personnel to be present at the delivery. You must have all the necessary equipment assembled before the birth and know how to use it. Anticipation of the baby's needs is a critical tool. Never assume anything. Be prepared for the worst and remain calm in your anticipation of the approaching birth.

Preparing for birth includes:

Identify helper and review emergency plan: Prepare the birth companion or another skilled helper to assist if the baby does not breathe

- A birth companion can help the mother and call for another helper
- A second skilled helper can assist in caring for the baby
- Emergency plan should include communication and transpotation to advance care

Preparing the area for delivery

- It is essential that the delivery room is draught free, warm and at least 25° C. ALL fans must be switched off BEFORE a birth takes place and windows and doors closed.
- Being prepared is vital. Before a baby is born the delivery area must be checked to ensure it is ready. Resuscitation equipment should be within easy reach of where the delivery will take place.
- There must be a clean, dry and warm surface for the delivery.
- The area where a baby is born should be
    - *Clean*: Help mother wash her hands and chest to prepare for skin-to-skin care

- *Weill lighted*: Use a portable lamp if needed to assess the baby
- *Warm*:A radiant heater should be available if possible (that is, a heater which warms the air surrounding the baby).

Washing hands

- Hand washing is of particular importance for all health workers. It is essential before and after visiting and touching any mothers and babies or carrying out any new tasks.
- Hand washing is very effective if done properly.
- Remember to take off unnecessary rings, jewelry and watches.
- Keep fingernails short and remove nail polish.
- If possible, use the recommended hand-washing protocol used in the health facility.

If a protocol does not exist use the following method:

- Apply plain or antimicrobial soap to your hands; work into lather.
- Rub hands in a circular movement, covering the front and back of the hands, in between the thumb and fingers and the wrist.
- Wash for 15–30 seconds.
- Rinse with a stream of running or poured water.
- Use SINGLE USE towels to dry your hands.

Avoid sharing a towel with other people this greatly increases the risk of spreading infections.

Preparing an area for ventilation and checking equpments

- A CLOCK with a second hand is required in a prominent position to note time of birth.
- Essential supplies include:
- Two clean and warm towels or cloths for drying and wrapping or covering the newborn baby
- A supply of warm towels and blankets nearby
- A small cloth for folding and placing under the baby's shoulders to maintain an open airway during basic resuscitation (demonstrate appropriate thickness).
- The following items should be available in a health facility and should be included in a delivery pack if a baby is born at home:
- A newborn size self-inflating bag (250–400 ml)
- Infant masks in two sizes: normal and small newborn (sizes 0 and 1)
- A suction device for taking mucous out of the mouth (mechanical or electrical or mouth operated)

Essential Newborn Care at birth

Session 2.7: Essential Newborn Care at birth

Facilitator: Start the session by defining ENC and briefly highlighting the components of ENC.

Task	Activity	Time
Explain and discuss	• Share the definition of ENC and list the 10 components of essential newborn care from **Session 7** to participants. • Make the class interactive by asking participants their experiences and encouraging them to ask questions between the slides.	10 minutes
Summarize	• Summarize the key points on definition and the 10 components of essential newborn care from the **Session 7** and conclude the session	5 minutes

Session 2.8: Essential Newborn Care – Definition and Components

Definition: Essential Newborn Care is a package of basic care provided to newborns to support their survival and wellbeing. The definition of essential newborn care can be broadened to describe a "comprehensive strategy designed to improve the health of newborns through interventions before conception, during pregnancy, at and soon after birth, and in the postnatal period".

The care we give for most of the babies immediately after birth is simple but very important to improve their survival and health. However, the standardized procedure for providing Essential Newborn Care is not commonly practiced. This results in serious consequences of unacceptably high neonatal morbidity and mortality. About 50% and 75% of neonatal mortalities occur in the first 24 hours after birth and within the first week of life of the newborn, respectively mainly due to asphyxia, hypothermia, hypoglycaemia, infection etc.

The initial steps in the care of the baby at birth, such as drying, wrapping, and evaluation of breathing, are similar for all babies. Subsequent care, however, may be different if there are problems such as birth asphyxia, prematurity or infection. The box below summarizes the immediate care package that should be provided to all babies immediately after birth. The order of the care given may vary depending on the specific needs of the baby.

Step 1:	Dry and stimulate the baby by delivering on mother's abdomen.
Step 2:	Assess breathing. Make sure the baby is breathing well.
Step 3:	If the baby does not breathe, clamp/tie and cut the cord immediately and start resuscitation.If the baby does cry/breathes well, clamp/tie and cut the cord after pulsations stop or after 2-3 minutes.
Step 4:	Place the newborn in skin-to-skin contact on the mother's chest and cover both with clean linen and blanket as required. Carry out all the steps noted below up to step #9, preferably with the baby on the mother's chest.
Step 5:	Initiate breastfeeding within the first hour.
Step 6:	Administer tetracycline eye ointment.
Step 7:	Apply 4% chlorhexidine gel on the cord
Step 8:	Administer vitamin K1.
Step 9:	Place the baby identification bands on the wrist and ankle.
Step 10:	Weigh the infant when he/she is stable.
Note:	Record observations and treatment provided in the registers/appropriate chart/cards. Defer the bath for at least 24 hours.Clean the HIV exposed newborn with clean towel and give HIV prophylaxis for the newborn based on national guideline. Decide together with the mother on the appropriate feeding option for the HIV exposed newborn based on national guideline.

Source: Integrated maternal and newborn care: Basics Skills Course 2009. Reference Manual

Module 3: Helping Babies Breathe

Respiratory adaptation
Helping babies breathe: Possible scenarios and actions

Module 3: Helping Babies Breathe

Facilitators:

It is estimated that birth asphyxia contributes to 28% of neonatal deaths in Ethiopia. Identifying breathing problems and prompt action in the first golden minute and in the immediate time following that will prevent most of these deaths. To realize this participants should master newborn resuscitation skills.

Module Objectives	By the end of this module, participants will be able to: • Explain the physiology respiratory adaptation • Evaluate the baby's breathing • Appreciate the importance of the "The Golden Minute" • Perform basic resuscitation using bag & mask for babies with difficulty of breathing • Provide continuous resuscitation for babies who require continuous breathing support • Describe post resuscitation care (counseling, follow-up and transfer where required).
Time the session requires	7 hours and 30 minutes
Materials and methods for the sessions	Materials: • LCD projector and desktop/laptop computer • Flips charts and markers • Notebook, pen and pencils for participants • Mannequin • Timer • Ventilation bag and mask • Suction device • Stethoscope • At least two cloths/blankets • Cap/hat for the newborn • Disposable cord ties or clamps • Sterile scissors or blade • Sessions Methods • Brainstorming • Small group exercise and sharing to the class • Role-plays • Demonstrations • Facilitators summarize the key points

This module is prepared based on the Handbook of the Neonatal Resuscitation prepared by the Latter Day Saints version of the American Academic of pediatrics and the Helping Babies Breathing Handbook of the American Academic of Pediatrics.

The goal of every birth is to have a healthy baby capable of making the transition from life within the mother to life in the world. The key to this transition is to be able to breath and get oxygen to the body through the lungs instead of from the mother through the placenta. The birth attendant must do what is possible in his/her capacity to assist the baby to achieve the transition as early as within the first minute, the Golden Minute.

Respiratory adaptation

Session 3.1 Respiratory adaptation

Facilitators: Giving a brief background on the physiology of breathing in newborn and discussing on the normal physiology and what can go wrong and why will benefit the participants to have basic knowledge that they can utilize to improve their clinical decisions in providing care for asphyxiated babies.

Task	Activity	Time
Reading Session	• Ask participants to read Session 2.1 and take note on key issues	15 minutes
Invite discussion	• Ask participants to explain the physiology of breathing on Session 24 • Encourage participants to ask questions and explain issues that might be unclear from the reading	15 minutes
Summarize	• Summarize the key points on respiratory adaptationfrom **Session 2.1** and conclude the session	5 minutes

Session 3.1:

Respiratory adaptation

What is birth asphyxia?

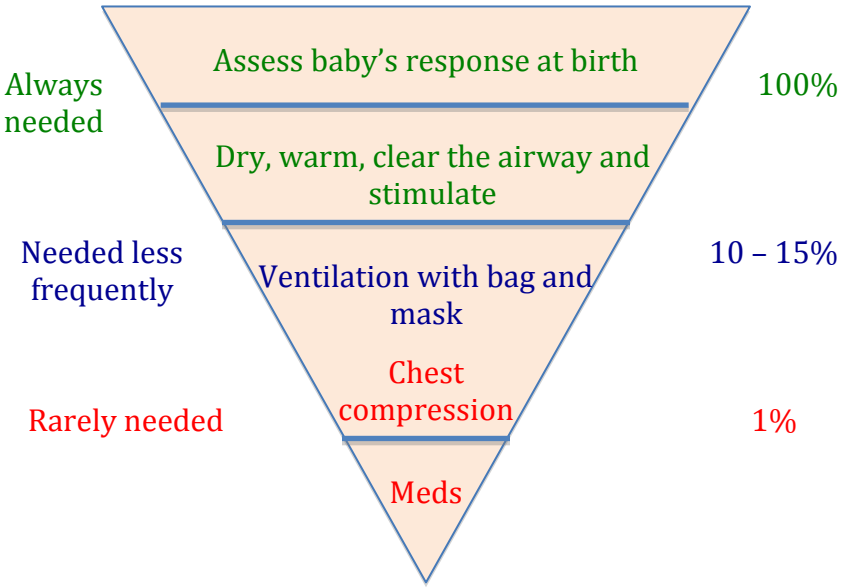
Birth asphyxia is failure of the baby to initiate and sustain breathing at birth. Asphyxia can start before, during or after the baby is born.
If the baby has asphyxia:

- The baby has trouble in breathing (gasping or breathing very irregularly or no breathing)
- The baby's color is pale or blue. This is when the skill of newborn resuscitation will be critical to save the life of the newborn and prevent further complications.

Which babies are at higher risk for asphyxia?
It is estimated that about 10% of newborns need help with breathing at birth. Variety of conditions can predispose a baby to asphyxia. However, it is important to realize that you may not be able to predict which babies will develop asphyxia at birth. About half of the babies with asphyxia do not have any risk factor at all. Asphyxia can also happen in the uterus when there is pressure on the umbilical cord that prevents adequate blood flow through the cord to the baby.

What is resuscitation?
Neonatal resuscitation means to revive or restore life to a baby through helping babies with who are not breathing well at birth to breath normally. This module is designed to teach the steps necessary to ventilate a newborn baby who is not breathing.

Basic steps in resuscitation
Ninety percent of newly born babies make the transition from intrauterine to extra uterine life without difficulty. They require little to no assistance to begin spontaneous and regular respirations. Approximately 10% of newborns require some assistance to begin breathing at birth and only about 1% of them need advanced resuscitative measures to survive.



Resuscitation must be anticipated at each birth. It is essential for health professionals who attend the mother at birth to be skilled at resuscitation and know how to recognize babies at risk. They must: anticipate that asphyxia may occur in every births, be prepared with the necessary equipment and support person, know the steps of resuscitation, and act quickly to save the life of the baby and prevent complications.

Physiology of Breathing

Understanding the basic concepts behind physiology of breathing is crucial to fully understand the effect of evidence based life saving care that health workers need to provide for babies with difficulty of breathing at birth.

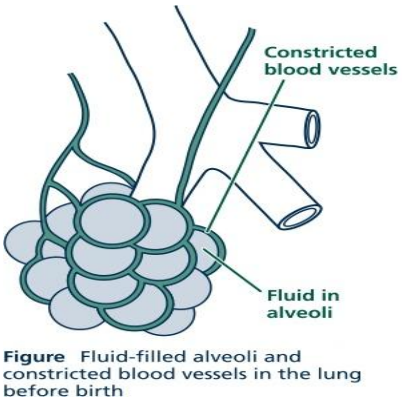


Figure A: Fluid filled alveoli and constricted blood vessels in the lung before birth

How does a baby receive oxygen before birth?
Oxygen is essential to intrauterine and extra-uterine survival of the newborn and to prevent damage to the brain of the neonate. Before birth, the placenta provides all of the oxygen needed by a fetus. Only a small amount of fetal blood passes through the fetal lungs. During the intrauterine life the fetal lungs do not function as a source for oxygen or as a route to excrete carbon dioxide. Therefore, blood flow to the lungs is not important to maintain normal fetal oxygenation and acid-base balance. The fetal lungs are expanded in utero, but the air sacs within the lungs (alveoli) are filled with fluid, rather than air. In addition, the blood vessels that perfuse and drain the fetal lungs are markedly constricted (Figure A).

Before birth, most of the blood from the right side of the heart cannot enter the lungs because of the increased resistance to flow in the constricted blood vessels in the fetal lungs. Instead, most of this blood takes the lower resistance path through the ductus arteriosus into the aorta (Figure B)

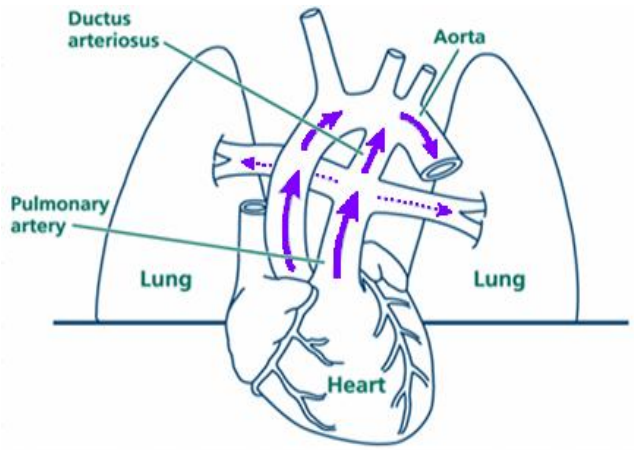


Figure B: Blood circulation before birth

After birth, the newborn will no longer be connected to the placenta and will depend on the lungs as the only source of oxygen. Therefore, in a matter of seconds, the lung fluid must be absorbed from the alveoli, the lungs must fill with air that contains oxygen, and the blood vessels in the lungs must relax to increase blood flow to the

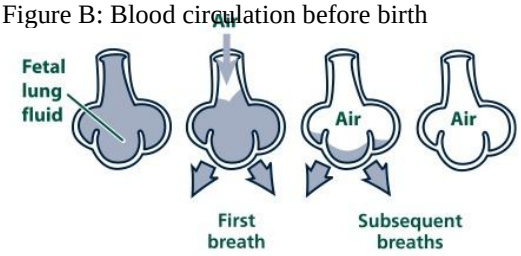


Figure C: Fluid replaced by air inalveoli

alveoli so that oxygen can be absorbed and carried to the rest of the body.

What happens with normal transition?

Normally, three major changes begin immediately after birth allowing a baby to get oxygen from the lungs.

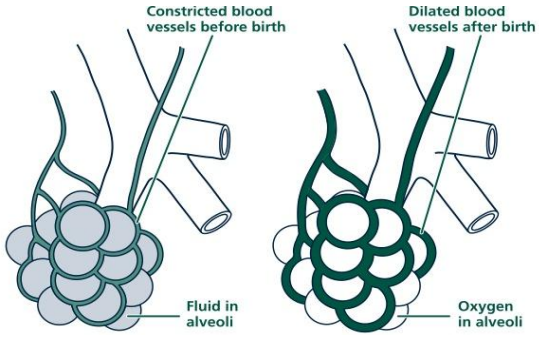


Figure D: Dilation of pulmonary blood vessels at first breath

First, the fluid in the alveoli is absorbed into lung tissue and replaced by air (Figure C) Because air contains 21% oxygen, filling the alveoli with air provides oxygen that can diffuse into the blood vessels that surround the alveoli.

Second, the umbilical arteries and vein are clamped at first breath. This removes the low resistance placental circuit and increases systemic blood pressure.

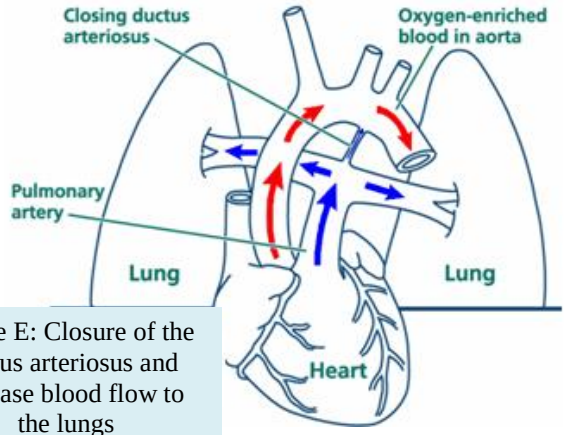


Figure E: Closure of the ductus arteriosus and increase blood flow to the lungs

Third, as a result of the increased oxygen in the alveoli, the blood vessels in the lung tissue relax (Figure D). This relaxation, together with the increased systemic blood pressure, creates a dramatic increase in pulmonary blood flow and a decrease in blood flow through the ductus arteriosus (PDA). The oxygen from the alveoli is absorbed by the increased pulmonary blood flow, and the oxygen-enriched blood returns to the left side of the heart where it is pumped to the tissues of the newborn's body.

In most circumstances, air provides sufficient oxygen (21%) to initiate relaxation of the pulmonary blood vessels. As blood levels of oxygen increase and pulmonary blood vessels relax, the ductus arteriosus begins to close. Blood previously diverted through the ductus arteriosus now flows throughthe lungs, where it picks up more oxygen to transport to tissues throughout the body (Figure E).

Figure F: Baby who made normal transition

Normal transition happens in babies who are

- Term
- Breathe normally/cry
- Pink
- Good muscle tone
- No meconium

At the completion of this normal transition, the baby breaths air and use his lungs to get oxygen. His initial crying and deep breaths have is strong enough to help move the fluid from his airways. The oxygen and gaseous

distention of the lungs are the main stimuli for the pulmonary blood vessels to relax. As adequate oxygen enters the blood, the baby's skin turns from gray/blue to pink.

A baby who has made a normal transition at birth will be term with no meconium, will be crying or have unlabored breathing, and will have good muscle tone.

What can go wrong during transition?

A baby may have difficulty of breathing before labor, during labor, or after birth. If the difficulty begins in utero, either before or during labor, the problem will usually reflect a compromised blood flow in the placenta or the umbilicalcord. The first clinical sign can be a slowing of the fetal heart rate. Problems encountered after birth are more likely to involve the baby's airway. The following are some of the problems that may disrupt normal transition:

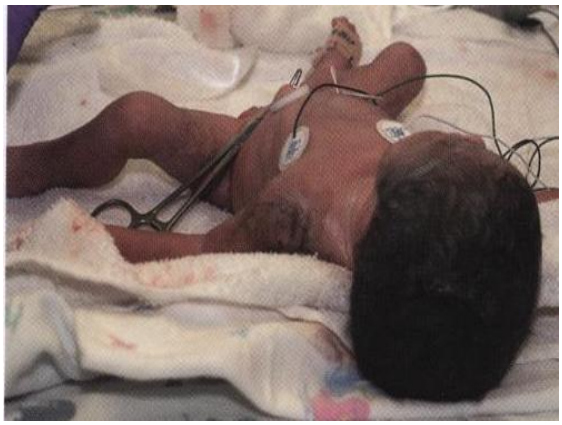


Figure G: Signs of abnormal transition

A. The baby may not breathe sufficiently to force fluid from the alveoli. Foreign material such as meconium may block air from entering the alveoli. As a result, the lungs will not fill with air, preventing oxygen from reaching the blood circulating through the lungs (hypoxemia).

B. Excessive blood loss may occur, or there may be poor cardiac function or bradycardia (slow heart rate) from hypoxia (insufficient oxygen to the tissues) and ischemia (inadequate blood to part of the body caused by a blocked artery), so that the expected increase in blood pressure cannot occur (systemic hypotension).

Abnormal transition happens in babies who are

- Preterm/post-term
- Did not breathe normally/cry
- Cyanotic/pale
- Floppy
- Meconium

C. A lack of oxygen or failure of air to enter the lungs may result in the pulmonary arterioles staying constricted; these arterioles may then remain constricted, thus preventing oxygen from reaching body tissues. (Persistent pulmonary hypertension)

D. The consequence of inadequate blood perfusion and tissue oxygenation can be brain damage, damage to other organs, or death.

What are the signs of an abnormal transition?

The baby that has difficulty making a normal transition may exhibit one or more of the following clinical findings:

- *Depression of respiratory drive* (slow respiratory rate) from insufficient oxygen delivery to the brain
- *Poor muscle tone* from insufficient oxygen delivery to the brain and muscles
- *Cyanosis* (blue discoloration of the skin and mucous membranes) *or pallor* from insufficient oxygen in the blood
- *Bradycardia* (slow heart rate) from insufficient delivery of oxygen to the heart muscle or brain stem
- *Poor perfusion* from insufficient oxygen to the heart muscle, blood loss, or insufficient blood return from the placenta before or during birth
- *Tachypnea* (rapid respirations) from failure to absorb fetal lung fluid

Many of these same symptoms may also occur in other conditions, such as infection or hypoglycemia (low blood sugar), or if the baby's respiratory efforts have been depressed by medications, such as narcotics or general anesthetic agents, given to the mother before birth.

Why premature babies are at higher risk of asphyxia?

Premature babies have anatomical and physiological characteristics that are quite different from babies born at term. Some of these characteristics are:

- Their lungs may be deficient in surfactant and, therefore, may be more difficult to ventilate. (Surfactant is a substance that lines the inside of the alveoli and prevents them from collapsing). When babies are born prematurely, prior to 34 weeks, they have decreased amounts or lack surfactant, therefore, they have difficulty breathing
- Their thin, permeable skin, large surface-area-to-body-mass ratio, and lack of subcutaneous fat make them more likely to lose heat and have problems with temperature regulation.
- They are more likely to be born with an infection.
- Their brains have very fragile capillaries that may bleed during periods of stress.
- They often have feeding problems

Caregivers should be aware of these and other unique characteristics of premature babies and the special challenges they may present during resuscitation.

Session 3.2: Dry and stimulate; while the baby is on the mother's abdomen dry and stimulate.

Facilitators: Tell to participants that delivering the baby on the mother's abdomen immediately after birth keeps the baby warm

Task	Activity	Time
Explain and demonstrate	• Explain how to dry the baby and keep him/her warm by placing him/her on the mother's abdomen. • Demonstrate the steps on properly drying and placing the baby on mother's abdomen immediately after birth • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if they put the baby skin to skin on the mother's abdomen immediately after birth • Ask participants the challenges with this and how they think they can be addressed	5 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module on each group's table. • Ask participants to practice proper drying of newborns immediately after birth using the mannequins. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	10 minutes
Summarize	• Summarize the steps on drying the baby and keeping him/her warm by placing him/her on the mother's abdomenfrom **Session 2.2** and conclude the session	5 minutes

Session 3.2:

While the baby is on the mother's abdomen dry and stimulate.

Dry the baby thoroughly at birth. Drying helps keep the baby warm and stimulates breathing. Dry the baby's body, arms, legs, and head by gently rubbing with a cloth. Wipe the face clean of blood and maternal feces. Remove the wet cloth. Note the time at birth; you need to record the time after you complete the essential care.

Place the infant on the abdomen of the mother.

- Immediately dry the whole body including the head and limbs. A newly born baby wet with amniotic fluid can become cold even in a warm room.
- Wipe the face clean of blood and maternal feces and dry the baby thoroughly immediately after birth and discard the wet cloth. Do not let the baby remain wet, as this will cool the body and make him/her hypothermic.
- ***If there is meconium in the amniotic fluid, clear the airway before drying.*** If the baby has passed stool before birth, there is meconium in the amniotic fluid. Meconium inhaled into the lungs can cause breathing problems. Suction the mouth and nose immediately after delivery. Use a bulb suction device, a tube and reservoir suction device, or a cloth to remove fluid. Dry the baby thoroughly after clearing the airway.
- Stimulate by rubbing the back or Slapping or flicking the soles of the feet
- Let the baby stay prone in skin-to-skin contact on the abdomen and cover the baby quickly, including the head, with a fresh dry cloth

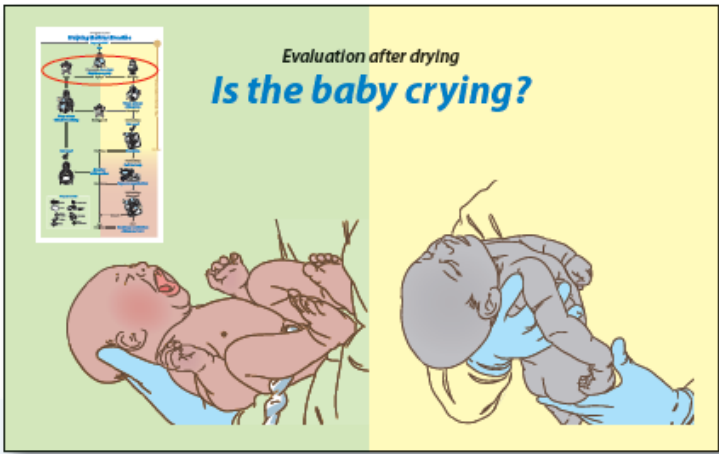
Session 3.3: Assess breathing. Make sure the baby is breathing well.

Facilitators: Please underscore to participants that a large proportion of newborns die around time of birth due to birth asphyxia majority of which can be easily avoided.

Task	Activity	Time
Explain and demonstrate	• Briefly explain to the participants how to evaluate breathing and signs of normal and abnormal breathing in newborns • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how they evaluate breathing in their facilities? • Ask them what they do when they come across a newborn not breathing at birth	10 minutes
Summarize	• Summarize the signs of breathingfrom **Session 2.3** and conclude the session	5 minutes

Session 3.3:

Assess breathing. Make sure the baby is breathing well.



- Check if the baby is crying while drying it.
- Crying is possible when large amount of air move in and out of the lungs. The crying baby usually moves his or her arms and legs and has good muscle tone. After crying for some seconds, a baby may stop crying and begin to breathe quietly and regularly. A baby also may continue to cry for some time. A baby who is not breathing is limp and does not move. The skin may be pale or blush. A baby who is breathing at shallowly, gasping, or not breathing at all needs help to breathe.
- If the baby does not cry, see if the baby is breathing properly.
- If the baby is breathing shallowly, not breathing and/or is gasping: **Call for help**. The assistant can provide basic care for the mother while you provide the more specialized care for the baby who is not breathing. Cut the cord rapidly and start resuscitation. (You will learn more in Neonatal resuscitation module)
- If the baby breathes well, continue routine essential newborn care.
- Do not do suction of the mouth and nose *as a routine*. Do it only if there is meconium, thick mucus, or blood.

Session 3.4: Cord Care: If the baby does not breathe, clamp/tie and cut the cord immediately and start resuscitation. If the baby does cry/breathes well, clamp/tie and cut the cord after pulsations stop or after 2-3 minutes

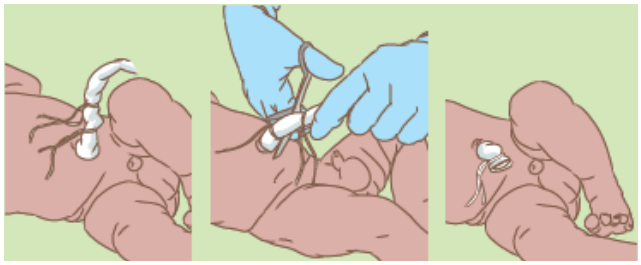
Facilitators: Mention about the Golden Minute, remind participants that there will be a separate module on newborn resuscitation.

Task	Activity	Time
Explain and demonstrate	• Explain benefits of cord care. • Demonstrate the steps on properly clamping/tying and cutting the cord	5 minutes
Invite discussion	• What cord care practices does your health authority recommend? • What traditions exist around cord care? How can parents be encouraged to put nothing on the cord?	5 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Ask participants to practice proper clamping/tying and cutting the cord using the mannequins. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	10 minutes
Summarize	• Summarize the steps on clamping/tying and cutting the cordfrom **Session 2.4** and conclude the session	5 minutes

Session 3.4:

Clamp/tie and cut the cord

Optimal cord care consists of the following:



Clamping the cord: If the baby does not need resuscitation, wait for cord pulsations to cease or approximately 2-3 minutes after birth, whichever comes first, and then place one metal clamp/cord tie 2 fingerbreadths from the baby's abdomen and the second clamp/tie another 5 fingerbreadths from the abdomen. Cutting the cord soon after birth can decrease the amount of blood that is transfused to the baby from the placenta and, in preterm babies; it is likely to result in subsequent anemia and increased chances of needing a blood transfusion.

Cutting the cord: Cut the cord between the two clamps or ties with sterile scissors or surgical blade, under a piece of gauze in order to avoid splashing of blood. At every delivery, a clean separate pair of scissors or blade should be designated for this purpose. Everything that touched the umbilical cord should be clean to avoid infection. Use clean gloves when clamping or tying and cutting the cord.

Tying the cord: Tie the cord firmly with sterile ligatures after the mother and baby are stable and after implementation of AMTSL. In finally tying the cord, make sure that it is tied tightly with 2-3 knots. Check for bleeding/oozing. If bleeding or oozing occurs, place a second clamp or tie between the first one and the baby's skin and retie if necessary. The cord may be tied by using sterile cotton ties, elastic bands, or pre-sterilized disposable cord clamps. Leave the cut end of the cord open to the air to dry.

Helping Babies Breathe: Possible scenarios and actions

Session 3.5: Clear the airway if there is meconium

Facilitators: Providers must clear the airway for all babies if there is meconium in the amniotic fluid.

Task	Activity	Time
Explain and demonstrate	• Describe the purpose and benefits of the clearing the airway when there is meconium in the amniotic fluid • Describe the *"Matrix for Helping Babies Breathe with proposed actions for possible six scenarios"* and *"Helping Babies Breath Action Plan"* poster • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants if providers in their facilities clear the airway if there is meconium? Do they clear for all babies irrespective of the meconium? • Ask if there are challenges and what they think can be done to address them	10 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Show how to use the suction device (inflate and deflate the bulb)
	  ○ Thoroughly dry the baby after clearing the airway
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		20 minutes

Summarize	• Summarize the key points on clearing the airway when there is meconium from **Session 2.5** and conclude the session	10 minutes

Session 3.5:

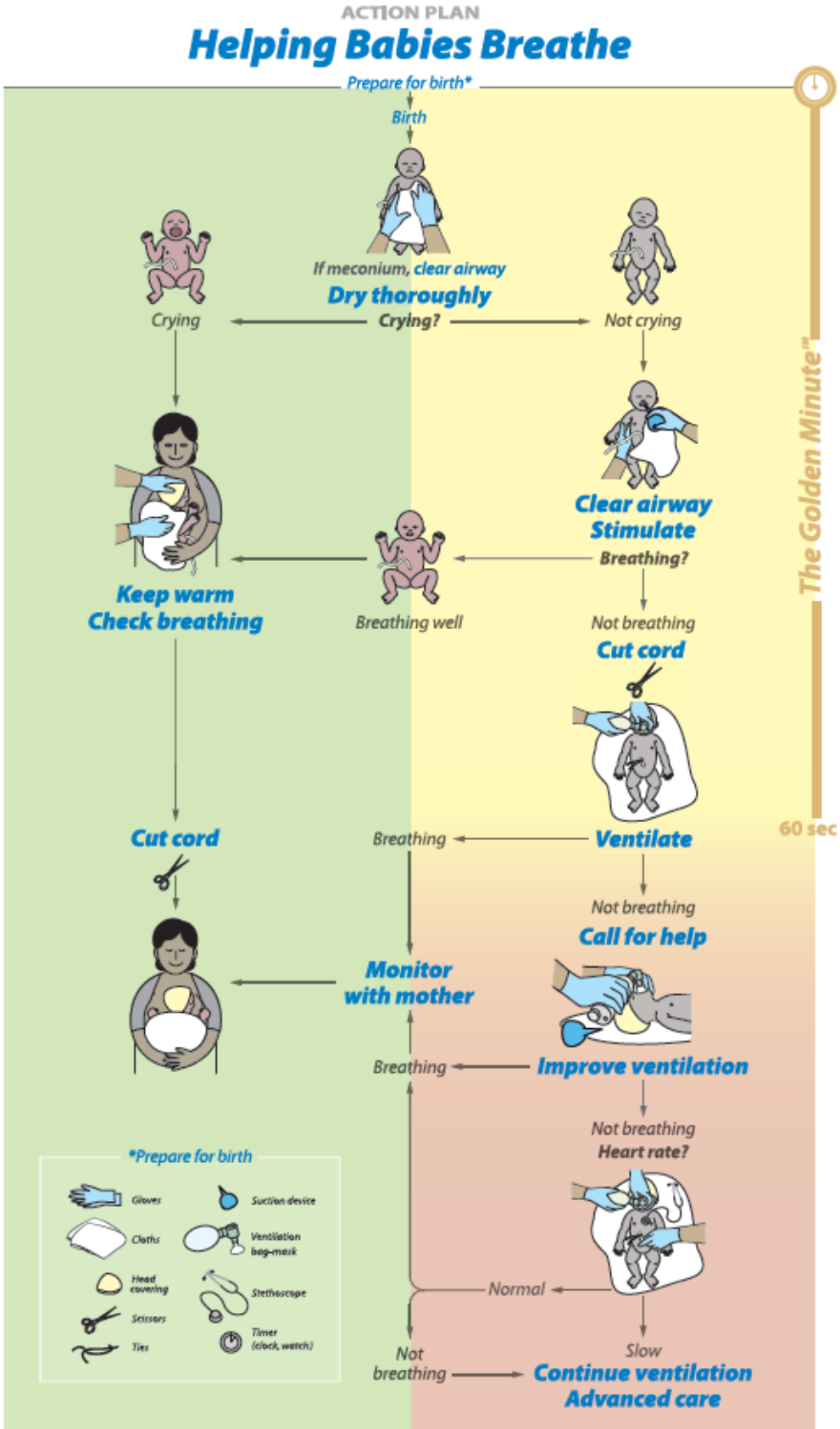
Clear the airway if there is meconium

If there is meconium in the amniotic fluid, clear the airway before drying. Meconium aspirated into the lungs can cause breathing problems. Suction the mouth and nose immediately after delivery. Use a bulb suction device, a tube and reservoir suction device, or a cloth to remove the fluid. Dry the baby thoroughly after clearing the airway.

Dry the baby

Put the baby on the abdomen and dry the baby thoroughly at birth. Drying helps keep the baby warm and stimulates breathing. A newly born baby wet with amniotic fluid can become cold even in warm room. Dry the body, arms, legs, and head by gently rubbing with a cloth. Wipe the face clean of blood and maternal feces. Remove the wet cloth. Note the time of birth.

The matrix in the next page and the "Action Plan" for Helping Babies Breathe in the following page help you to decide which actions to take next to help babies breathe when they are not reacting to the different levels of care you provide.


ACTION PLAN
Helping Babies Breathe
Prepare for birth*
Birth
If meconium, clear airway
Dry thoroughly
Crying?
Crying
Not crying
Clear airway
Stimulate
Breathing?
Keep warm
Check breathing
Breathing well
Not breathing
Cut cord
Cut cord
Breathing
Ventilate
Not breathing
Call for help
Monitor
with mother
Improve ventilation
Breathing
Not breathing
Heart rate?
Normal
Not
breathing
Slow
Continue ventilation
Advanced care
The Golden Minute™
60 sec
*Prepare for birth
Gloves
Suction device
Cloths
Ventilation bag-mask
Head covering
Stethoscope
Scissors
Timer (clock, watch)
Ties

Session 3.6:

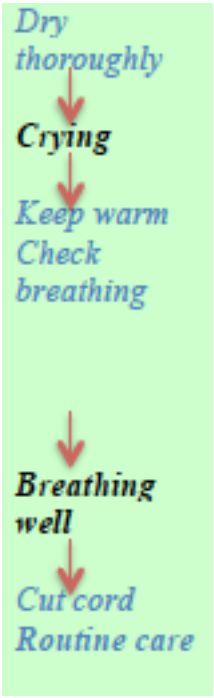
1. Baby is crying: Provide routine care

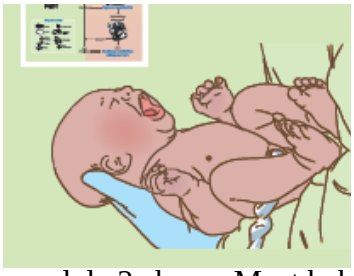
Facilitators: If babies are breathing normally providers should continue with provision of routine essential newborn care as discussed in Module 2.

Task	Activity	Time
Explain and describe	• Explain that if the baby is breathing normally providers should continue with routine care. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Summarize	• Summarize the key points on care provided for babies who cry/breathe at birth from **Session 2.6** and conclude the session	10 minutes

Session 3.6

1. Baby is crying: Provide routine care





About 1 in 10 babies needs help to breathe. Rapid assessment at the moment of birth is the best way to know if a baby needs help to breathe.

If the baby is crying continue with routine essential newborn care discussed in the module 2 above. Most babies cry at birth. Crying means a baby is breathing well. Crying baby usually moves his/her arms and legs and has good muscle tone. After crying for some seconds, a baby may stop crying and begin to breathe quietly and regularly. A baby also may continue to cry for some time.

Session 3.7:

2. Baby is not crying: Clear the airway and stimulate breathing

Facilitators: Most of the babies who do not breathe at birth breaths normally by just clearing the airway and stimulating them

Task	Activity	Time
Explain and demonstrate	• Demonstrate how to stimulate breathing • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants what providers in their facilities immediately do when babies are not breathing at birth • Ask participants the challenges and what can be done to address them	10 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Clear the airway with proper use of the suction device
	  ○ Stimulate breathing
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		20 minutes

Summarize	• Summarize the key points on clearing the airway and stimulating breathing for babies who do not cry/breath normally at birth from **Session 2.7** and conclude the session	10 minutes

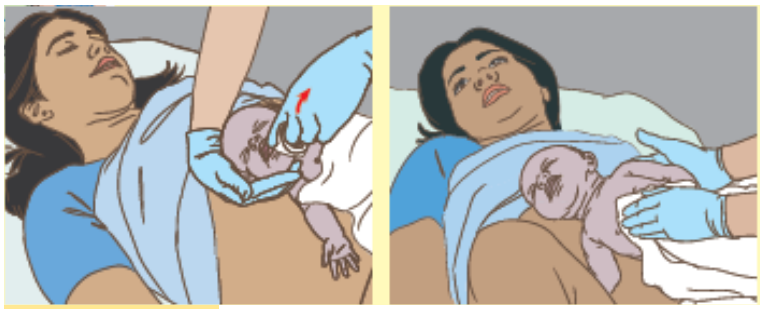
Session 3.7:

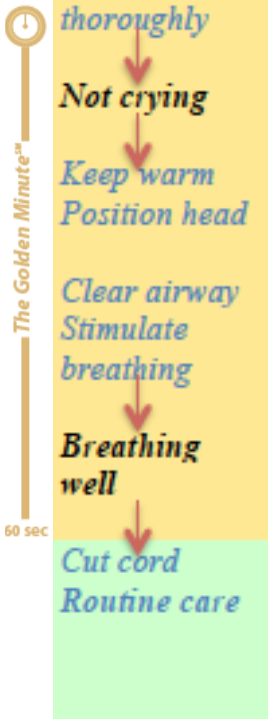
2. Baby is not crying: Clear the airway and stimulate breathing

A baby who does not cry needs help to breathe. Babies who do not cry may not be breathing at birth. A baby who is not breathing is limp and may be pale or bluish. A baby who is breathing shallowly, gasping, or not breathing at all needs help to breathe. Prompt attention will increase the chance of good response. If not help is given to baby who is not breathing, that baby may die or experience serious brain damage.

If the baby is not crying or breathing well after drying, you will need to help the baby breathe in "The Golden Minute".

Position the baby with the neck slightly extended to help keep the airway open. When the baby's head is in the correct position, the nose will be as far forward as possible. If the neck is flexed or extended too far, air may not enter freely.





*Clear the airway:*Clear the mouth and then the nose with a clean suction device or wipe. Clear the mouth first to remove the largest amount of secretions before the baby gasps or cries. Suctioning the nose first may cause gasping and aspiration of secretions.

When using bulb suction, squeeze the bulb before inserting the tip in the mouth or nose and release before withdrawing the bulb. Stop suctioning when secretions are cleared, even if the baby does not breathe. Suctioning too long, too vigorously, or too deeply can cause injury, slow heart rate and prevent breathing.

When using a suction device with a tube and reservoir, insert the tube into the side of the baby's mouth no more than 5 cm beyond the lips. Apply suction while withdrawing the tube. Insert the suction tube 1 to 2 cm into each nostril and apply suction while withdrawing the tube.

Stimulating breathing.

Gently rub the back once or twice. Do not delay or stimulate longer. Move quickly to evaluate breathing and decide if ventilation is needed. Drying, cleaning the airway, and stimulating breathing should take less than 1 minute. Your actions in The Golden Minute helps many babies

begin to breathe. If the baby breathes well after you cleared the airway and with simple stimulation, keep him/her skin-to-skin with the mother and continue with routine essential newborn care.

Check if the baby is 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 not breathing at all

Some babies will have shallow, irregular, slow, or noisy breathing immediately after birth. Others may have chest indrawing (retractions). These babies will require close monitoring of their breathing, heart rate, and color to decide if they need more help to breathe.

Decide what care the baby needs after cleaning the airway and stimulation: If the baby is breathing well, not further intervention is required. Continue to check the breathing. Clamp or tie and cut the umbilical cord. Encourage breastfeeding within the first hour.

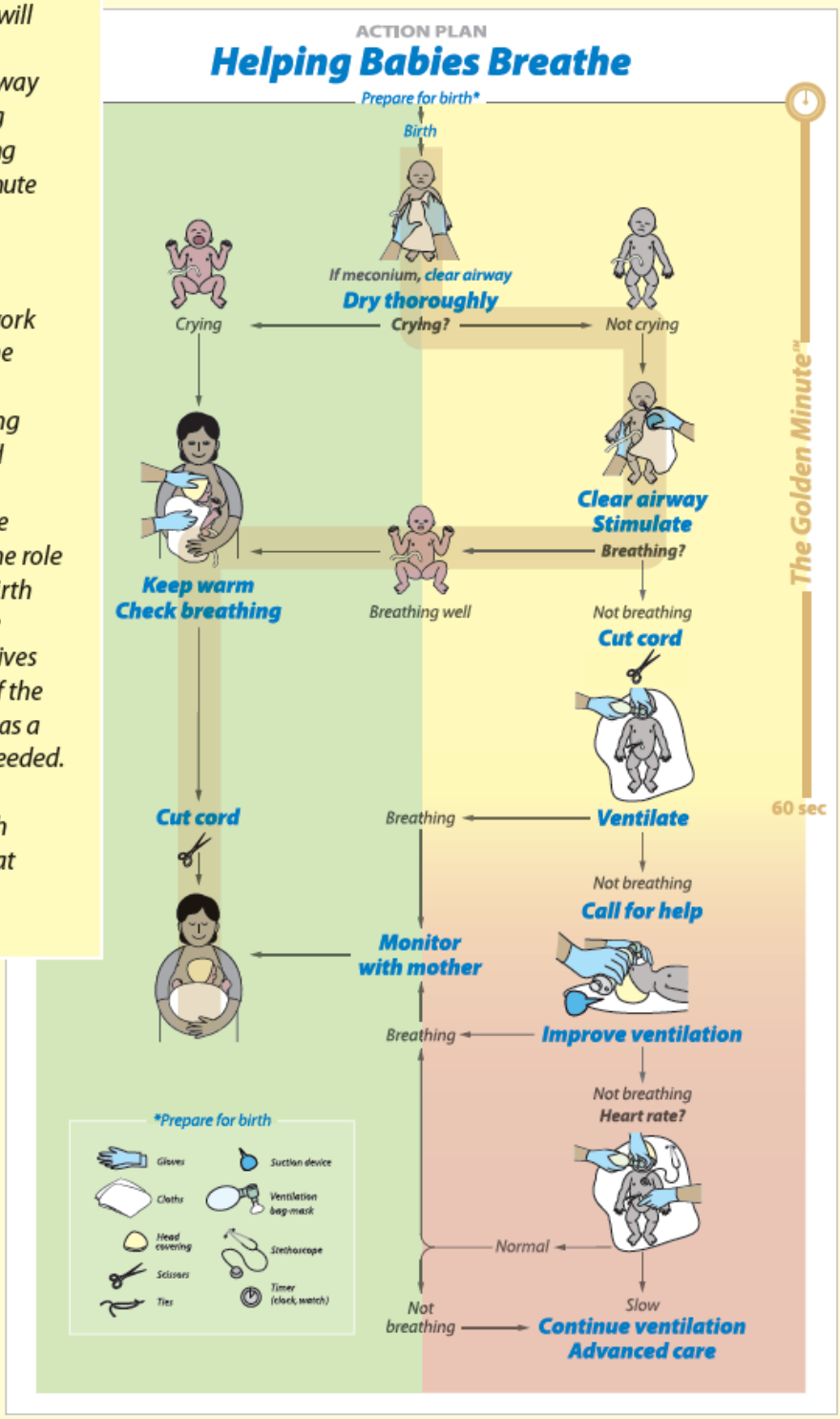
If the baby is not breathing well (gasping or not breathing at all) quickly clamp or tie and cut the umbilical cord before moving the baby to the area for ventilation then begin ventilation with bag and mask Delay in ventilation may result in preventable death or brain damage.

Exercise: The Golden Minute℠ – clear the airway and stimulate breathing

The facilitators will demonstrate clearing the airway and stimulating breathing during The Golden Minute and the baby's responses.

Learners will work in pairs with the mannequin to practice clearing the airway and stimulating breathing. One person takes the role of the skilled birth attendant. The other person gives the response of the baby and acts as a helper when needed.

Learners switch roles and repeat the exercise.



Session 3.8:

3. Baby is not crying: Ventilate with bag and mask

Facilitators: Almost all babies who do not breathe at birth starts to breathe normally with simple ventilation with bag and mask

Task	Activity	Time
Explain and demonstrate	• Explain the steps on ventilating with bag and mask of babies who do not respond to clearing airway and stimulating breathing. • Demonstrate to participants how to position the baby and ventilate with bag and mask • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants if health providers in their health facilities use bag and mask to initiate breathing for babies not breathing at birth • Ask participants the challenges and what can be done to address them	10 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Steps of ventilation of the baby with bag and mask
	  ○ Checking if the baby is breathing well
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		20 minutes

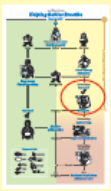
Summarize	• Summarize the key points on ventilating with bag and mask from **Session 2.8** and conclude the session	10 minutes

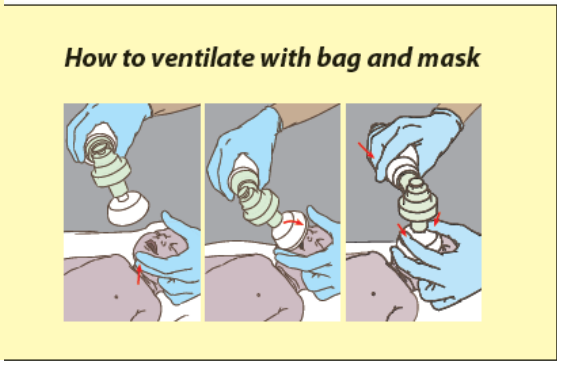
Session 3.8:

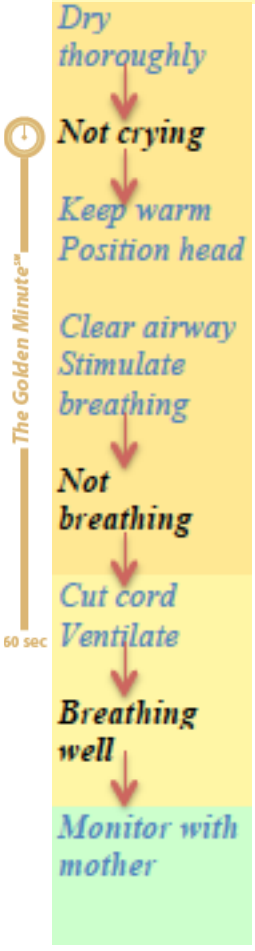
3. Baby is not crying: Ventilate with bag and mask

If the baby does not breathe well after clearing the airways and stimulating with gentle rubbing of the back then clamp or tie and cut the cord and ventilate the baby with bag and mask.

Ventilation with bag and mask is the most important and effective way to help the baby who is not breathing or is gasping. Ventilation opens the lungs with air.







Initiate ventilation: Place the baby on a flat clean, warm and dry area with a good light to assess the baby. You should have prepared this area prior to the birth.

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, and nose, but not the eyes. The mask should make a tight seal on the face so that air will enter the baby's lungs. A mask that is too large will not seal well on the face. Air will escape under the mask. A mask that is too small will not cover both the mouth and nose and may block the nose. Air will not enter the lungs freely.

Position the head slightly extended: Help keep the baby's airway open by positioning the head slightly extended and supporting the chin. Avoid over extension or flexion.

Position the mask on the face: Position the rim of the mask on the tip of the chin, then place the mask over mouth and nose.

Make a firm seal between the mask and the face while squeezing the bag to produce a gentle movement of the chest: Hold the mask on the face with the thumb and index finger on top of the mask. Use the middle finger to hold the chin up toward the mask. Use the 4th and 5th finders along the jaw to lift it forward and help keep the airway open. Form a tight seal by pressing lightly on the top of the mask and gently holding the chin up toward the mask. If the seal is not tight, you will not move air into the lugs as you squeeze the bag. The air will escape under the rim of the mask. Do not push the mask down onto the face. This may change the head position and interfere with air entering the lungs.

Squeeze the bag to produce a gentle movement of the chest, as if the bay were taking an easy breath. Make sure there is no leak between the mask and the baby's face. Squeeze the bag harder if you need to deliver more air with each breath.

Give 40 breaths per minute: Count aloud "one….two….three". If you squeeze the bag as you say, "One," and release while you say, "two….three," you will ventilate at a rate that helps air move into and out of the lungs.

Check if the baby is breathing well

Some babies improve quickly and begin breathing well after brief ventilation. Some babies require continued ventilation with bag and mask.

Check if the baby is 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 not breathing at all

Decide what next care baby needs after starting spontaneous breathing.

- If spontaneous breathing established, stop ventilation.
- Look for one of the danger signs (fast breathing, grunting and chest in-drawing)

A baby who is not breathing well (gasping or not breathing at all) needs continued ventilation with bag and mask.

Exercise: The Golden Minute℠ - ventilation

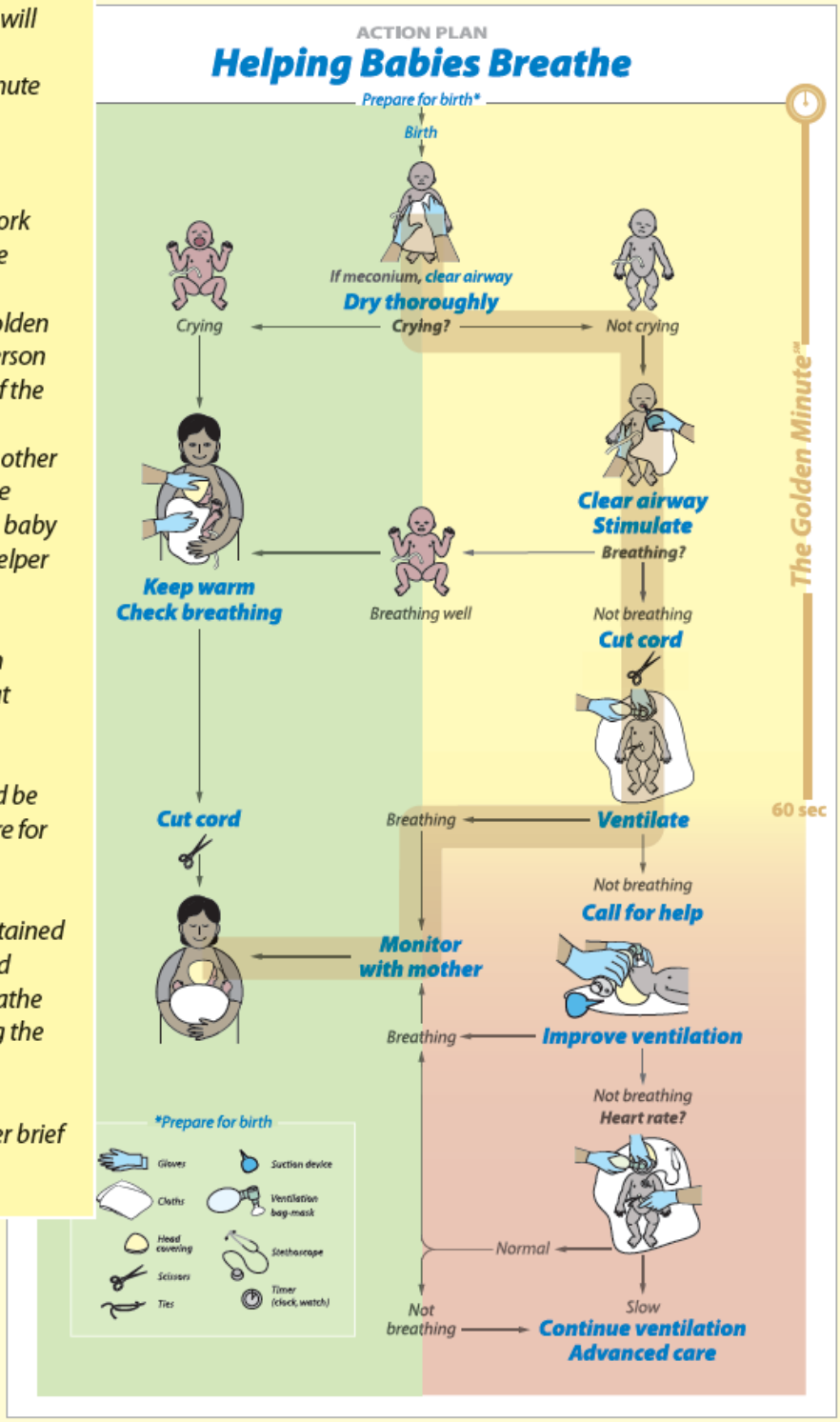
The facilitators will demonstrate The Golden Minute and the baby's responses.

Learners will work in pairs with the mannequin to practice The Golden Minute. One person takes the role of the skilled birth attendant. The other person gives the response of the baby and acts as a helper when needed.

Learners switch roles and repeat the exercise.

Learners should be prepared to care for a baby who

- *has clear OR meconium-stained amniotic fluid*
- *does not breathe after clearing the airway and stimulating*
- *breathes after brief ventilation*



Session 3.9:

4. Baby is not breathing with beginning ventilation: Continue/improve ventilation

Facilitators:

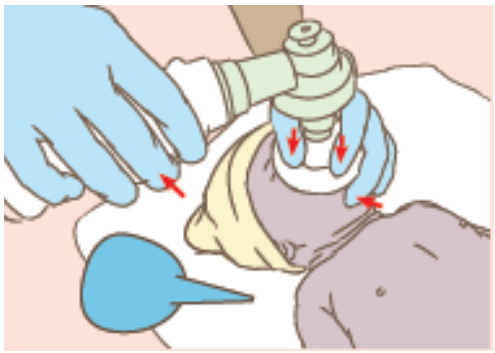
Task	Activity	Time
Explain and demonstrate	• Explain the purpose of continuing or improving ventilation when the baby does not respond to beginning ventilation. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants what health providers in their heath facilities do when babies do not respond to beginning ventilation • Ask participants the challenges and what can be done to address them	10 minutes

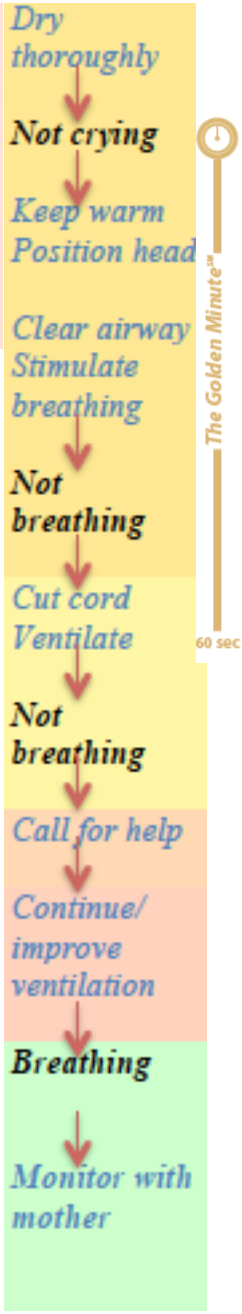
Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Continue/improve ventilation of the baby with bag and mask
	  ○ Check if the baby is breathing well
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		15 minutes

Summarize	• Summarize the key points on continuing or improving ventilation from **Session 2.9** and conclude the session	10 minutes

Session 3.9

4. Baby is not breathing with beginning ventilation: Continue/improve ventilation





If the baby doesn't breath well after beginning ventilation call for help and continue resuscitation. Ask for more skilled professional available.

Check that ventilation breaths produce movement of the chest as if the baby were breathing normally.

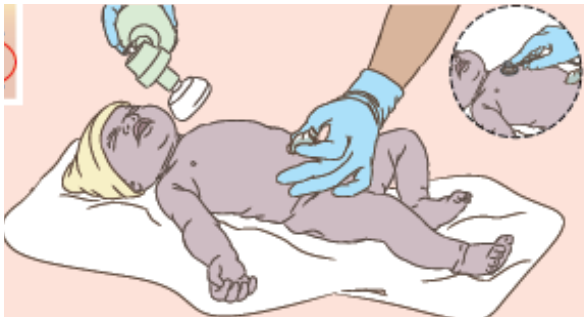
Take steps to improve ventilation if the chest is not moving. Check the baby's mouth, head and the bag.

- Put the baby in lateral position
- Check the mouth and nose and do fast suction, first the mouth and then the nose.
- Re-position the head properly
- Check fast for mal functioning of the bag.
- Open the baby's mouth slightly before reapplying the mask
- Reapply the mask to the face to form a better seal.
- Squeeze the bag harder to give a larger breath

An air leak under the mask or incorrect position of the head is a common reason for poor chest movement. If you still do not see gentle movement of the chest, try to find the problem and repeat the necessary steps to improve ventilation. Recheck the function of the ventilation bag. Replace it if another bag is available.

If the baby does not begin to breathe after 1 minute of ventilation with chest movement, evaluate heart rate to decide if ventilation is adequate.

Checking the heart rate is easier and faster with the help of another skilled person. A skilled helper can count the umbilical cord pulsation while you are giving the first minute of ventilation. If you have no skilled helper or the cord pulse cannot be felt, you will need to rely on movement of the chest as an indicator of adequate ventilation. Continue ventilation for 1 minute before stopping to listen to the heartbeat.



Decide if the heart rate is normal or slow: Evaluate the heart rate by feeling the umbilical cord pulse or listening to the heartbeat with a stethoscope. Feel the pulse in the umbilical cord. If pulse cannot be felt in the cord, you or your helper must listen over the left chest with a stethoscope and count the heartbeat. Pause ventilation for several seconds in order to hear the heartbeat.

- A heart rate of 100 beats per minute or more is normal.
- A heart rate of less than 100 beats per minute is slow.

Minimize the time without ventilation. Listen to the heart rate just long enough to recognize if it is normal or slow. If the heart rate sounds faster than your own, it is probably normal. If the heart rate sounds slower than your pulse, it is slow.

Session 3.10:

5. Baby is not breathing with ventilation, has normal heart rate: Continue ventilation

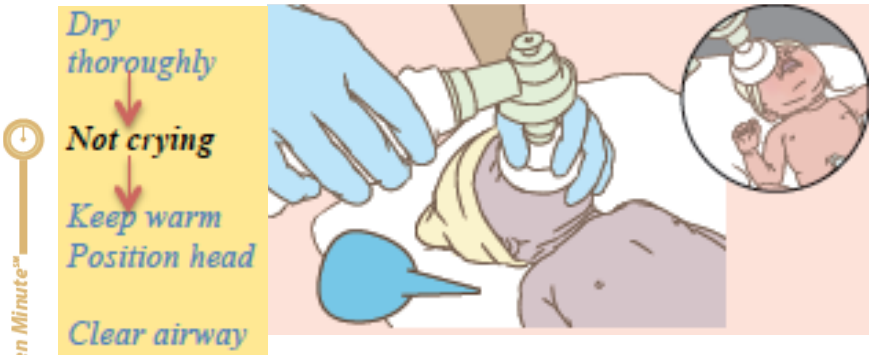
Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain to participants what to do for babies not breathing with ventilation but have normal heart rate. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants what health providers in their heath facilities do when babies not breathing with ventilation but have normal heart rate • Ask participants the challenges and what can be done to address them	10 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Continue/improve ventilation with bag and mask
	  ○ Check if the baby is breathing well
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		15 minutes

Summarize	• Summarize the key points on what to do for babies not breathing with ventilation but have normal heart rate from **Session 2.10** and conclude the session	10 minutes

5. Baby is not breathing with ventilation, has normal heart rate: Continue ventilation



If the heart rate is normal, continue to ventilate until the baby is breathing well. Gradually reduce the rate of ventilation and look for the baby's breathing. If the heart rate stays normal as the baby begins to breathe, stop ventilation. Ventilation can stop when the baby is breathing and the heart rate stays normal (more than 100 beats per minute).

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, consider also NEC. Talk with mother and the birth companion about the baby and the plan of care.

Continue ventilation and seek advanced care if the baby is not breathing or not breathing well

A baby who has a normal heart rate and pink color but does not breathe needs continued ventilation. A slow decrease in the rate of ventilation over several minutes may allow return of spontaneous breathing. If the baby still does not breathe, continue ventilation and consider specialty consultation and/or referral. It is always good to refer the baby to Neonatal Intensive Care Unit (NICU) if the health facility has one.

The baby who begins to breathe, but has difficulty breathing and a slow heart rate without ventilation needs continued ventilation and specialty care

The baby who is blue, pale, or breathing fast may be helped by supplemental oxygen through nasal prongs or catheter. Severe chest indrawing, grunting or frequent pauses in breathing (longer than 15 to 20 seconds) may require mechanical support of breathing

A baby who has received continued ventilation (longer than 5 minutes) needs close monitoring and specialty consultation or referral. Warmth and assistance with feeding will be necessary

Exercise: Continued ventilation with normal heart rate

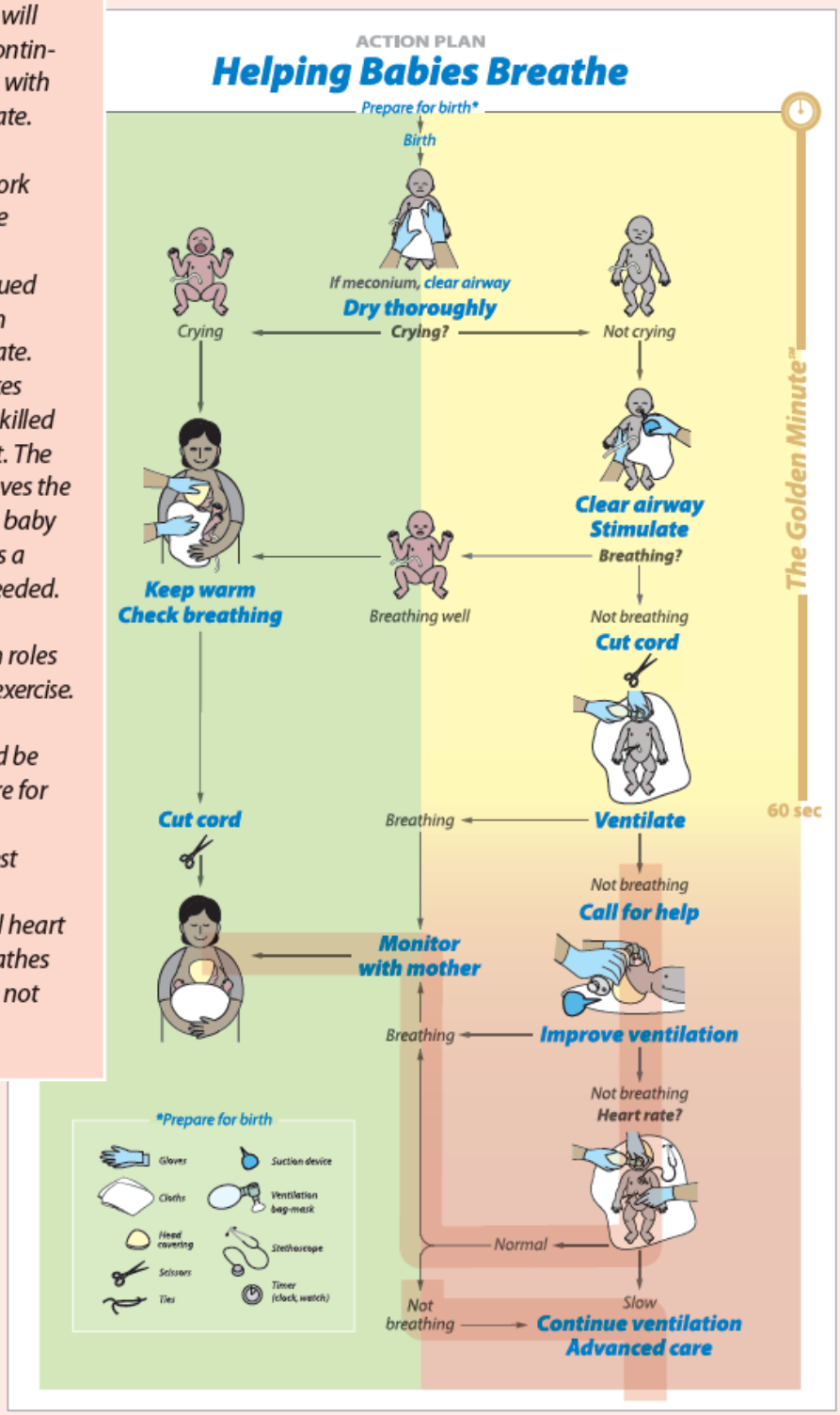
The facilitators will demonstrate continued ventilation with normal heart rate.

Learners will work in pairs with the mannequin to practice continued ventilation with normal heart rate. One person takes the role of the skilled birth attendant. The other person gives the response of the baby and also acts as a helper when needed.

Learners switch roles and repeat the exercise.

Learners should be prepared to care for a baby who

- *has poor chest movement*
- *has a normal heart rate and breathes well OR does not breathe well*



Session 3.11:

6. Baby is not breathing with ventilation, heart rate is slow: Continue ventilation and seek advanced care

Facilitators: Small proportion of babies who do not breathe at birth may continue to have breathing problem after ventilation and have slow heart rate. Whilst continuing ventilation the emergency plan for advanced care should be activated.

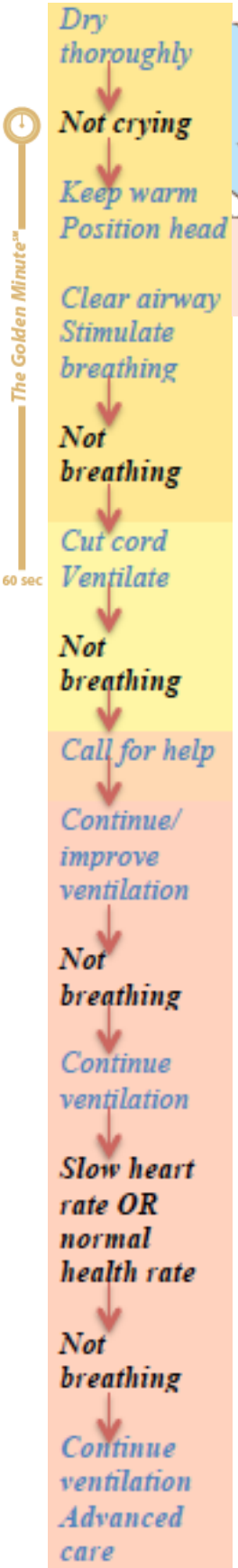
Task	Activity	Time
Explain and demonstrate	• Explain to participants what they do for babies not breathing with ventilation but with slow heart rate. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants what health providers in their heath facilities do when babies not breathing with ventilation and have slow heart rate • Ask participants the challenges and what can be done to address them	10 minutes

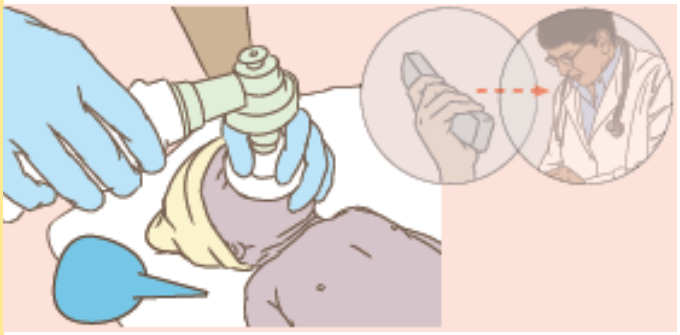
Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Continue/improve ventilation with bag and mask
	  ○ Check if the baby is breathing well
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		15 minutes

Summarize	• Summarize the key points on what to do for babies not breathing with ventilation but with slow heart rate **Session 2.11** and conclude the session	10 minutes

Session 3.11

6. Baby is not breathing with ventilation, heart rate is slow: Continue ventilation and seek advanced care





If the heart rate is slow, make sure that you have taken all the steps to improve ventilation. There may be a serious problem.

Such problems include pneumonia, meconium aspiration, immature lungs (prematurity), or a congenital malformation. The baby may need endotracheal intubation and supplemental oxygen or chest compression and medications.

Activate the emergency plan to access advanced care at a specialty facility. Continue ventilation during transport if the baby must be moved for advanced care.

If the baby has no heart rate and no breathing after giving ventilation for 10 minutes, the baby is dead. Stop ventilation.

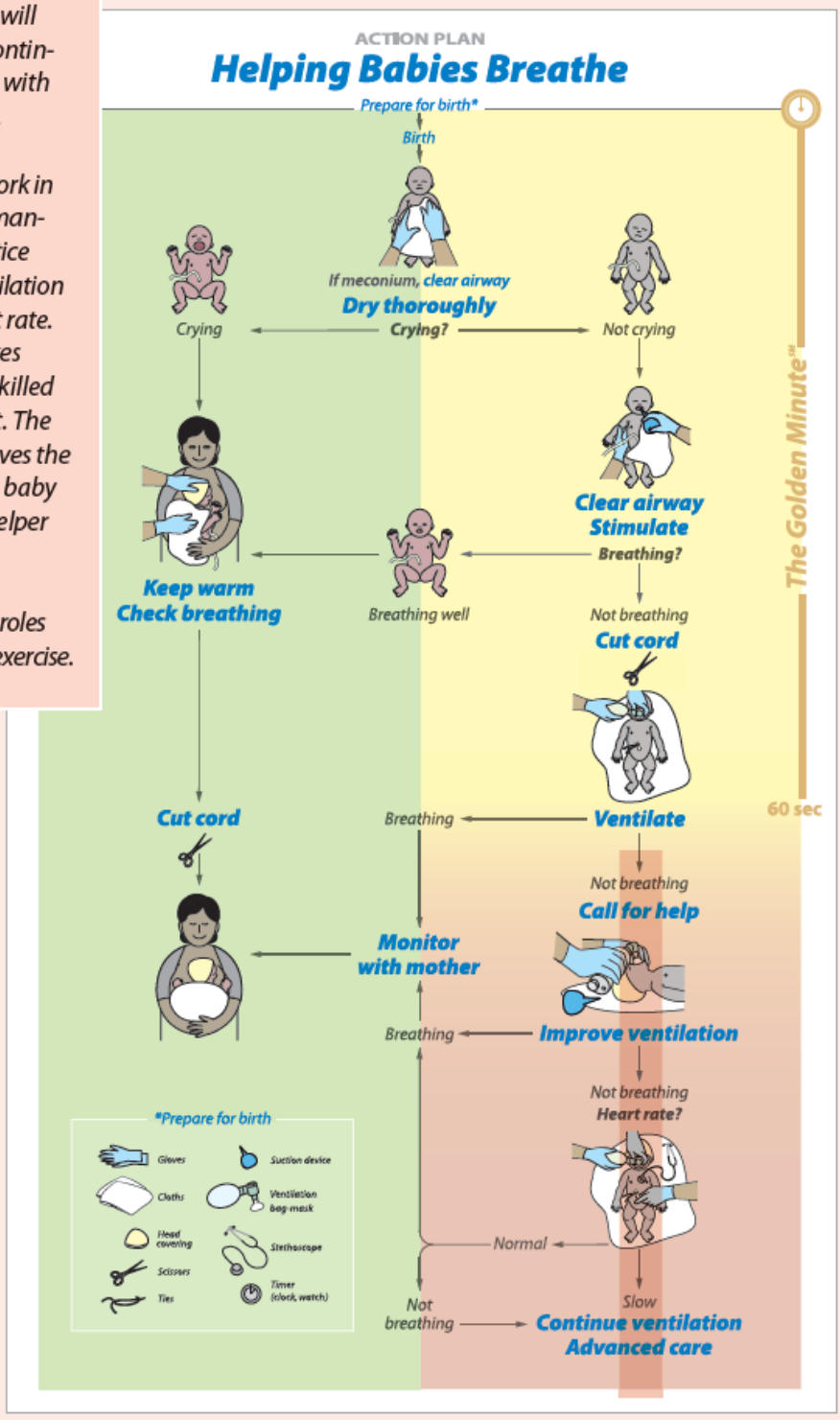
Skin that is purple-white or peeling (maceration) suggests that a baby died long before delivery. If recognized at delivery, ventilation need not begin. Ventilation can be stopped whenever maceration is recognized. No intervention is indicated. A baby who never had a heart rate and never breathed after birth is stillborn.

Exercise: Continued ventilation with slow heart rate

The facilitators will demonstrate continued ventilation with slow heart rate.

Learners will work in pairs with the mannequin to practice continued ventilation with slow heart rate. One person takes the role of the skilled birth attendant. The other person gives the response of the baby and acts as a helper when needed.

Learners switch roles and repeat the exercise.



Session 3.12

If referral/transfer is necessary transfer the mother and baby together, and support the family

Facilitators: It is very important that the mother and the baby remain together during referral if referral is necessary, the mother should be the primary provider of care for the baby whenever that is possible.

Task	Activity	Time
Explain and demonstrate	• Explain the purpose and benefits of referral and transfer. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	15 minutes
Invite discussion	• Ask participants what health providers in their heath facilities do when they decide to refer or transfer babies who need advanced care • Ask participants the challenges and what can be done to address them	10 minutes
Summarize	• Summarize the key points on referral and transport from **Session 2.12** and conclude the session	15 minutes

Session 3.12

If referral/transfer is necessary transfer the mother and baby together, and support the family

A baby may have breathing problems or other danger signs that require specialty care. Every facility should have guidelines for referral (transport) of sick babies.

Transport mother and baby together: Continue to monitor baby's breathing, heart rate, color and temperature and the actions you have taken to the responsible person at the receiving facility. Try to keep mother and baby together during transfer, even if only one is ill. Consider skin-to-skin care in transport, as possible, to facilitate observation and protect the baby from cold stress.

Support the family of a baby who is ill or who died. Explain to the family of a sick baby what is wrong and what can be done to help. Answer the family's questions or find help to answer them. If a baby dies, respond in a culturally appropriate way. If appropriate, explain to the family why you think the baby died and discuss with the family the events before death. Allow family members to see and hold the baby if they wish. Respect the family's wishes, privacy, and religious beliefs. Give the mother advice on breast care and family planning.

Matrix for Helping Babies Breathe: Proposed actions for the six possible scenarios

Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
		If meconium, clear the airway			
Dry thoroughly on abdomen	*Dry thoroughly on abdomen*	*Dry thoroughly on abdomen*	*Dry thoroughly on abdomen*	*Dry thoroughly on abdomen*	*Dry thorough on abdomen*
Crying	***Not crying***	***Not crying***	***Not crying***	***Not crying***	***Not crying***
Keep warm *Check breathing*	*Keep warm* *Position head* *Clear airway* *Stimulate breathing*	*Keep warm* *Position head* *Clear airway* *Stimulate breathing*	*Keep warm* *Position head* *Clear airway* *Stimulate breathing*	*Keep warm* *Position head* *Clear airway* *Stimulate breathing*	*Keep warm* *Position head* *Clear airway* *Stimulate breathing*
Breathing well	***Breathing well***	***Not breathing***	***Not breathing***	***Not breathing***	***Not breathing***
Cut cord ***Routine care***	*Cut cord* ***Routine care***	*Cut cord* *Ventilate*	*Cut cord* *Ventilate*	*Cut cord* *Ventilate*	*Cut cord* *Ventilate*
		Breathing well	***Not breathing***	***Not breathing***	***Not breathing***
		Monitor with mother	*Call for help*	*Call for help*	*Call for help*
			Continue/ improve ventilation	*Continue/ improve ventilation*	*Continue/ improve ventilation*
			Breathing	***Not breathing***	***Not breathing***
			Monitor with mother	*Continue ventilation*	*Continue ventilation*
				Normal heart rate	***Slow heart rate OR normal health rate***
				Breathing	***Not breathing***
				Monitor with mother	***Continue ventilation Advanced care***

Module 4: Essential Newborn Care for Every Baby

Essential Newborn Care Components
Other Essential Newborn Care Services

Module 4: Essential Newborn Care for Every Baby

Module Objectives	By the end of this module, participants will be able to: • Demonstrate how to provide steps of immediate essential newborn care • Demonstrate how to provide other essential newborn care services • To describe signs and symptoms of newborn infections • Manage local newborn infections • Manage major bacterial infection in newborn
Time the session requires	8 hours and 45 minutes
Materials and methods for the sessions	Materials: • LCD projector and desktop/laptop computer • Flips charts and markers • Notebook, pen and pencils for participants • Mannequin • Timer • Thermometer • At least two cloths/blankets • Cap/hat for the newborn • Disposable cord ties or clamps • Sterile scissors or blade • Chlorhexidine 4% gel • Tetracycline eye ointment • Vitamin K Injection: disposable syringe, needle, medication, alcohol/antiseptic solution, and clean, preferably sterile gauze/cotton • Weighing scale • Partograph/newborn register • Sessions Methods • Brainstorming • Small group exercise and sharing to the class • Role-plays • Demonstrations • Facilitators summarize the key points

Session 4.1: Skin to Skin Contact: Place the infant in skin-to-skin contact on the mother's chest and cover both with clean linen and blanket as required.

Facilitators: Please underline that immediate drying, changing the wet towel and putting the baby skin to skin on the mother's abdomen is very critical newborn care practice.

Task	Activity	Time
Explain and demonstrate	• Explain and demonstrate the steps on putting the baby skin-to-skin with the mother • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if they keep the baby skin to skin with them mother immediately after birth at least for the first hour • Ask them what are the challenges and what they think can be done to address them	5 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Using the mannequins ask participants to practice properly putting the baby skin-to-skin with the mother. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	10 minutes
Summarize	• Summarize the steps on clamping/tying and cutting the cordfrom **Session 3.1** and conclude the session	5 minutes

Session 4.1:

Place the infant in skin-to-skin contact on the mother's chest and cover both with clean linen and blanket as required.

Position the baby skin-to-skin on the mother's abdomen. The warmth from the mother's body is one of the best ways to keep the baby warm. Keep the baby warm by placing it in skin-to-skin contact on the mother's chest.

- Cover the baby's body and head with warm, dry and clean cloth and cap or other head covering. Otherwise, cover the baby with part of the mother's clothing. If the room is cool (<25 ºC), use a blanket to cover the baby over the mother.
- Postpone bathing and weighing and keep the area warm
- Initiate breastfeeding: the two measures to prevent hypothermia is at the time of birth are breastfeeding and skin-to-skin contact

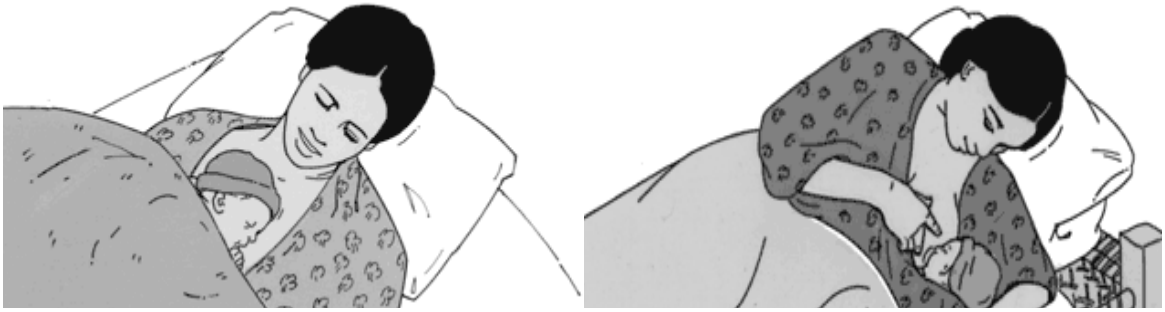


Figure 4.1: Keeping the baby warm after delivery

Session 4.2: Initiate breastfeeding within the first hour. Select the appropriate method of feeding for the HIV-infected mother, based on informed choice.

Facilitators: Tell to the participants that babies should be put on breast within the first hour after birth whether breast milk started to come or not.

Task	Activity	Time
Explain and demonstrate	• Explain the benefits of initiation of breastfeeding within the first hour. • Demonstrate the steps on initiation of breastfeeding within the first hour	5 minutes
Invite discussion	• Ask participants if they support the mother to initiate breastfeeding within the first hour • Ask them what are the challenges and what they think can be done to address them	10 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Using the mannequins and breast model ask participants to practice on properly putting the baby on breast describing signs of good positioning and attachment. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	15 minutes
Summarize	• Summarize the steps on initiation of breastfeeding within the first hour from **Session 3.2** and conclude the session	5 minutes

Session 4.2:

Initiate breastfeeding within the first hour. Select the appropriate method of feeding for the HIV-infected mother, based on informed choice.

Breast milk and colostrum provide nutrition that is easy to digest and contain antibodies that protect against infection. Babies should receive only breast milk for the first 6 months. Babies who receive other food or liquids before 6 months of age are more likely to develop diarrhea. Advise women about breastfeeding during antenatal visits and discuss it again before birth occurs.

Starting breastfeeding within the first hour after birth helps mothers to provide enough milk later. It also helps the uterus contract and reduces maternal bleeding.

Some babies may not breastfeed well soon after birth, but it is important to encourage breastfeeding during this time. To encourage early breastfeeding, keep mother and baby together unless a problem separates them. Babies are often alert immediately after birth and will move toward the mother's breast but may not suck.

Signs of readiness to feed include:

1) Licking movements
2) Eyes open
3) The baby's head slightly back
4) Tongue down and forward
5) Mouth open

Teach mothers how to recognize these signs and initiate breastfeeding early.

Steps of putting the baby to the breast: Proper positioning and attachment

- The baby's whole body is fully supported and held close at the level of the breast and turned toward the mother
- The mother, if possible, holds the breast with thumb on top and other fingers at the bottom without touching the nipple
- When the baby opens his/her mouth widely, the nipple and most of the surrounding areola are introduced into the mouth
- The baby's nose is not blocked by the breast tissue
- The mother does not feel pain in the nipple when the baby sucks. If she does, show her how to release the nipple from the baby's mouth (by gently depressing the baby's chin) and reintroduce the nipple after the pain subsides
    - That attachment at the nipple is appropriate

    - The baby's chin is touching or nearly touching the breast
    - The mouth is wide open
    - The lower lip is everted (turned outward)
    - Most of the areola is inside the mouth, especially the part below so that the areola is visible more above the mouth than below
    - The sucking is slow and deep and swallowing is audible
- Unrestricted time is allowed for the feeding.

Counseling the mother and families on breastfeeding: Provide the following messages to the mother

- Breastfeeding delays the mother's return to fertility because of lactational amenorrhea.
- Breastfeeding provides the best possible nutrition for the baby.
- Feed day and night, at least 8 times in 24 hours, allowing on-demand sucking by the baby.
- If the baby is small (less than 2,500 grams), wake the baby to feed every 3 hours.
- If the baby is not feeding well, seek help.
- Successful breastfeeding requires support for the mother from the family and health institutions.
- There is no need for extra bottle feeds or water for normal babies, even in hot climates
- Exposing the baby to water increases the likelihood of infections, especially diarrhea.
- Supplementing water reduces the effectiveness of breast milk in preventing infections and providing nutrition. Initiate breastfeeding within an hour
- Explain the importance of the Colostrum.
- Avoid the use of the bottles and pacifiers.

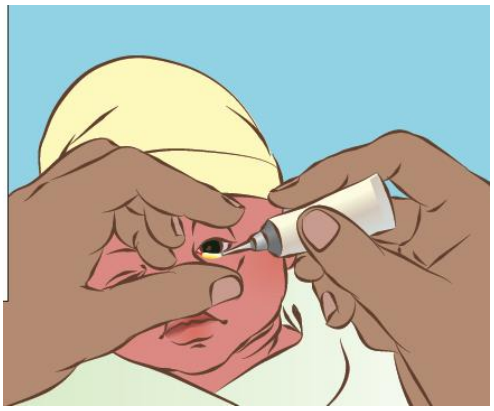
Session 4.3: Eye Ointment: Within 90 minutes after birth administer eye drops/eye ointment.

Facilitators: Tetracycline eye ointment should be given to the newborn before the mother leaves the health facility.

Task	Activity	Time
Demonstration	• Describe benefits of tetracycline eye ointment. • Demonstrate the steps on administration of tetracycline eye ointment.	5 minutes
Invite discussion	• Do health care providers routinely treat all babies' eyes with medicine? • What eye medicine does your healthy authority recommend? • Are there reasons parents do not want eye treatment with medicine after birth or do they put something else in the eyes?	5 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Ask participants to practice on administration of tetracycline eye ointment using the mannequins. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure.	15 minutes
Summarize	• Summarize the steps on administration of tetracycline eye ointment **Session 3.3** and conclude the session	5 minutes

Session 4.3:

Within 90 minutes after birth administration of eye drops/eye ointment



Infections can pass from the mother to the newborn during birth. Infections of the eye can result in blindness.

Applying tetracycline eye ointment/drops to the inside of the lower lid of both eyes soon after birth can prevent these infections.

Eye treatment can be delayed until the baby has breastfed, but provide eye care within the first 90 minutes after birth.

Apply tetracycline drops or ointment as follows:

- Wash your hands with soap and water
- Clean eyes immediately after birth with swab soaked in sterile water, using separate swab for each eye.
- Clean from medial to lateral side.
- Pull down the lower lid of the eye
- Place a portion of the ointment or drops inside the lower lid for both eyes.
- Apply the ointment from medial to lateral
- Don’t put anything else in baby's eyes as it can cause infection.
- Watch out for discharge from the eyes, especially with redness and swelling around the eyes.

Session 4.4: Chlorhexidine: Within 30 minutes after birth apply Chlorhexidine to the cord

Facilitators: Application of Cholorhexidine on the cord prevents babies from getting infection. Mothers/caretakers need to be able to properly apply the Chlorhexidine before they leave the health facility

Task	Activity	Time
Explain and demonstrate	• Describe benefits of administration of Chlorhexidine Gel. • Demonstrate the steps on administration of Chlorhexidine Gel.	10 minutes
Invite discussion	• Do babies in your facility receive Chlorhexidine Gel? Do you have protocol on application of Chlorhexidine Gel on the cord? • Is there Chlorhexidine Gel available in your facility? What are the challenges? • When after birth do you apply Chlorhexidine Gel?	10 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Ask participants to practice on application of Chlorhexidine Gelon the cord. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	15 minutes
Summarize	• Summarize the steps on application of Chlorhexidine Gelon the cord from **Session 3.4** and conclude the session	5 minutes

Session 4.4:

Within 30 minutes after birth apply Chlorhexidine to the cord

Application of Cholorhexidine on the cord prevents babies from getting infection. Mothers/caretakers need to be able to properly apply the Chlorhexidine before they leave the health facility.

Once the mother/caretaker returns home from the health facility she should continue applying the Chlorhexidine Gel on the cord once per day for seven consecutive days (for six additional days if the first dose is given at the health facility in the first 30 minutes after birth).

The technique for applying Chlorhexidine Gel on the cord is as follows:

- Explain the procedure to the mother.
- Wash your hands thoroughly with soap and water, air-dry or dry with clean towel.
- Open the lid of the Chlorhexidine Gel. When you open the package of the gel for the first time use the sharp end of the back of the lid to open the cover
- Gently press the package of the gel and put the ointment on the cord
- Use the tip of your finger to apply the Chlorhexidine Gel on the cut end of the cord and around the cord
- Leave the cord area open for 3 minutes after the application of the Chlorhexidine Gel. Dress the baby well and wrap him/her after 3 minutes to keep the baby warm
- Close the lid of the Chlorhexidine Gel firmly and put in a place where children cannot reach. DO NOT USE THE CHLORHEXIDINE GELTO TREAT ANY OTHER WOUND OR ILLNESS ESPECIALLY ON THE EYE, EAR OR MOUTH.

Counseling the mother and families on cord care: Provide the following messages to the mother

- Don’t to cover the cord with the diaper
- Don’t use bandages as it may delay healing and introduce infection
- Don’t use alcohol for cleansing as it may delay healing.
- Don’t apply traditional remedies to the cord as it may cause tetanus and other infections.
- Apply chlorhexidine on the cord after washing hands with soap and water based on the guidance given to you
- Watch out for pus discharge from the cord stump, redness around the cord especially if there is swelling, or fever (temperature more than 38°C) or other signs of infection. Visit health worker if you seen any of these signs

Wash your hands thoroughly with soap and water, air-dry or dry with clean towel.

Open the lid of the Chlorhexidine Gel. When you open the package of the gel for the first time use the sharp end of the back of the lid to open the cover

Gently press the package of the gel and put the ointment on the cord

Use the tip of your finger to apply the Chlorhexidine Gel on the cut end of the cord and around the cord

Leave the cord area open for 3 minutes after the application of the Chlorhexidine Gel. Dress the baby well and wrap him/her after 3 minutes to keep the baby warm

Close the lid of the Chlorhexidine Gel firmly and put in a place away from the reach of children.

Session 4.5: Vitamin K: Within 90 minutes after birth administer vitamin K1

Facilitators: Vitamin K prevents babies from serious bleeding problem and should be given to all babies before they leave the health facility

Task	Activity	Time
Explain and demonstrate	• Describe benefits of administration of Vitamin K. • Demonstrate the steps on administration of Vitamin K.	10 minutes
Invite discussion	• Do all babies receive vitamin K? • Are sterile (single use) needles and syringe available where you work? What is the method for their disposal? • What is the preparation of the Vitamin K in your facility? How do you manage with the leftover of the preparation?	5 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Ask participants to practice on administration of Vitamin K using the mannequins. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	5 minutes
Summarize	• Summarize the steps on administration of Vitamin K from **Session 3.5** and conclude the session	5 minutes

Session 4.5:

Within 90 minutes after birth administer vitamin K1

Vitamin K protects babies from serious bleeding that may result in death or brain damage. Every newborn should be given vitamin K. ***Because this treatment is painful, it should not be given during the first hour after birth, a time when the mother and baby should not be disturbed.*** Give vitamin K around 90 minutes of age after the first complete exam. Encourage the mother to breastfeed their baby during the injection for comfort.

The dose of vitamin K is 1 mg (0.5 mg for babies <1500 grams), and it is given intramuscularly (IM) at the anterior mid lateral thigh. ***Check the preparation of this dose carefully as more than one concentration may be available.***

Give vitamin K1 intramuscular (1 mg for term infant and 0.5 mg for the very low birth weight infant <1500 grams). The technique for giving an intramuscular injection in the newborn is as follows:

- Explain the procedure to the mother.
- Wash your hands thoroughly with soap and water, air-dry or dry with clean zpaper towel, put on clean gloves.
- Gather the necessary equipment: disposable syringe, needle, medication, alcohol/antiseptic solution, and clean, preferably sterile gauze/cotton.
- Examine carefully the medication's label to verify the name, expiration date, instructions for dilution, if any, or any other special notes.
- Calculate the amount to be given where required.
- Draw out the medication:
- Clean the rubber stopper with alcohol swab/cut the ampoule at its neck.
- Push the needle into the bottle/ampoule.
- Draw the calculated amount and pull the needle out.
- Remove the air while holding the syringe with the needle pointing up and tapping on the syringe barrel.
- Expose the baby's thigh and gently hold the knee so the baby is unable to kick.
- Grasp the muscle of the antero-lateral part of the upper thigh, clean the skin with the alcohol/antiseptic, and let it dry for a few seconds.
- In one quick movement put the needle in the muscle straight in, pull back on the plunger a little bit to make sure that the tip of the needle is not in a blood vessel.
- If blood comes to the syringe, take the needle out and apply pressure at the site to prevent bleeding. Re-inject in a fresh spot.
- Inject the drug slowly, remove the needle, and apply gentle pressure for a short while and ensure that there is no oozing of blood upon removal of the swab.

- Discard the needle and syringe immediately in a “sharps” disposal container.

Session 4.6: Identification Band: Within 90 minutes after birth place the baby identification bands on the wrist and ankle

Facilitators: Unless it is necessary babies should not be separated from their mothers. In addition, proper identification bands needs to be placed on their writs and ankle

Task	Activity	Time
Explain the procedure	• Explain the benefits of putting identification bands • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their health facilities put identification bands on babies • Ask what are the challenges and what they think should be done to address them	5 minutes
Summarize	• Summarize the key points on the importance of placing the baby identification bands on the writs and ankle from **Session 3.6** and conclude the session	5 minutes

Session 4.6:

Within 90 minutes after birth place the baby identification bands on the wrist and ankle

Place the identification tag /label on the wrist and ankle. If a ready-made disposable identification is not available, prepare one locally using sticking plaster and gauze strips. Note that, at a minimum, the names of the mother and, if available, the father, and the date and time of birth should be written on the identification bands.

Putting the identification bands on the hands and ankle will save you from misshaping babies in busy delivery rooms.

Session 4.7: Weigh the Newborn: Within 90 minutes after birth weigh the newborn when he/she is stable

Facilitators: Weighing babies is crucial step in newborn care as it largely defines the clinical decision in provision of additional care

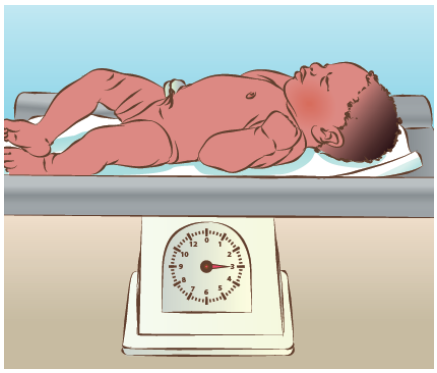
Task	Activity	Time
Explain and demonstrate	• Explain to the mother benefit of weighing the newborn when he is stable. • Demonstrate the steps on weighing the newborn.	5 minutes
Invite discussion	• What devices are available for weighing babies in your community? • How are these scales cleaned and maintained? • Are birth weights recorded? Who keeps these records? • How can you ensure that every baby is weighed?	5 minutes
Practice the procedure	• Form groups of up to 6 participants. • Make sure you have the materials listed for this module to be present on each group's table. • Using the mannequins ask participants to practice on weighing the newborn. • Make sure each participant has practiced the procedure. Facilitators should help each group when participants practice the procedure	10 minutes
Summarize	• Summarize the steps on weighing the newborn when he is stable **Session 3.7** and conclude the session	5 minutes

Session 4.7:

Within 90 minutes after birth weigh the newborn when he/she is stable

- Birth weight helps identify babies at higher risk, provides a baseline for monitoring growth and may also be necessary for calculating drug doses.
- Babies should be weighed within 90 minutes of birth. However, weighing should be deferred if an infant is cold unless needed for calculating antibiotic doses. Use scales designed for weighing babies. Zero the scales before each use to test that they function properly. Clean the scales with dilute bleach solution or other safe cleaning product before each use to prevent infection.
- Babies with birth weights under 2500 grams may require special care to prevent low body temperature. Babies with birth weight under 2000 grams should receive prolonged skin-to-skin care. These babies may need alternative feeding methods and more frequent assessment to identify problems and Danger Signs. Babies with birth weights under 1500 grams should be referred for advanced care when possible.
- Always document birth weights. Use established regional or national forms and guidelines for documenting birth weight, for example on partograph/maternal/ newborn charts and delivery room register.

Weighing the newborn when he/she is stable



- Place a clean linen or paper on the pan of the weighing scale.
- Adjust the pointer to zero on the scale *with* the linen/paper on the pan.
- Place the naked baby on the paper/linen. If the linen is large, cover the baby with the cloth.
- Note the weight of the baby when the scale stops moving.
- Never leave the baby unattended on the scale.
- Record the baby's weight in partograph/maternal/ newborn charts and delivery room register and inform the mother

Session 4.8: Register: Within 90 minutes after birth record observations and treatment provided in the registers/appropriate chart/cards

Facilitators: Recording all the observations from the assessment of the mother and newborn and treatment provided is very useful for documentation of care provided and to improve quality of newborn care that will be provided to the newborn.

Task	Activity	Time
Explain the procedure	• Explain the benefits of recording observations and treatment provided in the registers/appropriate chart/cards. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their facilities record observations and treatment provided to the newborn on charts/cards. Which cards do they use? • Ask the challenges they face in recording and what they think can be done to address the challenges	5 minutes
Summarize	• Summarize the key points on recording observations and treatment provided in the registers/appropriate chart/cards **Session 3.8** and conclude the session	5 minutes

Session 4.8:

Within 90 minutes after birth record observations and treatment provided in the registers/appropriate chart/cards

Recording complete information about the health status of the mother and the baby in the partograph/maternal/baby charts and in the delivery room registers is very important to provide comprehensive follow up care for the mother and the baby.

Complete information about the mother and babies is also useful for the health facility to know the status of mothers and babies that receive care in the facility and to improve quality of maternal and newborn health care services.

Session 4.9: Repeat Full Examination: Within 90 minutes after birth examine the baby to tell if a baby is well or has a problem

Facilitators: Examination of the baby is very useful procedure to classify the baby and provide appropriate care.

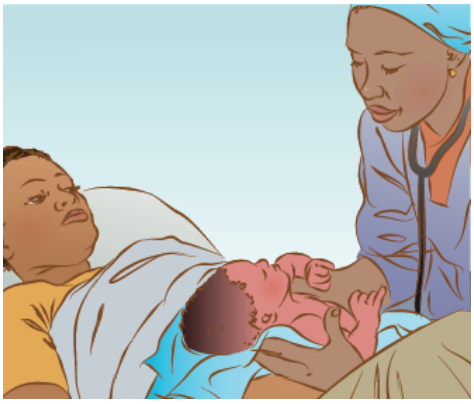
Task	Activity	Time
Explain and demonstrate	• Explain the benefits of examining newborns to tell if a baby is well or has a problem. • Demonstrate to participants the key steps in examining the newborn • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their facilities examine newborns within 90 minutes after birth • Ask participants what are the challenges and what they think can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• *Provider*: Demonstrates, describes to the mother, and documents the physical examination:
	  ○ Breathing
	  ○ Movement and position of arms and legs
	  ○ Skin color
	  ○ Cord appearance
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on recording observations and treatment provided in the registers/appropriate chart/cards **Session 3.9** and conclude the session	5 minutes

Session 4.9:

Within 90 minutes after birth examine the baby to tell if a baby is well or has a problem



A complete exam should be performed within 90 minutes of birth or whenever a baby appears unwell. During the exam, evaluate a baby by looking, listening and feeling. Focus on the following features:

Breathing: A baby should breathe easily between 40-60 times per minute. Count a baby's breathing rate for one minute.

Movement and tone: When active, well babies have spontaneous movements of arms and legs that are equal on both sides. Limbs are flexed at rest. The tone should be neither floppy nor rigid.

Skin color: The normal skin color of a newborn is pink, but hands and feet may still look pale or blue soon after delivery. Pink color may be difficult to detect in dark-skinned babies. The inside of the mouth should be pink in all babies. Babies with jaundice may have yellow skin. Recognizing jaundice is important because severe jaundice may require advanced care.

Cord appearance: On the initial exam, there should be no drainage or bleeding from the cord.

Other features of a general exam: Inspect the baby's entire body for abnormalities.

Document the results of this exam even if all findings are normal. Perform the exam in front of the parents and communicate the findings to them.

Session 4.10: Further Care: Within 90 minutes after birth measure temperature to identify babies who require special care

Facilitators: Body temperature of the baby, both hypothermia and hyperthermia, is very important indicator of the baby's wellness and should be checked within 90 minutes after birth.

Task	Activity	Time
Explain and demonstrate	• Explain to participants measuring temperature to identify babies who require special care. • Demonstrate to participants the key steps measuring temperature • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their facilities measure baby's temperature within 90 minutes after birth as a standard practice • Ask the challenges and what they think can be done to address them	5 minutes

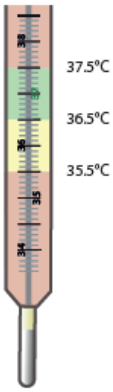
Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Collect a manikin or doll and a thermometer.
	• Choose thermometer readings for the provider in Role Two.
	• *Provider*: Measure the temperature:
	  ○ Clean the thermometer
	  ○ Position the baby on the side or back
	  ○ Put the tip of the thermometer high in the armpit
	  ○ Hold the arm against the side for the recommended time
	• Classify the temperature (given by the provider in Role One) as normal, having a problem, or showing a Danger Sign.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on measuring temperature to identify babies who require special care **Session 3.10** and conclude the session	5 minutes

Session 4.10:

Within 90 minutes after birth measure temperature to identify babies who require special care

Keeping body temperature normal helps a baby stay healthy. Low temperature can cause death.



It is better to prevent low temperature than to warm a baby who is cold. Monitor temperature in the first hours after birth. Low temperature is common among premature and low-weight babies. Prevent or correct low temperature with changes in care (see Improve thermal care, page 39).

The normal temperature range is 36.5-37.5 °C. A temperature 35.5 °C-36.4 °C requires improved thermal care. A temperature below 35.5 °C is a Danger Sign. A temperature above 37.5 °C not due to over-warming (for example being placed in direct sunlight) is a Danger Sign.

Feeling the skin of the face, abdomen, or foot can estimate the temperature, but measuring the temperature is more exact. Measuring temperature in the armpit (axilla) is safer than measuring a rectal temperature. Measure temperature in all babies within 90 minutes after birth.

A thermometer used with babies must measure temperatures below 35.5 °C.

Session 4.11: Classify further care: By 90 minutes after birth classify the baby to determine further care

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Describe criteria for classifying the baby for further care. • Review the chart in **Session 3.11** • Give examples of babies who fall in well baby and unwell baby categories	5 minutes
Invite discussion	• Ask participants who is responsible for identifying babies who have a problem or a Danger Sign in their facilities? • Ask participants which babies are difficult to classify?	5 minutes
Practice the procedure	• Ask two participants from each group to role-play, one of them acting as two care providers • *Provider 1*: Based on cases of babies born in your facility who were normal, had problems, and needed advanced care, provide findings of physical exam, weight, and temperature of these babies to the provider in Role Two. • *Provider 2:* Classify babies as normal, having a problem, or needing advanced care. • Change roles and repeat the exercise • Discuss similarities and differences between the role-play and your clinical practice	10 minutes
Summarize	• Summarize the key points on classifying the baby for further carefrom **Sessions3.11 and 3.12** and conclude the session	5 minutes

Session 4.11:

By 90 minutes after birth classify the baby to determine further care

At about 90 minutes following birth, babies should be classified as normal and well, having a problem or needing advanced care. Classification is based on the baby's weight, temperature and exam.

- Well babies breathe at a normal rate (40-60 per minute) without effort, have a temperature of 36.5-37.5 °C, and weigh >2000 grams.
- Babies who have a problem may have a temperature of 35.5-36.5 °C, birth weight of 1500-2000 grams, or may feed poorly.
- Babies needing advanced care may have a Danger Sign, severe jaundice or a birth weight <1500 grams.

Some babies do not attach to the breast during the first 90 minutes after birth and therefore do not feed. If these babies are normal in all other ways, feeding should be attempted again. Babies who do not feed after several attempts should be classified as having a Danger Sign.

All babies should be classified by 4 hours of age.

Examine the Newborn

Use this chart to assess the newborn after birth, classify and treat, possibly around an hour; for discharge (not before 12 hours); and during the first week of life at routine, follow-up, or sick newborn visit. Record the findings on the postpartum record.
Always examine the baby in the presence of the mother.

ASK, CHECK RECORD	LOOK, LISTEN, FEEL	SIGNS	CLASSIFY	TREAT AND ADVISE

Check maternal and newborn record or ask the mother:
• How old is the baby?
• Preterm (less than 37 weeks or 1 month or more early)?
• Breech birth?
• Difficult birth?
• Resuscitated at birth?
• Has baby had convulsions?
 	
Ask the mother:
• Do you have concerns?
• How is the baby feeding?
 	
Is the mother very ill or transferred?
	• Assess breathing (baby must be calm)
	  ○ Listen for grunting
	  ○ Count breaths: are they 30-60 per minute? Repeat the count if elevated
	  ○ Look at the chest for in-drawing.
	• Look at the movements: are they normal and symmetrical?
	• Look at the presenting part — is there swelling and bruises?
	• Look at abdomen for pallor.
	• Look for malformations.
	• Feel the tone: is it normal?
	• Feel for warmth. If cold, or very warm, measure temperature.
	• Weigh the baby.
		• Normal weight baby (2500-g or more).
		• Feeding well — suckling effectively 8 times in 24 hours, day and night.
		• No danger signs.
		• No special treatment needs or treatment completed.
		• Small baby, feeding well and gaining weight adequately.
			WELL BABY	**If first examination:**
				• Ensure care for the newborn
				• Examine again for discharge.
				
				If pre-discharge examination:
				• Immunize if due
				• Advise on baby care
				• Advise on routine visit at age 3-7 days
				• Advise on when to return if danger signs
				• Record in home-based record.
				• If further visits, repeat advices.

		• Body temperature 35-36.40C.	MILD HYPOTHERMIA	• Re-warm the baby skin-to-skin • If temperature not rising after 2 hours, reassess the baby.
		• Mother not able to breastfeed due to receiving special treatment • Mother transferred	MOTHER NOT ABLE TO TAKE CARE FOR BABY	• Help the mother express breast milk • Consider alternative feeding methods until mother is well • Provide care for the baby, ensure warmth • Ensure mother can see the baby regularly • Transfer the baby with the mother if possible • Ensure care for the baby at home

If preterm, birth weight <2500gm or twin

ASK, CHECK RECORD	LOOK, LISTEN, FEEL	SIGNS	CLASSIFY	TREAT AND ADVISE

• Baby just born.
• Birth weight
  ○ <1500-g
  ○ 1500-g to <2500-g.
• Preterm
  ○ <32 weeks
  ○ 33-36 weeks.
• Twin.
	• If this is repeated visit, assess weight gain.	• Birth weight <1500g
		• Very preterm <32 weeks or >2 months early).
			VERY SMALL BABY	• Refer baby urgently to hospital
				• Ensure extra warmth during referral

		• Birth weight 1500g-<2500g • Preterm baby (32-36 weeks or 1-2 months early) • Several days old and weight gain inadequate. • Feeding difficulty	SMALL BABY	• Give special support to breastfeed the small baby • Ensure additional care for a small baby • Reassess daily • Do not discharge before feeding well, gaining weight and body temperature stable • If feeding difficulties persist for 3 days and otherwise well, refer for breastfeeding counseling
		• Twin	TWIN	• Give special support to the mother to breastfeed twins • Do not discharge until both twins can go home

Manage infections in newborns

Session 4.12:

Introduction

Risk of infection in the newborn

- Newborns and especially low birth weight babies are extremely susceptible to infections because:
    - Their immune system is not yet fully developed.
    - They are totally dependent on the mother/caregiver, needing repeated handling that exposes them to microorganisms.
- Newborn babies are susceptible to microorganisms that would not normally cause infection in older infants/children. Hence, prevention of infection is a top most priority.
- Minor infections may spread fast and become life threatening major infections with a high case fatality rate.
- Early identification and management of infection can decrease the high mortality rate in the neonatal period.

Timing of infections

Early onset neonatal infections (0 to 3 days):
These are related to risk factors in pregnancy and during labor/delivery. Early onset neonatal infections are mostly due to predisposing factors during pregnancy and delivery which includes:

- Maternal fever
- Maternal urinary tract infection
- Premature rupture of membranes (PROM)
- Unhygienic delivery practices
- Poor hygiene related to the care of the baby, including umbilical cord care

Late onset neonatal infections (4 to 28 days):
Late onset neonatal infectionsare often related to environmental factors at home or at health facilities such as:

- Lack of adherence to infection prevention practices when handling a newborn, such as poor or no hand washing or the use of improperly cleaned and/or inadequately sterilized equipment and supplies.
- Excess, unnecessary handling of the newborn, especially a low birth weight baby, more without washing hands properly.

Types of infection

Major infections:
Diseases such as **pneumonia,diarrhea**, **septicemia**, and **meningitis** are called serious bacterial infection (SBI). In newborn infants SBI spreads rapidly as the clinical features may be nonspecific.In general the word "sepsis" is used in public health to identify these major infections.Microorganisms and their toxins spread fast, leading to a high mortality.

Minor/localized infections:
- Localized umbilical or cord infection
- Oral thrush
- Conjunctivitis
- Skin infection (pyoderma)

Session 4.12: Danger Signs: Within the first 90 minutes, periodically during the first day, and at any time if you suspect a problem assess for danger signs to detect problems early and reduce the risk of death

Facilitators: Assessing small babies for danger signs and prompt treatment of problems will prevent neonatal deaths and complications

Task	Activity	Time
Explain and demonstrate	• Briefly summarize purposes and benefits of assessing the baby for danger signs. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities assess small babies for danger signs • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Use a manikin or doll to demonstrate fast breathing or describe another Danger Sign
	• *Provider*: Demonstrates, describes to the mother:
	  ○ Count the breathing rate of the manikin if possible.
	  ○ Name the Danger Sign that is shown or described and tell how to identify each sign.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		15 minutes

Summarize	• Summarize the key points on assessing the baby for danger signs from **Session 3.13** and conclude the session	5 minutes

Session 4.13:

Within the first 90 minutes, periodically during the first day, and at any time if you suspect a problem assess for danger signs to detect problems early and reduce the risk of death

Danger Signs are caused by infection or other serious conditions and indicate that a baby may die. All babies should be assessed for Danger Signs in the first 90 minutes after birth and frequently during the hospitalization. A baby with a Danger Sign needs urgent antibiotic treatment and advanced care.

The following are the Danger Signs:

Fast breathing and chest in-drawing can be caused by pneumonia or sepsis. Chest in-drawing means the spaces between, above or below the ribs indent with each breath. Fast breathing is breathing rate more than 60 breaths per minute.
Babies with breathing problems may also have a blue color of the skin and inside the mouth.

Temperature that is too low (<35.5°C) or high (>37.5°C) is a sign of infection. A temperature thatis 35.5-36.4°C and does not rise with re-warming isalso a Danger Sign.

Not feeding may be a sign of infection, prematurity, or other serious problems.

No movement, or very little movement, even when stimulated, may be a sign of infection or other serious problems.

Convulsions are repeated back-and-forth movements of the arms and legs that cannot be stopped by holding the arm or leg. Jitteriness of the arms and legs may look like convulsions but is a less serious problem. Unlike convulsions, jitteriness can be caused by a stimulus such as a loud noise or sudden movement. Jitteriness can be stopped by holding the arms and legs.

A baby with a Danger Sign needs urgent antibiotic treatment and advanced care.

Session 4.13: Antibiotics: If a baby has a danger sign give antibiotics to reduce risk of death

Facilitators: Identification and timely administration of appropriate type and dose of antibiotics improves survival and health of small babies with danger signs

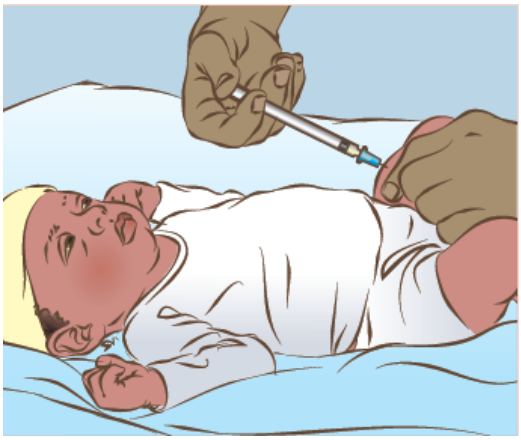
Task	Activity	Time
Explain and demonstrate	• Explain to participants on how to identify and administer appropriate antibiotics to reduce risk of death in neonates. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their health facilities identify and administer appropriate antibiotics for neonates with problems • Ask the participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Choose a birth weight for the calculation of antibiotic dosage.
	• Collect syringes, recording sheet and pen.
	• *Provider*: Explain why a baby needs antibiotics. Demonstrate the steps in giving antibiotics:
	  ○ Calculate dosages for the birth weight given
	  ○ Draw up the correct volume of each medication
	  ○ Document giving the medications in the baby's record
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on antibiotics to reduce risk of death from **Session 3.14** and conclude the session	5 minutes

Session 4.14:

If a baby has a danger sign give antibiotics to reduce risk of death



Infection in a baby can cause death. A baby with a Danger Sign is at high risk for having an infection and needs urgent antibiotic treatment and advanced care. Ampicillin and gentamicin are often used to treat infection in babies. However, different antibiotics may be used in your facility.

Identify the antibiotics typically used to treat babies in your facility and provide to the baby who has Danger Sings.

Give the first doses of antibiotics as soon as possible after the identification of a Danger Sign because early treatment may prevent death. The doses will depend on the weight of the baby and the antibiotics used. If possible, a blood culture should be obtained before antibiotics are given. Typically, antibiotic treatment is given for at least 5 days.

Note: If ampicillin and gentamicin are used in your facility, the chart on this page can be duplicated and posted for future reference.

Weight in kg	**Ampicillin IM** **Dose: 50 mg per kg every 12 hours** **Add 2.5 ml sterile water to 500 mg vial - 200 mg/ml**	**Gentamicin IM** **Dose: 5 mg per kg every 24 hours if term; 4 mg per kg every 24 hours if preterm** **20 mg per 2 ml vial - 10 mg/ml**
1.0 - 1.4 kg	0.35 ml	0.5 ml
1.5 - 1.9 kg	0.5 ml	0.7 ml
2.0 - 2.4 kg	0.6 ml	0.9 ml
2.5 - 2.9 kg	0.75 ml	1.35 ml
3.0 - 3.4 kg	0.85 ml	1.6 ml
3.5 - 3.9 kg	1 ml	1.86 ml
4.0 - 4.4 kg	1.1 ml	2.1 ml

Give IM antibiotic for possible gonococcal eye infection (single dose)

Weight in kg	**Ceftriaxone (1st choice)** **Dose: 50 mg per kg once** **250 mg per 5 ml vial=mg/ml**	**Kanamycin (2nd choice)** **Dose: 25 mg per kg once, max 75 mg** **75 mg per 2 ml vial = 37.5 mg/ml**
1.0 - 1.4 kg	1 ml	0.7 ml
1.5 - 1.9 kg	1.5 ml	1 ml
2.0 - 2.4 kg	2 ml	1.3 ml
2.5 - 2.9 kg	2.5 ml	1.7 ml
3.0 - 3.4 kg	3 ml	2 ml
3.5 - 3.9 kg	3.5 ml	2 ml
4.0 - 4.4 kg	4 ml	2 ml

Session 4.14: Jaundice: If the face is yellow on the first day, or the palms and soles at any time recognize severe jaundice to begin treatment and arrange advanced care

Facilitators: Identification of jaundice and provision of proper treatment and care prevents death and severe complications

Task	Activity	Time
Explain and demonstrate	• Briefly explain how providers can diagnose jaundice to initiate treatment. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities diagnose jaundice, how the manage when they diagnose jaundice • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Use a manikin or doll.
	• *Provider*: Demonstrates, describes to the mother how to check for jaundice:
	  ○ Recognizing severe jaundice on the first day
	  ○ Recognizing severe jaundice after the first day
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on diagnosing jaundice to initiate treatment from **Session 3.15** and conclude the session	5 minutes

Session 4.15:

If the face is yellow on the first day, or the palms and soles at any time recognize severe jaundice to begin treatment and arrange advanced care

Jaundice is a yellow color of the skin caused by high blood levels of bilirubin. Bilirubin comes from breakdown of red blood cells. High levels of bilirubin can cause brain damage or death.

All babies have some jaundice. Babies who are premature, have infections or certain blood disorders, or who feed poorly are more likely to develop severe jaundice.

Jaundice first appears on the head. As bilirubin levels rise, jaundice moves down the body. When bilirubin levels are very high, the palms and soles are yellow. Jaundice is severe if it appears on the face during the first day of life or is seen on the palms and soles at any time.

Jaundice can be difficult to detect in dark-skinned babies. Pressing the skin with a finger and then releasing the pressure may help detect jaundice in those babies.

Severe jaundice can cause death or permanent injury and requires urgent advanced care. In all babies with jaundice, encourage breastfeeding every 2-3 hours. When breastfeeding is not possible, feed by cup or spoon.

Session 4.15: Need for Advanced Care: If a baby has a Danger Sign, is <1500g, has severe jaundice, or needs extra support for another problem seek advanced care to provide adequate monitoring and treatment

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Briefly explain purposes of seeking advanced care for babies who have jaundice, very small birth weight or danger signs. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities stabilize and arrange transportation when the baby needs advance care • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Identify a reason to seek advanced care (Danger Sign, weight less than 1500 grams, severe jaundice).
	• *Provider*: Demonstrate the steps to seek advanced care:
	  ○ Explain to the family why referral is needed
	  ○ Describe the plan for safe transfer, including communication with the receiving facility
	  ○ Prepare a referral note
	  ○ Describe ways to keep the baby warm and fed during transport
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on seeking advanced care for babies who have jaundice, very small birth weight or danger signs from **Session 3.17** and conclude the session	5 minutes

Session 4.16:

If a baby has a Danger Sign, is <1500g, has severe jaundice, or needs extra support for another problem seek advanced care to provide adequate monitoring and treatment

A baby who has a Danger Sign, is <1500 g or has severe jaundice needs advanced care to improve the baby's condition. In some cases, advanced care can save the baby's life.

Advanced care may include special monitoring. Special monitoring of the baby's vital signs and activities, such as body temperature and feeding, will determine when life-saving interventions should be used.

Advanced care may include special treatments. For example, a baby treated with antibiotics will need to complete a full course of antibiotics (usually at least 5 days). If a baby has poor feeding, intravenous fluids may be needed. If a baby has a breathing problem, oxygen may be needed. If a baby has convulsions, special medication may be needed.

A baby with a birth weight <1500 g needs advanced care that may include intravenous fluids or tube feedings, and special techniques or devices to maintain normal temperature. A baby with severe jaundice needs special treatment with phototherapy or an exchange transfusion.

Before referring a baby for advanced care directly contact the facility that will receive the baby. Send a referral note (see example on page 64) with the baby. During the transport, the baby should be kept warm with skin-to-skin care and encouraged to breastfeed.

The chart in the next page summarizes the steps to identify, classify and treat newborns with problems

Look for signs of Jaundice and local infections and Provide Appropriate Treatment/Referral

ASK, CHECK RECORD	LOOK, LISTEN, FEEL	SIGNS	CLASSIFY	TREAT AND ADVISE

What has been applied to the umbilicus?	• Look at the skin. Is it yellow?
	  ○ If baby is less than 24 hours old, look at skin on the face
	  ○ If baby is 24 hours old or more, look at palms and soles.
	• Look at the eyes. Are they swollen and draining pus?
	• Look at the skin, especially around the neck, armpits, inguinal area:
	  ○ Are there skin pustules?
	  ○ Is there swelling, hardness or large bullae?
	• Look at the umbilicus:
	  ○ Is it red?
	  ○ Draining pus?
	  ○ Does redness extend to the skin?
		• Yellow skin on face and only <24 hours old.
		• Yellow palms and soles and >=24 hours old.
			JAUNDICE	• Refer baby urgently to hospital
				• Encourage breastfeeding on the way
				• If feeding difficulty, give expressed breast milk by cup

		• Eyes swollen and draining pus	GONOCOCCAL EYE INFECTION	• Give single dose of appropriate antibiotic for eye infection • Teach mother to treat eyes • Follow up in 2 days. If no improvement or worse, refer urgently to hospital • Assess and treat mother and her partner for possible gonorrhea
		• Red umbilicus or skin around it	LOCAL UMBILICAL INFECTION	• Teach mother to treat umbilical infection • If no improvement in 2 days, or if worse, refer urgently to hospital.
		• Less than 10 pustules	LOCAL SKIN INFECTION	• Teach mother to treat skin infection • Follow up in 2 days • If no improvement of pustules in 2 days or more, refer urgently to hospital

If Danger Signs Provide Prompt Treatment for Possible Serious Illness

SIGNS	CLASSIFY	TREAT AND ADVISE
Any of the following signs: • Fast breathing (more than 60 breaths per minute). • Slow breathing (less than 30 breaths per minute). • Severe chest in-drawing • Grunting • Convulsions. • Floppy or stiff. • Fever (temperature >38^{0}C). • Temperature <35^{0}C or not rising after rewarming. • Umbilicus draining pus or umbilical redness and swelling extending to skin • More than 10 skin pustules or bullae, or swelling, redness, hardness of skin. • Bleeding from stump or cut. • Pallor.	POSSIBLE SERIOUS ILLNESS	• Give first dose of 2 IM antibiotics • Refer baby urgently to hospital In addition: • Re-warm and keep warm during referral • Treat local umbilical infection before referral • Treat skin infection before referral • Stop the bleeding

Session 4.16: Case Study

Facilitators:

Task	Activity	Time
Explain the case scenario	• Explain the case scenario exercise and provide checklist	5 minutes
Prepare materials for the practice	• Manikin • Soap, basin and water • Thermometer • Cleaning solution • Scale • Ointment or drops for eyes • 1.0 mL syringe • Vial of vitamin K or water to simulate • Documents for recording results of exam, weight and temperature • Pen	
Practice the exercise	• Work in pairs. • Demonstrate and describe care of a baby for the first 90 minutes after birth. • One person takes the role of the mother. The other person takes the role of the health worker who performs the actions (black text) and communicates with the mother (green text). • Switch roles and repeat the exercise with a different case scenario.	20 minutes
Summarize	• Summarize by addressing if there are any questions from the participants	5 minutes

Case scenario:
A baby was born vaginally at 39 weeks gestation. The baby cried at birth.
The placenta has been delivered and mother is well.

- ☐ Wash hands
  Explain why it is important to wash hands before touching the baby.
- ☐ Monitor breathing
  Describe fast, difficult, noisy breathing.
- ☐ Continue skin-to-skin care
  Explain that skin-to-skin care helps the baby stay warm and begin breastfeeding.
- ☐ Initiate breastfeeding
  Describe the signs that a baby is ready to breastfeed and how to position a baby.

Provide treatment to prevent disease and assess the baby
(Steps can be done in any order between 60-90 minutes)

- ☐ Examine the baby
  Breathing, skin color, movements, activity, cord appearance, other physical features
  Describe the findings to the mother.
- ☐ Measure temperature
  Tell mother if temperature is normal, low, or high.
- ☐ Weigh the baby
  Tell mother the baby's weight.
- ☐ Documents results of exam, weight and temperature.

- ☐ Provide eye care
  Explain that eye care prevents infections.
- ☐ Provide cord care
  Explain that cord care prevents infections.
- ☐ Give vitamin K
  Explain that vitamin K prevents serious bleeding.
- ☐ Classify the baby as being Normal, having a Problem, or showing a Danger Sign

Session 4.17: After skin-to-skin care with a well, normal weight baby maintain normal temperature to prevent a baby becoming either too cold or tool hot

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain benefits of maintaining normal temperature. • Show steps in maintaining body temperature	5 minutes
Invite discussion	• What clothing and wraps are used locally to keep babies warm? • What ways are babies kept warm at home? Are these safe?	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Collect a manikin or doll and a blanket or dry cloth
	• *Provider*: Demonstrate and describe to the mother:
	  ○ Preventing heat loss
	  ○ Selecting appropriate clothing and head covering
	  ○ Wrapping the baby
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on classifying the baby for further carefrom **Session 3.17** and conclude the session	5 minutes

Session 4.17:

Maintaining normal temperature

Background knowledge

A baby begins to lose heat even before the body temperature falls. Preventing heat loss should begin with skin-to-skin care at birth. Skin-to-skin care should continue for at least one hour whenever possible. If illness in the mother prevents skin-to-skin care with her, another adult can provide skin-to-skin care.

Other ways to prevent heat loss are to keep theroom warm, and eliminate drafts and contact withwet or cold surfaces. Do not bathe a baby before24 hours after birth, or longer if the baby has a lowbirth weight.

After skin-to-skin care, wrap the baby in a clean, dryblanket or cloth. Wrap securely, but not so tightlythat breathing is difficult. Babies may also bedressed in dry clothes, or a diaper and shirt. Thehead should be covered. The amount of clothingshould be appropriate for the temperature around thebaby. This usually means 1-2 more layers of clothesthan are required for adults to be comfortable.

Babies may become too hot if placed in directsunlight, or if placed too close to heaters or stoves.

Session 4.18: Immunization: Within one day after birth begin immunization to help prevent serious childhood illnesses

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain the benefits of immunization for newborns and national schedule. • Demonstrate on how to administer immunization for Hepatitis, BCG and Oral Polio • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants how providers in their facilities provide immunization to newborns, what schedule do they use • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Collect manikin or doll, alcohol and swabs, syringes of correct size, recording form and pen
	• *Provider*: Demonstrate giving each immunization:
	  ○ Measure the correct dose in the syringe (use air or water)
	  ○ Identify the correct site to give the medication or indicate oral administration
	  ○ Clean the site of injection
	  ○ Record immunizations on the appropriate form
	  ○ Demonstrate the technique for safe disposal of syringes and needles
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		20 minutes

Summarize	• Summarize the key points on immunization for newborns from **Session 3.18** and conclude the session	5 minutes

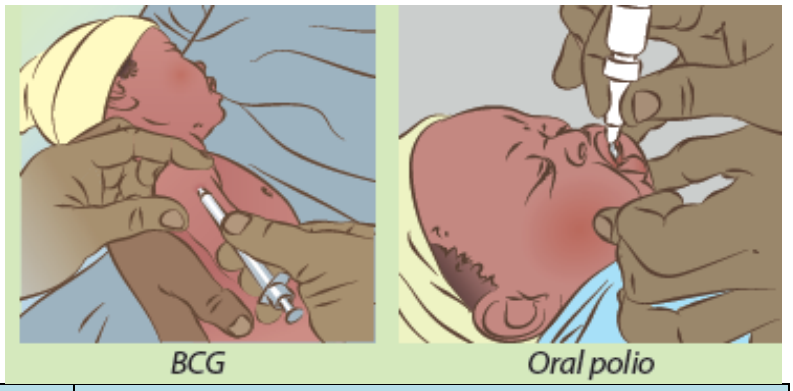
Session 4.18:

Within one day after birth begin immunization to help prevent serious childhood illnesses

Background knowledge

Immunizations given during the first week may include BCG and oral polio.

IMMUNIZATION SCHEDULE FOR ETHIOPIA



Vaccine	Age				
	Birth	6 weeks	10 weeks	14 weeks	9 months
BCG	X				
Oral polio Vaccine (OPV)	X	X	X	X	
DPT-HepB-Hib (Pentavalent)		X	X	X	
Pneumococcal Conjugate Vaccine (PCV)		X	X	X	
Rota vaccine		X	X		
Measles and Vitamin A					X

If mother is HIV positive, BCG is often deferred until the baby is known to be HIV negative.

Remind mothers that additional doses of hepatitis B and polio vaccines will be required later. Immunizations against other diseases will also be needed later. Follow recommendations of your health authority.

Session 4.19: Discharge: When considering discharge reassess the baby and breastfeeding to make sure discharge is appropriate

Facilitators: Before discharging the mother/caretaker it is critical that the baby and the mother are assessed for any problems and ensure that the mother can comfortably feed the baby

Task	Activity	Time
Explain and demonstrate	• Explain the benefits of reassessing the baby and breastfeeding before discharge. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if the providers in their facilities assess the mother and the baby before discharge and if they check the mother can effectively feed the baby • Ask what are the challenges and what they think can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Collect a manikin or doll with a head covering, blanket, recording form and pen.
	• *Provider*: Demonstrate and describe to the mother:
	  ○ Completing an assessment of breastfeeding and a physical exam before discharge
	  ○ Identifying the baby who cannot be discharged early
	• Discuss concerns with the mother.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on reassessing the baby and breastfeeding for dischargefrom **Session 3.19** and conclude the session	5 minutes

Session 4.19:

Reassessing the baby and breastfeeding for discharge

Background knowledge

When possible, discharge from the birth facility should not occur until 24 hours after birth. Delay discharge for babies who have had problems such as low birth weight, low temperature or breathing problems. Prior to discharge, assess both mother and baby for potential problems and readiness for home care.

Evidence of successful breastfeeding should be present prior to discharge. The baby should feed every 2-4 hours and at least 8 times per day. The baby should suckle effectively with slow, deep sucks, and the baby should settle between feedings. If the baby is not breastfeeding well, observe a feeding. Watch for signs of poor attachment.

A second complete exam of the baby should be performed prior to discharge from the birth facility. Include a thorough inspection of the umbilicus because of the risk of infection of the umbilicus, a serious and potentially life-threatening problem. Signs of infection include redness and swelling at the base of the umbilicus and drainage of pus from the cord. If present, clean the cord with soap and water. Antibiotics should be given, and the baby should receive advanced care if a Danger Sign is also present.

Session 4.20: Counseling: When discharge is appropriate give parents guidance for home care to help parents continue essential care and recognize problems

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Project slides on counseling at discharge. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their facilities give adequate guidance for home care for mothers/caretakers at discharge • Ask what are the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask two participants from each group to role-play, one of them acting as care provider and the other one as the mother
	• Use a copy of the Family Health Card
	• *Provider*: Counsel a family about essential care at home:
	  ○ Discuss key messages for home care
	  ○ Assess understanding of Danger Signs
	  ○ Identify place and time for follow-up care
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on counseling at dischargefrom **Session 3.20** and conclude the session	5 minutes

Session 4.20:

Counseling at discharge

Background knowledge

Prepare parents for home care by helping them understand key messages:

- Breastfeed exclusively for 6 months, and recognize signs of successful breastfeeding.
    - Feeds every 2-4 hours or 8-12 times per day
    - Sleeps well between feedings
    - From about 3 days after birth, urinates 6-8 times per day
- Recognize and manage common breast problems.
    - Engorgement
    - Cracked nipples
    - Mastitis
- Always wash hands before touching the baby and after activities that soils the hands.
- Put nothing on the cord (other than medicine that is prescribed). Apply chlorhexidine on the cord for the first 7 days.
- Complete scheduled immunizations.
- Recognize Danger Signs. Understand the need to seek medical care urgently for these signs. Understand where this care would be obtained.

These messages can be reinforced by the use of the Family Health Card. Before discharge, parents should demonstrate their knowledge of these key messages.

Advise parents about other practices that are recommended in your setting, such as use of bed nets. Determine where and when follow up care will be provided.

Module 5: Essential Care for Small Babies

Module 5: Essential Care for Small babies

Module Objectives	By the end of this module, participants will be able to: • Define the low birth weight (LBW) baby. • Describe complications of LBW babies. • Evaluate and manage the LBW babies • Provide KMC, NG tube and cup feeding of the low birth weight infants
Time the session requires	7 hours and 35 minutes
Materials and methods for the sessions	Materials: • LCD projector and desktop/laptop computer • Flips charts and markers • Notebook, pen and pencils for participants • Premi-Natalie Mannequin • Timer • Ventilation bag and mask • Suction device (bub/penguin suction) • Stethoscope • Thermometer • At least two cloths/blankets • Cap/hat for the newborn • KMC carrier/"Nettela" • Cup for feeding • NG tube • Syringe (5ml/10ml) • Disposable cord ties or clamps • Sterile scissors or blade • Participants manual Methods • Principles: Explain, Demonstrate and Practice • Brainstorming • Small group exercise and sharing to the class • Role-plays • Demonstrations • Video clips • Facilitators summarize the key points

Session 5.1

Introduction

Globally each year, about 20 million LBW babies are born. Birth weight strongly influences the chances of a newborn to survive and thrive in the neonatal period and through infancy. Prematurity is the leading cause mortality among under-five year children. In some countries as high as 40 to 80 percent of all neonatal deaths occur among LBW babies. In industrialized nations, preterm birth is the main contributor to LBW. In less developed nations, high rates of LBW are due to both preterm birth and impaired uterine growth.

Compared to normal birth weight babies, LBW babies have a much greater risk of dying in the neonatal period as well as in the infancy period (29–365 days). Those babies who survive are at risk for poor growth and increased rates of illness from infectious diseases in infancy and childhood. They also may have compromised cognitive, motor, and behavioral development.

LBW babies require special attention if they are to survive and thrive, particularly with regard to warmth, feeding, hygiene practices, and prompt identification and treatment of complications. Kangaroo mother care (KMC) is a simple, cost-effective approach that can meet many of these basic newborn needs.

During this session, the participants will learn how to manage preterm and low birth weight (LBW) baby at a peripheral center and counseling for care at home.

Definition:

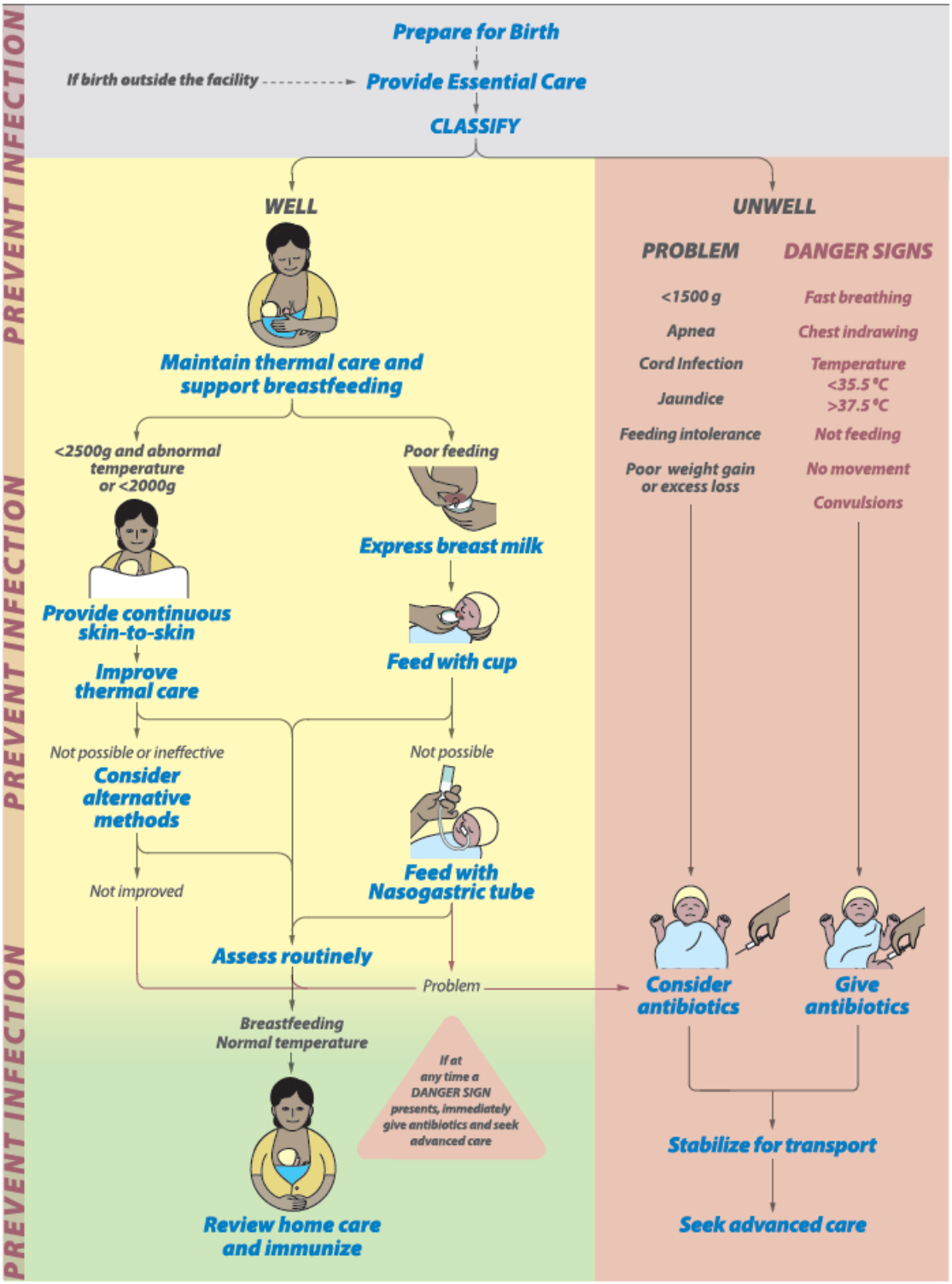
> *Low birth weight babies are defined as babies with birth weight of less than 2,500 grams irrespective of their gestational age. However, most of the low birth weight babies are preterm.*
>
> ***Preterm babies:*** *are defined as babies born prior to 37 completed weeks.*

Although all LBW babies need specialized additional care the type and intensity of care provided to them depends on proper classification of their problems. The poster in the next page and the chart in the following page guides providers to decide on which pathway of action they should follow in the care for LBW babies.

Helping Babies Survive

Essential Care for Small Babies

ACTION PLAN



Helping Babies Survive®

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Session 5.1: Preparation for Birth: When a baby is expected to be small prepare for the birth to prevent problems from the beginning

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain the purpose and benefits of preparation for birth of small baby. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Practice the procedure	• Ask participants to form group to role-play, one of them acting as care provider, one as mother and one as the helper. Enact the following scenario • *A woman arrives at your facility with ruptured membranes. She says her baby is not due for 2 months. The woman will deliver very soon.* • Review the woman's assessment with her provider and your helper. • Prepare for birth of a small baby. • Communicate with the family. • Change roles and repeat the exercise • Discuss similarities and differences between the role-play and your clinical practice	10 minutes
Summarize	• Summarize the key points on preparing for birth of small baby from **Session 4.2** and conclude the session	5 minutes

Session 5.1

When a baby is expected to be small prepare for the birth to prevent problems from the beginning

Review Key Knowledge

Prepare for care of a small baby as soon as the pregnant woman enters the facility.

Review the assessment of the pregnant woman.

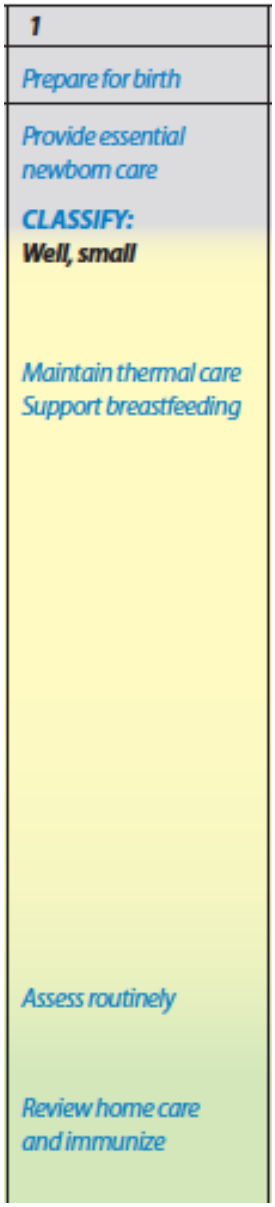
- Concerns for preterm labor, bleeding, pre-eclampsia orinfection
- Estimated gestation and size
- Medications given (antenatal corticosteroids or antibiotics)

Arrange referral or prepare for the birth.

- Refer if care needed for mother or baby cannot be provided.
- Prepare for birth if delivery will occur very soon.

When preparing for birth of a small baby, take special steps to support breathing and temperature as well as prevent infection.

- Have a skilled helper present.
- Decide where advanced care will be provided.
- Provide extra warmth at delivery.
- Wash hands and assemble clean equipment.
- Prepare an area near mother for helping the baby to breathe.
- Select an appropriate size mask and check the ventilation bag.
- Discuss special needs of small babies with the family, including skin-to-skin care.



Session 5.2: Essential Care for Small baby: When a baby is recognized to be small provide essential newborn care to keep the baby well

Facilitators: When the baby is small providers should give essential newborn care focusing on skin-to-skin care/thermal care and breathing.

Task	Activity	Time
Explain and demonstrate	• Explain the purpose and benefits ENC for small baby. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants what providers in their facilities do to LBW babies • Ask what the challenges are and what they think can be done to address them	5 minutes

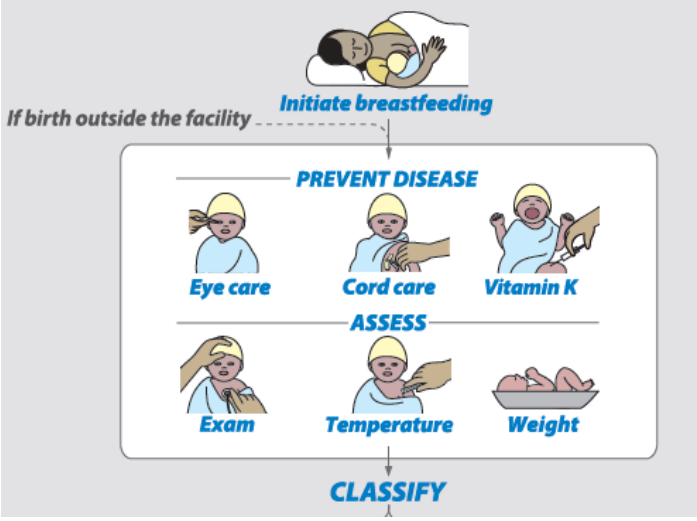
Practice the procedure	• Ask three participants from each group to role-play, one of them acting as care provider, one as mother and one as the helper. Enact the following scenario
	• *Provider*: Demonstrate how to provide the steps of essential newborn care while communicating with the mother and minimizing interruption of skin-to-skin care.
	  ○ Provide eye care, cord care and vitamin K.
	  ○ Measure temperature and examine.
	  ○ Weigh the baby.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on ENC for small babies from **Session 4.3** and conclude the session	5 minutes

Session 5.2

When a baby is recognized to be small provide essential newborn care to keep the baby well

Provide the steps of essential newborn care discussed in Module 2 with special attention to warmth and breathing to keep the small baby well.



Continue skin-to-skin care

- Keep mother and baby together after birth to prevent heat loss.
- Uncover only the areas needed for care.
- Measure temperature with a thermometer.
- If skin feels cool at any time, measure temperature immediately.

Monitor breathing

- Rapid breathing (>60/min) and chest indrawing are seen more frequently with small babies.
- Check breathing every 15 minutes until first complete exam.

Initiate breastfeeding

- Help the mother recognize the signs of readiness to feed and the proper position of the baby at the breast.

Provide care with minimal interruption of skin-to-skin care, including steps to

- Prevent disease:Eye care, cord care, and vitamin K
- Assess:Temperature, exam, and weight while covered with a warm blanket

Infants born outside the facility should be provided all the above steps of essential newborn care.

Session 5.3: Classify: By 90 minutes classy a small baby to determine further care

Facilitators: Proper classification of small babies is essential to provide tailored care that saves lives and prevents complications

Task	Activity	Time
Explain and demonstrate	• Explain on how to classify the small baby for further care. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants on how to classify small babies for further care • Ask what are the challenges and what they think can be done to address them	10 minutes
Practice the procedure	• Ask participants to work in pairs to discuss one the following babies and share classification with the group o A term baby with a birth weight of 2400 grams who has a temperature of 35.4^{o}C, is breathing 80 breaths per minute, and does not initiate breastfeeding o A preterm baby with a birth weight of 1750 grams who has a temperature of 36.7^{o}C and does not initiate breastfeeding o A baby with a birth weight of 1800 grams who has a temperature of 36.3^{o}C which rises after one hour of improved skin-to-skin care	10 minutes
Summarize	• Summarize the key points on classifying the small baby for further care from **Session 4.4** and conclude the session	5 minutes

Session 5.3

By 90 minutes classy a small baby to determine further care

Classify a small baby by 90 minutes to determine further care. Classification is based on the baby's weight, temperature, and exam.

The WELL small baby

- Weighs between 1500 and 2500 grams and
- Maintains a normal temperature with thermal care and
- Breathes well

The UNWELL small baby

- Develops a problem or
  - Weighs less than 1500 grams or
  - Apnea or
  - Cord infection or
  - Jaundice or
  - Feeding intolerance or
  - Poor weight gain or excess loss
- Has a Danger Sign
  - Fast breathing or
  - Severe chest indrawing or
  - Temperature <35.5^{o}C or >37.5^{o}C or
  - Not feeding or
  - No movement or
  - Convulsions

Classification may be delayed up to 4 hours if a small baby has

- Fast breathing or chest indrawing that isimproving
- Temperature <36.5^{o}C that rises within onehour of improved thermal care
- Poor feeding due to lack of energy ordifficulty with coordination to breastfeed

These babies require careful assessment for other signs of illness.

All small babies require ongoingroutine assessment as they are at risk ofdeveloping problems.

Session 5.4: KMC: If a baby is small and well maintain thermal care (KMC) to prevent the baby from becoming cold

Facilitators: KMC is natural high impact newborn care that avoids deaths and prevents complications in small babies.

Task	Activity	Time
Explain and demonstrate	• Explain to participants the purpose and benefits of KMC for small baby. • Demonstrate the KMC positioning steps • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	10 minutes
Invite discussion	• Ask participants if providers in their facilities initiate KMC for all small babies • Ask participants the challenges and what can be done to address them • Video clip on KMC	25 minutes

Practice the procedure	• Ask three participants from each group to role-play, one of them acting as care provider, one as mother and one as the helper. Enact the following scenario
	• *Provider*: Demonstrate steps on securing the baby on KMC while counseling the mother. Teach mother to observe
	  ○ Activity
	  ○ Breathing
	  ○ Color
	  ○ Temperature
	• Show mothers how to record feedings and wet or dirty diapers on a simple form.
	• Ask mother if she has questions about the baby's care.
	• If a baby has a low temperature despite skin-to-skin care.
	  ○ Identify the possible causes of low temperature with skin-to-skin care.
	  ○ Describe the steps to improve thermal care.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		25 minutes

Summarize	• Summarize the key points on provision of KMC from **Session 4.5**, **Session 4.6and Session 39** and conclude the session	10 minutes

Session 5.4

If a baby is small and well maintain thermal care (KMC) to prevent the baby from becoming cold

All small babies need attention to basic thermal care to prevent them from becoming cold.

In general, newborns are at risk of hypothermia because of their large surface area for small body mass and premature and LBW babies in particular for the following reasons.

- Highly permeable skin which increases epidermal water loss
- Deficient subcutaneous fat with less insulation
- Deficient stores of brown fat
- Immature central thermoregulation
- Poor caloric intake
- Poor oxygen consumption because of associated pulmonary problems

Newborns may lose heat by the following mechanisms

- **Convection** – where heat is lost from the skin to moving air.
- **Radiation** – where heat is dissipated from the baby to a colder object in the surrounding like to the floor, wall or window.
- **Conduction** – where the baby loses heat to the surface on which he or she lies.
- **Evaporation** – major cause of heat loss immediately after birth where water is evaporated from wet infants skin like evaporation from boiling water.

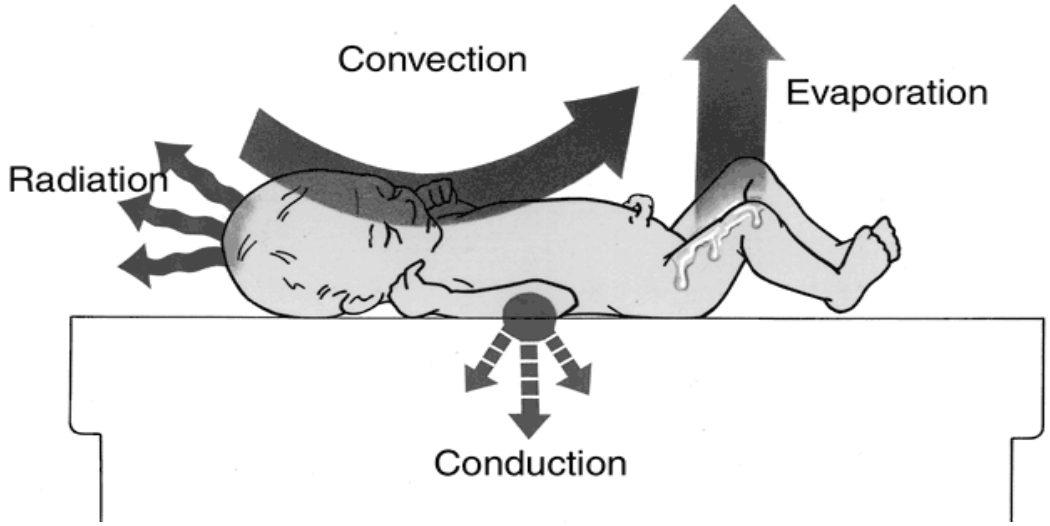


Figure above illustrates physical mechanisms of heat loss

Hypothermia

Classification: Based on its severity hypothermia could be:

- Mild (cold stress) = 36^0C -36.4^0C
- Moderate = 32^0C -35.9^0C and
- Severe (neonatal cold injury) < 32^0C

Prevention and management of hypothermia: There are several actions that providers can take to prevent small babies from going into hypothermia.

Care point	**Type of care**
Before delivery	• Warm delivery room • Organize newborn corner with adequate heat source
At delivery	• Deliver the baby on mother's abdomen • Dry the baby thoroughly immediately after birth and remove wet clothes. • Use cap to prevent significant heat loss through the scalp • Keep the newborn in skin to skin contact with the mother • Keep the newborn under radiant warmer – if there is a need for resuscitation • Cover weighing scales with warm towel when weighing the baby • Initiate early breastfeeding
Subsequent care	• Arrange appropriate transportation if needed: continue provision of KMC during transportation • Postpone bathing (after 24 hours) • Warm hands and stethoscope before touching the baby • Do examination/resuscitation of the infant under the radiant warmer • Practice rooming in wards/post natal rooms • Keep the newborn away from windows and drafts • Continue breastfeeding
General management	• Identify and treat cause of hypothermia (disease process and environmental conditions) • Put hypothermic infants on KMC, in incubators or under radiant warmer. • Warm the new born slowly • Monitor axillary temperature every 30 minutes till newborn temperature becomes stable • Monitor environmental temperature
Management of newborns with severe hypothermia	• Warm the baby using a radiant warmer. • Remove cold or wet cloths. • Cover the baby with warm clothes and hat.

	• Treat for sepsis, if present
	• Measure blood glucose and treat if hypoglycemic.
	• Keep IV line under the radiant warmer to warm the fluid.
	• Measure the baby's temperature every hour.
	• If the baby's temperature is increasing at least 0.5 °C per hour in the 1st three hours, re warming is successful.
	• Then measure the baby's temperature every two hours.
	• If the baby's temperature does not rise or is rising more slowly than 0.5 °C per hour, check and reset temperature of the warmer.
	• Once the baby's temperature is normal, measure the temperature every three hours for 12 hours and then 12 hourly.
	• Monitor for complications and manage accordingly
	  ○ Look for respiratory problems
	  ○ Monitor vital signs
	  ○ Monitor urine output
	  ○ Monitor blood sugars
	  ○ Look for signs multi organ failure

Dangers of warmers: Providers should not use radiant warmer unless it is necessary. There are some dangers associated with using warmers.

- Hyperthermia
- Burn
- Dehydration
- Mask serious infections

Kangaroo mother care (KMC): Kangaroo mother care consists of skin-to-skin care of babies (usually low birth weight or very low birth weight). KMC also promotes early and exclusive breastfeeding, but may be used even when babies are formula fed.

The cornerstones of KMC

Kangaroo Position

Dress the baby in a nappy and cap and place in an upright position against the mother's bare chest, between her breasts and inside her blouse. One may use a special garment, or one can tuck the mother's blouse under the baby or into her waistband. Cover both mother and baby with a Gabi, blanket or jacket if it is cold. You too can be innovative.

Kangaroo Nutrition

Babies who are unable to suckle should be fed expressed breast milk via a nasogastric tube or cup if they can swallow. Keep babies in the KMC position whilst being tube fed. Allow them to try to suckle during the tube feed.

In the KMC position, babies will declare themselves ready to suckle, as their rooting and suckling reflexes become manifest. Once the baby is able to suckle, allow the baby to breastfeed on demand but at least every three hours.

Kangaroo Support
It is very important to explain and demonstrate to the mother until she is motivated and confident to try the kangaroo position. Assist the mother with positioning and feeding, and give emotional support. The concept should be explained to other family members (especially the maternal grandmother), and they can also practice KMC (especially the father).

When to discharge from the hospital
Discharge when the baby has a sustained weight gain of at least 15 grams /kg /day. Bring the baby back for follow up in the next few days to ensure that baby is well and growing. It is advised practice to follow up KMC babies in a designated place.

Types of Kangaroo Mother Care

Intermittent KMC
This type of KMC is not done on a 24-hour basis but only for certain periods of the day. The mother stays at home or within the hospital but comes to the neonatal unit to do KMC at specified times; the newborn is left in an incubator for the remainder of the time. Intermittent KMC is mostly used for very small and sick babies, and/or for mothers who do not want or are not yet ready or able to practice continuous KMC. Examples include very LBW infants or mothers who are recovering from surgery (e. g., C-section). Intermittent KMC can be practiced while the baby is still in neonatal unit or delivery room. It is possible even with babies on oxygen and IV therapy. Frequency is determined by how stable baby is. A common sense approach is best.

Continuous KMC:
This is when KMC is practiced 24 hours every day (except for very short periods when the mother has to bathe or attend to other personal needs) and requires support from family members, including the husband. It is the ideal type of KMC for LBW babies. Continuous KMC can be instituted once the baby is stable, suckling well and needs no additional care. The baby can then be transferred to an adjoining KMC ward. Smaller babies may be able to go onto continuous KMC if they are stable and do not require oxygen.

Where do we do continuous KMC?
The KMC ward should be in close proximity to the neonatal unit and under the supervision of the neonatal staff, with 24-hour nursing coverage. The ward should be comfortable and warm but not heated.

Who can provide Kangaroo Mother Care?

- Everyone can provide KMC as long as they understand the method and are motivated to practice it.

- All those who want to assist the mother can practice KMC, such as grandmothers, sisters, aunts, husbands, and even friends.

Duration of KMC

Both **intermittent KMC and continuous KMC** are practiced as long as possible until the baby no longer tolerates the method. Babies who outgrow KMC become restless and will usually try to get out of the skin-to-skin position. Local KMC protocols may vary regarding the weight when babies are discharged from KMC follow-up. It is important to note, however, that babies should still be breastfed and kept warm even when KMC is no longer practiced.

How to practice kangaroo mother care

When to start KMC
KMC should be started when the small preterm or LBW baby is stable; otherwise it will have to be delayed. Exactly when KMC can begin depends on the condition and status of the baby and the mother. It is important, however, to encourage the mother to adopt KMC very early on.

Eligibility criteria for KMC
The following criteria should be used to decide whether a mother should begin KMC:

- The willingness of the mother to do KMC
- The baby should be in a stable condition:
  - ✓ No major illness present suchas sepsis, pneumonia, meningitis, respiratory distress and convulsions.
  - ✓ Babies who have been started on antibiotics for suspected infection can start KMC as soon as they are stable.
  - ✓ Intermittent KMC can be used until the baby is fully stable.
- Babies under phototherapy may be evaluated to receive intermittent KMC.

Start KMC at your health facility or refer all LBW babies with a weight below 2,000 grams to the nearest health facility with KMC services or to a higher level of care.

Positioning of the mother and baby

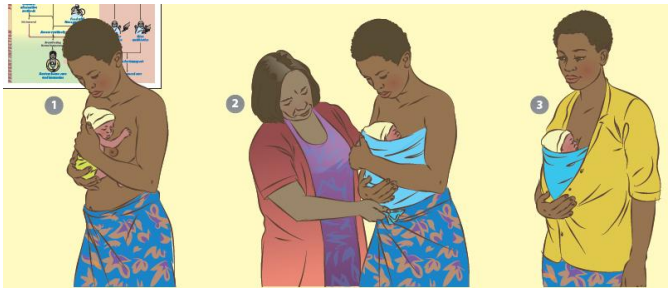
In KMC the baby, wearing only a nappy, socks and a hat, is held upright between the mother's breasts in continuous contact with her skin (skin-to- skin contact). The position of the baby against the mother's chest underneath the cloth should secure the position of the baby's head and neck.

The mother covers her baby with her own clothes and an additional blanket or shawl to cover the baby. While resting, the mother should be in a comfortable, moderately inclined position at about a 30-degree angle, supported with pillows to keep her comfortable.

When the mother walks around, the baby is still kept upright by a cloth. It is important that the nappy is changed soon after wetting or soiling, not only for the comfort of mother and baby but to reduce the body's heat loss.

Keeping the baby in the KMC position can be demanding for the mother, as continuous KMC practice is a tiring job. To assist the mother when she is tired or is attending to personal needs such as bathing, other family members (such as husbands, grandmothers, mothers-in-law, or older siblings) can be taught how to care for the baby in the kangaroo position so they can give the mother relief when necessary.

Steps in positioning the baby for KMC:



1. Dress the baby in socks, a nappy, and a cap.
2. Place the baby between the mother's breasts.
3. Secure the baby on to the mother's chest with a cloth
4. Put a blanket or a shawl on top for additional warmth.
5. Instruct the mother to put on a front-opened top: a top that opens at the front to allow the face, chest, abdomen, arms and legs of the baby to remain in continuous skin-to-skin contact with the mother's chest and abdomen.
6. Instruct the mother to keep the baby upright when walking or sitting.
7. Advise the mother to have the baby in continuous skin-to-skin contact 24 hours a day (or less in the case of intermittent KMC).
8. Advise the mother to sleep in a half-sitting position in order to maintain the baby in a vertical position.

Daily routine of a KMC Ward

Babies should be weighed daily, and feeds adjusted according to weight gain. If not yet breastfeeding on demand, they should receive 175ml/kg/day of expressed breast milk, in 8 feeds 3 hourly.

Babies on oxygen should have their oxygen saturation monitored 3 hourly.

Discharge from KMC position

Discharge from the kangaroo positions is usually determined by the babies themselves. When babies are about 40 weeks post menstrual or when their weight is about 2500 grams whichever comes first babies will not be comfortable in kangaroo position and moves a lot to indicate that they no more need the position. Then the health worker or the mother needs to discharge the baby from the kangaroo position by then.

Hyperthermia

Increased body temperature (Hyperthermia) is less frequently seen when compared with hypothermia. It occurs when axillary temperature is above $37.5^{o}C$.

Causes

- High environmental temperature
- Dehydration
- Infection
- CNS dysfunction and
- Medications

Signs of hyperthermia

- The newborn will be tachypneic
- Excessive sweating
- Flushed, bright and pink skin

When environmental temperature is the cause of hyperthermia, the trunk, extremities will have the same temperature, and the infant appears pink/vasodilated. But infants with sepsis are often vasoconstricted and the extremities are $2^{0}C$ to $3^{0}C$ colder than the trunk.

When high environmental temperature is suspected as a cause of fever, adjust room temperature, dress them with suitable clothing, expose them to room temperature or immerse them in tepid water and measure temperature.

Management

- Initiate early and frequent breast feeding
- Keep the baby away from source of excessive heat
- Remove extra cloths
- Look for possible causes including infections and treat accordingly.
- Do not use antipyretics as initial treatment.
- Do not rash to start antibiotics before ruling out other causes

Check temperature by feeling the forehead or the foot at feedings (every 3-4 hours). Measure temperature with a thermometer.

- Whenever the baby feels cold or hot
- At least twice in the first 24 hours
    - Within 90 minutes after birth
    - When in a stable thermal environment
- Once a day while in the facility

Wrap the baby and follow routines toprevent heat loss when no longer usingskin-to-skin care.

- Cover the head and put on socks.
- Dress the baby in an extra layer of clothes.
- Wrap the baby snugly.

- Change wet diapers promptly and remove wet clothes or blankets.
- Do not bathe a small baby; clean by wipingwith a wet cloth as needed after 24 hours.

Session 5.5

If the baby is cold and a well baby is less than 2,000gm provide continuous skin-to-skin care (KMC) to help maintain normal temperature

Continuous skin-to-skin care (KMC) is the preferred method to maintain normal temperature of babies less than 2,000 grams and any baby who is cold despite wrapping.

Continuous (>20 hours per day) skin-to-skin care can be provided

- To well small babies including those fed by cup or nasogastric tube
- By the mother or a family member
- During most activities including sleep

When mother must temporarily interrupt skin-to-skin care

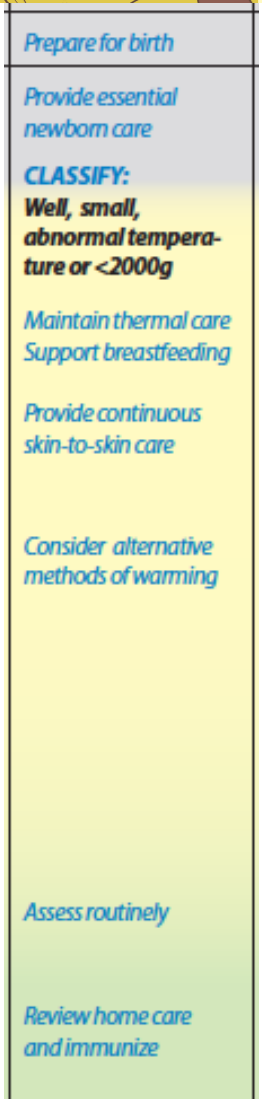
- Encourage a family member to place the baby skin-to-skin or
- Wrap the baby snugly

Support and counsel the mother to

- Develop confidence in positioning and caring for her baby skin-to-skin
- Assess her baby
- Engage in self-care
- Receive help from family members

Assess a baby during continuous skin-to-skin care and teach the mother to observeand report concerns about

- Activity – normal versus low or convulsions
- Breathing - comfortable versus fast, chestindrawing or pauses > 20 seconds (apnea)
- Color – pink versus blue, pale, or yellow
- Temperature – normal versus hot or cold



Session 5.6: Improve Thermal Care: If baby's temperature is low improve thermal care to help maintain normal temperature

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain purposes and benefits of warming babies with low temperature through skin-to-skin care or other options such as radiant warmer • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants what providers in their facilities do to warm small babies with low temperature • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Ask participants to work in pairs to play the roles of the mother and the provider.
	• Provider: A baby has a low temperature despite skin-to-skin care
	  ○ Identify the possible causes of low temperature with skin-to-skin care
	  ○ Describe the steps to improve thermal care
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on keeping normal temperature for the baby from **Session 4.7** and conclude the session	5 minutes

Session 5.6

If baby's temperature is low improve thermal care to help maintain normal temperature

If a baby's temperature is low with skin-to- skin contact, improve the thermal environment for skin-to-skin care.

Improve continuous skin-to-skin care by

- Removing wet clothes and changing diaper
- Adding hat, socks and mittens for the baby
- Covering mother and baby with extra blankets
- Minimizing interruptions in skin-to-skin contact
- Improving the thermal environment of the room
    - Raising the temperature
    - Reducing movement of air
    - Removing or covering cold surfaces

Recheck temperature in 1 hour

If skin-to-skin care is not possible or the baby cannot maintain normal temperature, consider an alternative method of warming.

- Radiant warmers, incubators, heated cots or heat-producing wraps should only be used when skin-to-skin care is ineffective or not possible.
- Misuse and malfunction of warming devices can result in dangerously low or high temperature.
- Warming devices increase risk of infection when used to care for more than one baby or not properly cleaned and stored.

Only trained providers should use alternative warming devices.

Overheating a baby can cause dehydration, apnea, brain injury, burn and death.

Session 5.7: Support Breast Feeding: If a baby is small support breastfeeding to provide best nutrition

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain to participants breast milk feeding for small babies. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities help when there are problems with breastfeeding a small babies • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Work in pairs to play the roles of the mother and the provider. Enact the following scenario:*A 2000gram baby is 3 days old and breastfeeding. Weight today is 1700 grams.*
	  ○ Evaluate the baby's effectiveness at breastfeeding.
	  ○ Determine if the baby is breastfeeding adequately.
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on feeding small babies on breast milk from **Session 4.8** and conclude the session	5 minutes

Session 5.7

If a baby is small support breastfeeding to provide best nutrition

Breast milk is the best food for small babies. Small babies may not have the **skills** or strength to feed at the breast initially. Mothers attempting to breastfeed a small baby require extra support and encouragement.

Support the special needs of a small baby who is attempting breastfeeding with

- Nipple stimulation prior to feeding
- Added attention to positioning and supporting head
- Early licking and practice at breast.
- Manual expression of drops of breast milk onto the nipple
- Awakening baby when changing to opposite breast

Evaluate the baby's effectiveness at breastfeeding

- Wakes and shows feeding readiness cues.
- Latches, sucks steadily with pauses, and swallows audibly.
- Feeds without choking, turning blue or pale.
- Mother reports breast softening.

A baby who is adequately fed

- Breastfeeds for at least 10 minutes per side.
- Sleeps comfortably between feedings every 2-3 hours.
- Has 6-8 wet diapers a day.
- Loses no more than 10% of birth weight.

If a baby cannot breastfeed effectively, support mother's breast milk production and use an alternative feeding method as needed.

- Teach mother to express breast milk every 3 hours.
- Encourage time at breast during skin-to-skin care and reassess readiness to breastfeed daily.
- Ensure mother has adequate nutrition, increased fluid intake and care for medical problems.

Session 5.8: Expressed Breast Milk: If a baby cannot feed directly from the breast providing expressed breast milk is an alternative feeding method

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain to the participants the benefits and techniques of expressing breast milk. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities support mothers to express breast milk. • Ask participants if there are challenges with storing the milk, use of pumps etc and what can be done to address them	5 minutes

Practice the procedure	• Work in pairs or groups of 3 to play the roles of the mother and the birth attendant.
	  ○ Follow the sequence of steps to express breast milk.
	  ○ Give guidance to the mother while assisting her.
	  ○ Correctly store the breast milk.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on expressing breast milk from **Session 4.9** and conclude the session	5 minutes

Session 5.8:

If a baby cannot feed directly from the breast providing expressed breast milk is an alternative feeding method

A mother should express breast milk for a baby who cannot feed directly from the breast.

Teach a mother to express breast milk

- Wash hands with soap and water.
- Sit comfortably.
- Hold a clean container under nipple.
- Place thumb above and first finger below and behind the dark portion of the breast.
- Support the breast with other fingers.
- Press the breast gently towards the chest wall.
- Compress the breast between the thumb and finger. Avoid sliding the thumb and finger on the skin of the breast.
- Rotate the position of the thumb/finger around the breast with each compression.
- Express breast until milk drips, then express the other breast.
- Alternate between breasts 5-6 times (20–30 minutes).
- Consider nipple stimulation, massage of breasts and use of warm compresses prior to or during expression to improve milk flow.

Express breast milk at the times when a baby would normally feed (at least 8 times during a 24 hour period).

Expressed breast milk should be

- Stored in a clean, covered container
- Kept in the coolest place possible for up to 6 hours
- Discarded after 6 hours unless refrigerated (can be used up to 24 hours if refrigerated)

Closely assess the volume of expressed milk, as it may not be adequate for a small baby in the first few days.

Prepare for birth

Provide essential newborn care

CLASSIFY:
Well, small, poor feeding

Maintain thermal care
Support breastfeeding

Provide continuous skin-to-skin care

Express breast milk

Feed with cup or spoon

Assess breast feeding readiness

Assess routinely

Review home care and immunize

Session 5.9: Cup Feeding: If a baby cannot feed directly from the breast feed by cup to provide breast milk until breastfeeding can occur

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Briefly discuss on feeding on breast milk by cup. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their facilities feed babies by cup when they cannot feed directly from the breast • Ask participants what are the challenges in cup feeding and what can be done to address them	5 minutes

Practice the procedure	• Work in pairs to play the roles of the mother and the provider.
	  ○ Demonstrate the steps of feeding while explaining them to the mother.
	  ○ Assess the baby's ability to take cup or spoon feedings
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on feeding on breast milk by cup from **Session 4.10** and conclude the session	5 minutes

Session 5.9:

If a baby cannot feed directly from the breast feed by cup to provide breast milk until breastfeeding can occur

Cup feeding should be used for babies who are able to swallow but not able to feed adequately from the breast.

When using an alternative method to feed breast milk

- Feed according to baby's cues every 2-4 hours.
- Give at least 8 feedings per day. The baby should be awake and alert.
- Measure the amount to be fed into a container (see Provide appropriate volume, provider guide page 66).
- Place a small amount of milk in the cup.
- Position the baby semi-upright.
- Rest the cup lightly on the baby's lower lip touching the outer, upper lip.
- Tip the cup so milk reaches the baby's lips.
- Allow the baby to lick the milk. To avoid choking, do not pour milk into the mouth.
- Allow the baby to take small amounts frequently.
- Continue feeding for up to 30 minutes. The baby has finished when the mouth closes, and the baby no longer appears interested.
- Burp the baby after feeding.

A baby who is able to cup feed will

- Take the full desired amount.
- Not cough, choke or turn blue with feeding.
- Be awake and able to feed every 2-4 hours.

Cup feedings may be combined with breastfeeding or nasogastric tube feeding.

- Assess the baby's readiness to breastfeed daily.
- The baby who cannot cup feed adequately will need nasogastric tube feeding.

Session 5.10: Nasogastric Feeding: If a baby cannot feed enough by mouth insert a nasogastric tube to provide breast milk until breastfeeding can occur

Facilitators:

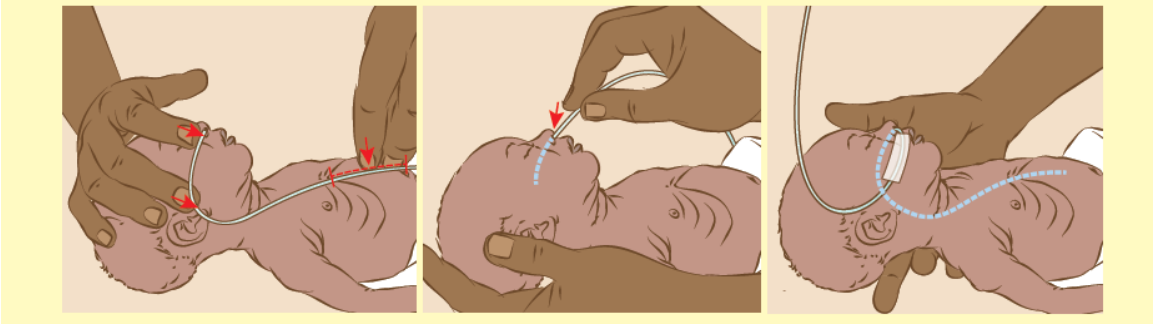
Task	Activity	Time
Explain and demonstrate	• Briefly describe purpose and benefits of nasogastric tube. • Demonstrate insertion of NG tube • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants if providers in their facilities insert nasogastric tubes if babies cannot feed enough breast milk by mouth • Ask participants the challenges in feeding by NG tube and what can be done to address them	10 minutes

Practice the procedure	• Work in pairs to play the roles of the provider and a helper.
	  ○ Select, measure, lubricate and insert the nasogastric tube.
	  ○ Confirm proper placement of the tube and secure it.
	  ○ Remove the tube safely.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		15 minutes

Summarize	• Summarize the key points on clearing the airway when there is meconium from **Session 4.11**to**Session 4.13** and conclude the session	10 minutes

Session 5.10:

If a baby cannot feed enough by mouth insert a nasogastric tube to provide expressed breast milk until breastfeeding can occur



Review Key Knowledge

Nasogastric tube feeding should be used for a baby who cannot feed well by mouth and

- Is unable to swallow without choking or
- Has early inadequate intake by breast or cup with low urine output (<6 wet diapers a day) or
- Cannot take enough breast milk by breast or cup to grow properly

To insert a nasogastric tube

- Wash hands.
- Select correct size tube (5 or 6 French).
- Measure length of tube to be inserted from tip of nose to earlobe to half way between tip of breastbone and umbilicus.
- Put a mark on tube at measured length.
- Lubricate the tube with expressed milk.
- Insert the tube gently through nostril to the mark.
- Confirm proper placement of the tube:
    - Inject 2 mL of air while listening for the sound of air entering the stomach and
    - Withdraw air from the stomach and look for small amounts of gastric fluid
- Tape tube to the skin close to the nose.
- Note depth of insertion using mark on tube and record in chart.

To remove a nasogastric tube

- Pinch the tube closed and withdraw rapidly.
- Have a suction device available to remove milk or

4
Prepare for birth
Provide essential newborn care
CLASSIFY: ***Well, <2000 g, poor feeding***
Maintain thermal care *Support breastfeeding*
Provide continuous skin-to-skin care
Consider alternative methods of warming
Express breast milk
Feed with cup or spoon or nasogastric tube
Assess breast feeding readiness
Assess routinely
Review home care and immunize

secretions in the throat.

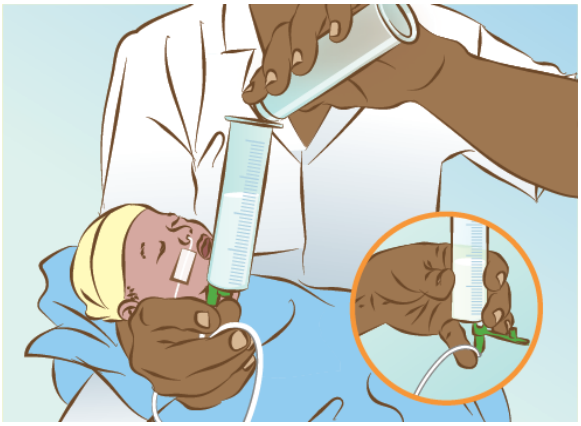
Session 5.11: Volume: When using alternative feedings provide appropriate volume of breast milk to support growth

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Briefly discuss on feeding appropriate volume of breast milk. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how NG tube insertion is decided, how volume of milk to be given is decided • Ask participants challenges with feeding appropriate volume of breast milk and what can be done to address them	5 minutes
Practice the procedure	Work in pairs to Determine the amount of milk for one feeding: • 1.6 kg birth weight baby on day 2 • Same baby on day 4 (current weight 1.48 kg) • Same baby on day10 (current weight 1.7 kg) Determine if daily weight change is acceptable for a baby born at 2 kg: • On day 1,2,3,4: 2000, 1980, 1970, 1960 g • On day 8,9,10,11: 2000, 2070, 2070, 2090 g • On day 14,15,16,17: 2180, 2200, 2220, 2230 g Discuss similarities and differences between the role-play and your clinical practice	15 minutes
Summarize	• Summarize the key points on feeding appropriate volume of breast milk from **Session 4.12** and conclude the session	5 minutes

Session 5.11:

When using alternative feedings provide appropriate volume of breast milk to support growth



Feeding volume is determined by the age and weight of a baby. Begin nasogastric feedings at low volumes, increase gradually, and adjust volumes for amounts taken by mouth. Evaluate tolerance with every feeding to identify problems promptly.

Determine the volume of a feeding:

2.0 - 2.5 kg start at 15 mL per feeding every 3 hours, increase 5 mL per feeding daily to 40+ mL

1.75 - 2.0 kg start at 10 mL per feeding every 3 hours, increase 5 mL per feeding daily to 35+ mL

1.5 – 1.75 kg start at 8 mL per feeding every 3 hours, increase 4 mL per feeding daily to 32+ mL

Once on full volume feedings, add 2 mL per feeding for every 100 grams gained above birth weight.

Small babies may require 160-180 mL/kgdaily to gain weight adequately.

Evaluate feeding adequacy.

- Babies receiving an adequate volume of milk
- May lose up to 10% of weight in first 10 days
- Gain 15 grams/kg daily after early weight loss
- Show steady weight gain on a growth chart

Feeding intolerance that requires advancedcare includes

- Repeated vomiting (especially if bile-stained)
- Distended abdomen or tenderness
- Bloody stools

Suggested feeding volumes in ml per feeding

Birth weight (kg)	Frequency of feeding	Day of birth/day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
2.0 – 2.5kg	Every 3 hours	15	20	25	30	35	40	40+
1.75 – 2.0 kg	Every 3 hours	10	15	20	25	30	35	35+
1.5 – 1.75 kg	Every 3 hours	8	12	16	20	24	28	23+

Session 5.12:

If a baby cannot feed enough by mouth give breast milk by nasogastric tube to provide safe and adequate feeding

Review Key Knowledge

Feeding with a nasogastric tube requires close attention to the baby. In some facilities, mothers may learn to administer feedings.

- Measure the amount to be fed into a container
- Confirm tube is secured and the mark on the tube is visible at the edge of the nose.
- Hold the baby semi-upright, preferably skin-to- skin or in the lap.
- Open the nasogastric tube and attach an empty syringe of the correct size (without plunger).
- Pinch off the tube and pour milk into syringe.
- Hold syringe 20cm above the baby and release pinch to allow milk to flow into the stomach.
- If flow does not start
    - Gently insert syringe plunger but do not push or
    - Cover top of the syringe barrel with thumb and release
- Remove syringe and recap tube when finished.

If baby spits up or chokes, slow the feed by

- Lowering syringe and/or
- Gently pinching tube

Each feed should take about 10-15 minutes.

When combining nasogastric tube feedings with cup or breastfeeding, adjust for the volume taken by cup or approximate intake at breast.

Session 5.13: Breastfeeding Readiness: Assess breastfeeding readiness to support transition from an alternative method of feeding to breastfeeding

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Briefly explain to participants on how to assess breastfeeding readiness to support transition to breastfeeding. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities assess breastfeeding readiness • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Work in pairs to discuss feeding of the following babies.
	  ○ 7-day-old baby who awakens, licks and breastfeeds for a total of 2-3 minutes
	  ○ 10-day-old baby who awakens, licks and breastfeeds for a total of 10 minutes
	  ○ 8-day-old baby who licks but chokes and turns blue with attempt to breastfeed
	• Discuss similarities and differences between the role-play and your clinical practice
		10 minutes

Summarize	• Summarize the key points on assessing breastfeeding readiness to support transition to breastfeeding from **Session 4.14** and conclude the session	5 minutes

Session 5.13:

Assess breastfeeding readiness to support transition from an alternative method of feeding to breastfeeding

Small babies using alternative feeding methods should gradually transition to breastfeeding.

Assess the signs of readiness for breastfeeding each day.

- Awakening or stirring before feedings
- Rooting, opening mouth, licking at feeding time
- Crying or demanding at feeding time

Choking or blue color with breastfeeding suggests a baby is not yet ready.

When transitioning to breastfeeding

- Limit time at breast if the baby tires.
- Provide supplemental feeding by nasogastric tube based on estimated intake at breast
- Withhold supplement if the baby sucks actively during a breastfeeding of adequate duration.
- Gradually increase breastfeeding without supplementation.
- Remove nasogastric tube when taking the majority of feedings by mouth.
- Confirm that weight gain continues with breastfeeding alone.

Session 5.14: Case study

Facilitators:

Task	Activity	Time
Explain the case study	• Explain the case scenario exercise and provide checklist	5 minutes
Prepare materials for the practice	• Alcohol-based hand cleaner or soap • Small baby manikin, doll, or simulator • Clean nasogastric tube (5-6 French) • Tape (to mark and secure tube) • 20 mL syringe • Stethoscope • Water to simulate milk • Container to collect liquid	

Practice the exercise	• In pairs practice skills and communication related to nasogastric feeding.
	• One participant plays as provider, the other as mother
	• *Case study: A baby is born at 1600 grams and is currently 12 hours old. You have assessed the feeding skills and the baby cannot feed by breast or cup. You have helped the mother to express and collect breast milk.*
	  ○ Correctly insert a nasogastric tube
	  ○ Explain to the mother the steps in giving a feeding and have her feed the baby
	  ○ Administer feeding
	• Switch roles and repeat the exercise with a different case scenario.
		20 minutes

Summarize	• Summarize by addressing if there are any questions from the participants	10 minutes

Exercise: Feeding

Scenario 1

A baby is born at 1600 grams and is currently 12 hours old. You have assessed the feeding skills and the baby cannot feed by breast or cup. You have helped the mother to express and collect breast milk.

PART I

Place a nasogastric tube:

- [ ] Communicate with the mother and explain need for nasogastric feedings
- [ ] Wash hands
- [ ] Select correct size tube
- [ ] Measure length of tube to be inserted and mark tube
- [ ] Lubricate tube with expressed breast milk
- [ ] Insert tube
- [ ] Confirm proper placement
- [ ] Tape tube on face

PART II

The nasogastric tube has been correctly inserted. Now explain to the mother the steps in giving a feeding and have her practice the following:

- [ ] Measure amount to be fed into a container
- [ ] Confirm tube secured with mark at the nose
- [ ] Check position of tube before each feed
- [ ] Position the baby correctly
- [ ] Open the nasogastric tube and attach an empty syringe
- [ ] Pinch the tube and pour milk into syringe

Administer a feeding:

- [ ] Hold the syringe 20 cm above the baby
- [ ] Release pinch to allow milk to flow
- [ ] Monitor the baby for choking or spitting up and adjust flow if needed
- [ ] Cap the tube

Session 5.15: Routine Assessment: When providing care to a small baby assess routinely to help determine if a baby is well or needs advanced care

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Explain to participants on purposes and benefits of assessing small baby routinely. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their facilities assess small babies to determine if they are well or need further care, how do they document findings and communicate with other providers • Ask participants the challenges and what can be done to address them	5 minutes

Practice the procedure	• Work in groups of 3 to play the role of the mother, a provider and a colleague who is assuming care of the baby.
	• *A 6-day-old baby, whose mother has no concerns, shows normal activity and color, temperature of 36.7 and weight of 1530, a loss of 150 grams from birth weight of 1680 grams. The baby is taking 24 mL of breast milk every 3 hours and had 6 wet diapers and 3 stools in the previous day.*
	  ○ Assess the baby, decide on the significance of the findings, and decide whether to continue or change care.
	  ○ Communicate your assessment to your colleague.
	• Change roles and repeat the exercise
	• Discuss similarities and differences between the role-play and your clinical practice
		15 minutes

Summarize	• Summarize the key points on assessing small baby routinely from **Session 4.15** and conclude the session	5 minutes

Session 5.15:

When providing care to a small baby assess routinely to help determine if a baby is well or needs advanced care

Routine assessment of small babies determines further care and detectsconditions that require change in care orreferral.

The condition of small babies can changequickly. Prompt recognition and responseto problems can be life saving.

Assess a baby at least once per shift.

- Discuss mother's observations (activity, breathing, color, temperature)
- Perform a limited physical exam
- Review
    - Temperature
    - Weight
    - Intake (frequency, volume, tolerance)
    - Output (wet diapers, stools)

Decide if the baby is well or unwell	**Act**
Well: Desired progress	Continue care Adjust volume of feeding as needed
Uncertain: Change from previous not clearly normal	Change support Assess frequently
Unwell: Problem or Danger Sign	Seek advanced care

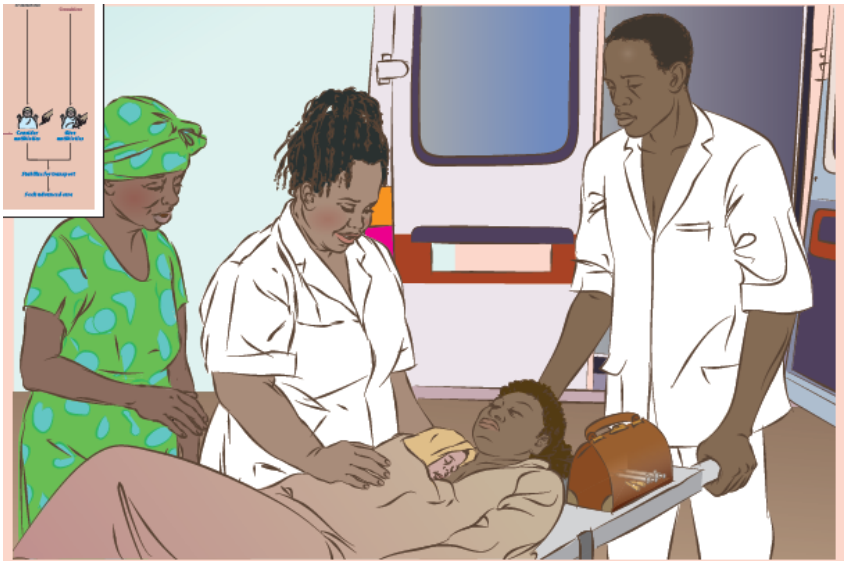
Session 5.16: Stabilization: When a baby needs advanced care stabilize for transport to improve outcome

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Briefly explain to participants on how to stabilizea newborn for transport for advanced care. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers stabilize and transport babies seeking advanced care • Ask participants the challenges and what can be done to address them	5 minutes
Practice the procedure	• Ask participants to work in pairs to discuss the following babies. • Use local guidelines to decide which of the following babies would be appropriate for transport. Share with the larger group your plan for stabilization and what to include in a referral note. 1. A 2-hour-old 1600gram baby who has developed grunting and chest wall indrawing. 2. A 2-week-old old birth weight 1700gram baby who remains 200grams below birth weight despite nasogastric feedings. 3. A 2-week-old 2000gram baby who has bile-stained vomiting and a distended abdomen.	10 minutes
Summarize	• Summarize the key points on stabilizing newborn for transport for advanced care from **Session 4.16** and conclude the session	5 minutes

Session 5.16:

When a baby needs advanced care stabilize for transport to improve outcome



5

Prepare for birth

Provide essential newborn care

CLASSIFY:
Unwell, problem

< 1500 grams

Apnea

Cord infection

Jaundice

Feeding intolerance

Poor weight gain or excess loss

Consider antibiotics

Stabilize for transport

Seek advanced care

Review Key Knowledge

Prompt referral, stabilization before transport and care by a trained teamimprove outcomes.

Seek advanced care promptly for

- Danger Signs and Problems

Stabilize by

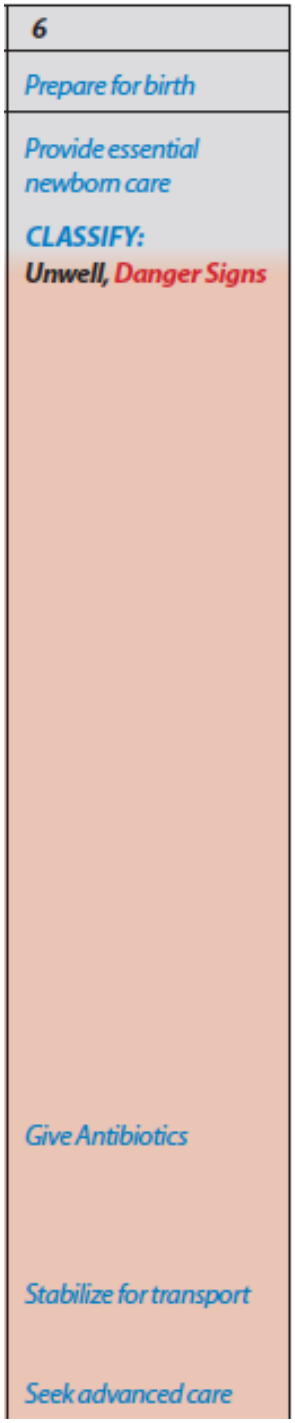
- Supporting breathing as needed (oxygen if available)
- Continuing skin-to-skin care(or safe alternative)
- Providing fluids and nutrition (nasogastric feeds or intravenous fluidsif unable to feed)
- Giving antibiotics if indicated
- Placing nasogastric tube for distended abdomen

Communicate with the family

- Explain the baby's condition.
- Encourage parents to see and touch the baby.
- Tell danger signs
    - Weight < 1500 grams
    - Apnea
    - Cord infection
    - Jaundice
    - Feeding intolerance
    - Poor weight gain

Communicate with the receiving facility

- Explain the baby's condition.
- Discuss stabilization.
- Agree on transport plan (appropriate vehicle, equipment, persons).
- Discuss options for lodging/care for mother.
- Prepare a referral note.



Session 5.17: Review Home Care: When a small baby is ready for discharge review home care to keep the baby well

Facilitators:

Task	Activity	Time
Explain and demonstrate	• Briefly explain key issues that need to be considered during counseling the mother and families on home care when baby is ready for discharge. • Make the class interactive by asking participants their experiences and encouraging them to ask questions.	5 minutes
Invite discussion	• Ask participants how providers in their health facilities decide to discharge small babies, what counseling messages do they provide to the mother and families • Ask participants the challenges and what can be done to address them	5 minutes
Practice the procedure	• Work in pairs to play the roles of the mother and a provider. ○ Counsel the mother for home care using the Parent Guide or local materials. • Change roles and repeat the exercise • Discuss similarities and differences between the role-play and your clinical practice	10 minutes
Summarize	• Summarize the key points on counseling the mother on home care when baby is ready for discharge from **Session 4.17** and conclude the session	5 minutes

Session 5.17:

When a small baby is ready for discharge review home care to keep the baby well

Review Key Knowledge

Planning for successful discharge occurs throughout care in the facility. Small babieswho are sent home too soon are at risk ofbecoming sick and failing to grow.

Continue skin-to-skin care until the baby

- Weighs 2000 grams
- Can maintain normal temperature when wrapped or
- Does not tolerate skin-to-skin care (wiggles,pulls out limbs, cries, sweats)

A baby is ready for discharge when

- Breathing is normal (no indrawing, rate < 60 breaths per minute, no apnea).
- Temperature is stable (36.5-37.5oC) in a normal environment.
- Weight gain is adequate over 3 consecutivedays.
- Mother and baby have demonstrated successful breastfeeding or alternativemethod of feeding.
- Mother and family are confident they can care for the baby.
- Postnatal care is arranged for motherand baby
    - Twice a week until 2000 grams and
    - Once a week until 2500 grams

When caring for the baby at home

- Prevent infection with hand washing and clean surroundings.
- Keep the baby warm.
- Breastfeed every 2-4 hours.
- Assess the baby for changes or Danger
- Signs and seek care if necessary.
- Return to the clinic for weighing andimmunizations.

A family that is providing skin-to-skin careor alternative feedings at home will need special support from community healthworkers.

The columns in the chart below describe six case scenarios of care for LBW babies

Trace the pathway through the Action Plan for each case and describe or demonstrate the care you would provide. The first column describes a well small baby who receives skin-to-skin care for the first day, then maintains a normal temperature and breastfeeds well. Columns two through four illustrate babies who are well but need extra support. There are many additional scenarios that combine problems with temperature and feeding. Columns five and six illustrate babies who are unwell with a problem or a Danger Sign. Use this outline and the Action Plan to create other cases using observations from your experience. You can also plan or review the care of a small baby in your facility.

1	2	3	4	5	6
Prepare for birth	*Prepare for birth*	*Prepare for birth*	*Prepare for birth*	*Prepare for birth*	*Prepare for birth*
Provide essential newborn care	*Provide essential newborn care*	*Provide essential newborn care*	*Provide essential newborn care*	*Provide essential newborn care*	*Provide essential newborn care*
CLASSIFY: ***Well, small***	***CLASSIFY:*** ***Well, small, abnormal temperature or <2000g***	***CLASSIFY:*** ***Well, small, poor feeding***	***CLASSIFY:*** ***Well, <2000 g, poor feeding***	***CLASSIFY:*** ***Unwell, problem***	***CLASSIFY:*** ***Unwell, Danger Signs***
Maintain thermal care *Support breastfeeding*	*Maintain thermal care* *Support breastfeeding*	*Maintain thermal care* *Support breastfeeding*	*Maintain thermal care* *Support breastfeeding*	*< 1500 grams*	
	Provide continuous skin-to-skin care	*Provide continuous skin-to-skin care*	*Provide continuous skin-to-skin care*	*Apnea*	
				Cord infection	
	Consider alternative methods of warming	*Express breast milk*	*Consider alternative methods of warming*	*Jaundice*	
			Express breast milk	*Feeding intolerance*	
		Feed with cup or spoon	*Feed with cup or spoon or nasogastric tube*	*Poor weight gain or excess loss*	
		Assess breast feeding readiness	*Assess breast feeding readiness*		
Assess routinely	*Assess routinely*	*Assess routinely*	*Assess routinely*		
				Consider antibiotics	*Give Antibiotics*
Review home care and immunize	*Review home care and immunize*	*Review home care and immunize*	*Review home care and immunize*		
		If at any time a DANGER SIGN presents, immediately give antibiotics and seek advanced care		*Stabilize for transport*	*Stabilize for transport*
				Seek advanced care	*Seek advanced care*

Annex

Annex A. Knowledge and skills assessment

Knowledge check

Select the best answer to each question or statement. Circle the letter of the correct answer.

1. How long should healthy mothers of well babies provide initial skin-to-skin care?
   A. At least one hour
   B. As long as it is convenient for the mother
   C. Only until the baby's temperature is normal
   D. At least 24 hours
2. During the first hour after birth, how often should babies be observed for breathing problems?
   A. Once during the hour
   B. Every 30 minutes
   C. Every 15 minutes
   D. Every 5 minutes
3. Why is it important to begin breastfeeding within the first hour after birth?
   A. It helps babies breastfeed more successfully
   B. It keeps the baby from crying
   C. It keeps babies alert soon after birth
   D. It helps babies breathe more easily
4. When should a baby be given liquids other than breast milk?
   A. When the baby does not feed at the breast within the first hour after birth
   B. When the mother has engorged breasts
   C. When the baby cries between feedings
   D. Never
5. What is an early sign that a baby is ready to breastfeed?
   A. Crying for a long period of time
   B. Opening the mouth and licking
   C. Eyes closed and hands open
   D. Breathing rapidly with the mouth open
6. How fast should a normal baby breathe?
   A. At least 65 times per minute
   B. At any rate as long as there is no chest in-drawing
   C. 40-60 times per minute
   D. 25 times per minute
7. What is the most important reason for weighing all babies soon after birth?
   A. Birth weight may identify babies who need special care
   B. Mother and family members often want to know the birth weight

C. Birth weight will determine how long a baby will breast feed at each feeding
D. Birth weight will identify babies who need vitamin K

8. In what part of the eye should medicine to prevent eye infections be given?
A. Inside the upper eyelid
B. Inside the lower eyelid
C. In the corner of the eye only
D. On the outside of the eyelid

9. What is the normal temperature range for a healthy baby?
A. 36.5°C - 37.5°C
B. 34.0°C – 35.5°C
C. 35.5°C - 36.5°C
D. 37.5°C - 38.5°C

10. Which babies should be given vitamin K after birth?
A. Only babies with bleeding
B. Only babies with birth weight >2500 grams
C. All babies
D. Only sick babies

11. How should a baby be kept warm after skin-to-skin care?
A. Bathing in warm water
B. Wrapping in a clean, dry blanket or cloth
C. Placing near warm stones
D. Exposing to sunshine

12. How soon after birth can a healthy baby be bathed?
A. As soon as the baby has a normal temperature
B. As soon as normal breathing has been established
C. At least six hours following birth
D. Immediately after the first breastfeeding

13. What is a sign of good attachment at the breast?
A. The baby's nose is pressed against the breast.
B. The baby bites down and pulls on the nipple.
C. Only the tip of breast is in the baby's mouth.
D. The baby's mouth is wide open on the breast.

14. What should mothers do if they have breast engorgement?
A. Feed more often or express milk
B. Stop breastfeeding for one day
C. Take antibiotics
D. Apply herbs to the breasts

15. At 90 minutes after birth, a 2700 gram baby is skin-to-skin with the mother and has a temperature of 36.0 °C. What should you do next?
A. Give antibiotics and seek advanced care.
B. This temperature is normal and no special care is needed.
C. Make the room warm and free of drafts and replace any wet clothing.
D. Place warm stones next to the baby.

16. Babies with what problem might benefit from cup feeding?
A. Vomiting with every feeding
B. Unable to awaken for feedings

C. Able to swallow but unable to suck effectively
D. Unable to swallow

17. When cup feeding a baby, what is the correct action?
A. Allow the baby to lick the milk from the cup
B. Pour small quantities of milk into the baby's mouth
C. Place the baby flat on his back
D. Drip a continuous stream of milk into the mouth

18. Which of the following would describe convulsions?
A. Occur only in the legs
B. Cannot be stopped by holding arms and legs
C. Occur in response to a loud noise
D. Occur only when the baby is awake

19. When should a baby be treated with antibiotics?
A. If birth weight is less than 2000 grams
B. When a Danger Sign is present
C. If the baby cries often
D. If the baby appears to be in pain

20. When should the first dose of an antibiotic be given?
A. After transfer for advanced care
B. As soon as possible after a Danger Sign has been identified
C. After all family members have been contacted
D. At a time that is convenient for the health care provider

21. After the first day following birth, jaundice is severe when it appears on what body area?
A. Back and abdomen
B. White part of the eye
C. Legs and arms
D. Palms and soles

22. How often should a mother express milk for a baby who cannot feed at the breast?
A. As often as the baby would normally feed (8-12 times per 24 hours)
B. 3 times during the daytime only
C. Once in the morning and once before bedtime
D. 4 times per 24 hours

23. A 3000gram baby is unable to suck or swallow during the first 6 hours after birth. How would you classify this baby and what should you do?
A. The baby is normal, and breastfeeding should be encouraged
B. The baby has a Danger Sign, and you should seek advanced care
C. The baby has a feeding problem, and should be cup fed.
D. The baby will probably die, and no further care should be provided

24. Which of the following is a sign that a baby is breastfeeding adequately?
A. Crying within one hour after each feeding
B. Vigorous sucking that causes nipple pain with each feeding
C. Remains awake and active after each feeding
D. Feeding 8 to10 times per day

25. You have determined that a baby with a birth weight of 1800grams needs antibiotics. How much ampicillin (200 mg/mL) should you give?

A. 0.6 mL
B. 0.5 mL
C. 1.0 mL
D. 0.35 mL

Weight in kg	Ampicillin IM Dose: 50 mg per kg every 12 hours Add 2.5 ml sterile water to 500 mg vial - 200 mg/ml	Gentamicin IM Dose: 5 mg per kg every 24 hours if term; 4 mg per kg every 24 hours if preterm 20 mg per 2 ml vial - 10 mg/ml
1.0 - 1.4 kg	0.35 ml	0.5 ml
1.5 - 1.9 kg	0.5 ml	0.7 ml
2.0 - 2.4 kg	0.6 ml	0.9 ml
2.5 - 2.9 kg	0.75 ml	1.35 ml
3.0 - 3.4 kg	0.85 ml	1.6 ml
3.5 - 3.9 kg	1 ml	1.86 ml
4.0 - 4.4 kg	1.1 ml	2.1 ml

OSCE A

Instructions to facilitator: Read aloud to the learner the following instructions and the case. Provide prompts where shown in italics (following theword "Prompt"). As you observe the learner, tick the boxes Done or Not Done. Indicate the baby's response to the learner'sactions either with the doll or manikin or verbally.

"I am going to read a role play case. Please listen carefully, and then show me or tell me what you would do to take care ofthis baby. I will indicate the baby's response with the manikin, or I will answer any questions about the baby's condition.I will not volunteer information unless you ask. I will provide no other feedback until the end of the case."

"You have a maximum of 15 minutes to demonstrate the care of this baby."

"A 22-year-old mother has given birth to her first baby. The placenta has been delivered and mother is well. The baby cried at birthand is now 10 minutes old and wide-awake. Show me what you would do to care for this baby over the next two hours.

Activities	**Done**	**Not Done**
Washes hands		
Continues skin-to-skin care		
Monitors breathing Recognizes baby is breathing well *Prompt: Show or say baby is breathing well.*		
Initiates breastfeeding. *Prompt: Baby has nursed well for 15 minutes. What would you do now?*		
Provides eye care.		
Provides cord care		
Examines baby Breathing		
Movements and tone		
Skin color		
Cord appearance *Prompt: Provide the following information if asked by the learner. Baby is breathing normally and is pink, the limbs are flexed, and there is no bleeding from the cord*		
Measures temperature Places thermometer in the armpit		
Reads and records temperature accurately *Prompt: Temperature is 37˚C*		
Weighs baby Cleans scale, puts baby on scale.		
Measures and records weight accurately *Prompt: Weight is 2900 grams*		

Gives vitamin K Draws into syringe the correct amount of vitamin K		
Indicates correct location for injection		
Classify baby for further care Recognizes baby is normal *Prompt: If the learner has not said that the baby is normal, ask: how would you classify this baby? Then say: now demonstrate and discuss how you would support breastfeeding.*		
Supports breastfeeding Assists with positioning of mother and baby		
Describes good attachment		
Discuss successful feeding with mother		

SCORING:
Successful completion requires a total score of 16 correct of 20 "Done".
Incompletely done items should be marked as not done.
Examining, taking temperature, weighing baby, providing eye and cord care, and giving vitamin K can be done in any order.

OSCE B

Instructions to facilitator: Read aloud to the learner the following instructions and the case. Provide prompts where shown in italics (following the word "Prompt"). As you observe the learner, tick the boxes Done or Not Done. Indicate the baby's response to the learner'sactions either with the manikin or verbally.

"I am going to read a role play case. Please listen carefully, and then show me or tell me what you would do to take care of this baby. I will indicate the baby's response with the manikin, or I will answer any questions about the baby'scondition. I will not volunteer information unless you ask. I will provide no other feedback until the end of the case".

"You have a maximum of 10 minutes to demonstrate your care for this baby."

"A baby was born 60 minutes ago. She weighs 1700 grams. Eye and cord care have been provided, and vitamin K has been given. No other care has been initiated. She was kept skin-to-skin but was not able to breast feed. You just finishedwashing your hands".

Activity	**Done**	**Not Done**
Examines baby Breathing		
Movements and tone.		
Skin color		
Cord appearance *Prompt: Provide the following information if asked by the learner. Baby's breathing is fast and labored. Color is pink. She is moving very little. Muscle tone is poor. The cord is not bleeding.*		
Measures temperature Places thermometer in the armpit *Prompt: Temperature is 35˚C*		
Recognizes hypothermia		
Improves thermal care *(Checks for wet clothing and wraps, raises room temperature, adds a layer of clothing/blanket and hat, improves skin-to-skin care; must indicate 3 of 4 for successful completion of this action.)*		
Classifies baby for further care Recognizes baby has Danger Sign		
Gives antibiotics Calculates correct dose		
Draws up correct dose		
Plans for referral for advanced care Indicates the need for a referral note.		
Communicates with the mother/ family Communicates the need for transfer with family		

SCORING:
Successful completion requires a total score of 10 correct of 13 “Done”.
Incompletely done items should be marked as not done.

Knowledge check
Select the best answer to each question or statement. Circle the letter of the correct answer.

1. In the first minute after birth, you should
    A. Bathe the baby
    B. Help the baby breathe
    C. Feed the baby
    D. Not touch the baby
2. To prepare for a birth
    A. You identify a helper and review the emergency plan
    B. You ask everyone but the mother to leave the area
    C. You prepare equipment only when you need it
    D. You do not need a helper
3 To prepare the area for delivery
    A. Open all the doors and windows to get fresh air
    B. A clean space for the baby will not be required
    C. Make sure the area is clean, warm, and well-lighted
    D. Keep the room temperature cold
4 Which baby can receive routine care after birth?
    A. A baby who is not breathing
    B. A baby who is gasping
    C. A baby who is crying and/or breathing well
    D. A baby who is limp
5. Routine care for a healthy baby at birth includes
    A. Drying, removing the wet cloth, and bathing the baby
    B. Drying, removing the wet cloth, and positioning the baby skin-to-skin
    C. Bathing and putting clean clothes on the baby
    D. Drying and wrapping the baby in the wet cloth
6. When should the umbilical cord be clamped or tied and cut during routine care?
    A. After the placenta is delivered
    B. Around 1-3 minutes after birth
    C. Immediately after the baby is born
    D. Before a baby has cried
7. A baby is quiet, limp and not breathing at birth. What should you do?
    A. Dry the baby thoroughly
    B. Shake the baby
    C. Throw cold water on the face
    D. Hold the baby upside down
8. A baby is born through meconium-stained amniotic fluid. Which statement is TRUE?
    A. Stimulate the baby and then clear the airway
    B. Meconium cannot be inhaled into the lungs
    C. Clear the airway before drying the baby
    D. All babies born through meconium-stained amniotic fluid can receive routine care
9. What should you do in The Golden Minute?

A. Bathe the baby
B. Deliver the placenta
C. Evaluate the heart rate
D. Help a baby breathe if necessary

10. A newborn baby is quiet, limp and not crying. The baby does not respond to steps to stimulate breathing.What should you do next?
A. Slap the baby's back
B. Hold the baby upside down
C. Squeeze the baby's ribs
D. Begin ventilation

11. Which of the following statements about ventilation with bag and mask is TRUE?
A. The mask should cover the eyes
B. Air should escape between the mask and face
C. Squeeze the bag to produce gentle movement of the chest
D. Squeeze the bag to give 80 to 100 breaths per minute

12. Which of the following signs MUST be monitored in a baby during the first few hours after birth?
A. Length
B. Breathing
C. Smile
D. Urine output

13. A baby's chest is not moving with bag and mask ventilation. What should you do?
A. Stop ventilation
B. Reapply the mask to get a better seal
C. Slap the baby's back
D. Give medicine to the baby

14. You can stop ventilation if
A. Baby is blue and limp
B. Baby's heart rate is 80 per minute
C. Baby's heart rate is 120 per minute and the chest is not moving
D. Baby's heart rate is 120 per minute and the baby is breathing or crying

15 What should you do to keep the baby warm?
A. Open all the windows to allow warm air to circulate
B. Give the baby a bath after birth
C. Place hot water bottles next to the baby's skin
D. Place the baby skin-to-skin with mother

16. What should you do to keep the baby clean?
A. Wash your hands before touching the baby and help mother wash her hands before breastfeeding
B. Reuse the suction device before cleaning
C. Keep the umbilical cord tightly covered
D. Do not touch the baby

17. A newborn baby's heart rate should be:
A. Faster than your heart rate
B. Slower than your heart rate

Bag and mask ventilation – skill check

Complete this evaluation with learners before they attempt the OSCE evaluations. Use the comments below the numbered steps to score the performance. Note the number of steps done correctly on the first attempt. Givefeedback to the learner. Repeat the evaluation until all steps are done correctly.

Activity	**Done**	**Not Done**
1. Check equipment and select the correct mask Test function of bag and mask. Make sure mask fits the baby's face.		
2. Apply the mask to make a firm seal Extend the head, place mask on the chin, then over the mouth and nose. A firm seal permits chest movement when the bag is squeezed.		
3. Ventilate at 40 breaths per minute The rate should not be less than 30 or more than 50 breaths per minute.		
4. Look for chest movement Check that every ventilation breath produces chest movement.		
5. Improve ventilation if the chest does not move: a) Head – reapply mask and reposition head		
b) Mouth – clear secretions and open the mouth		
c) Bag – squeeze the bag harder		

Score on first attempt _____ of 7
All steps done correctly _____ (facilitator initials)

OSCE – Station A

Instructions to the facilitator:Read aloud to the learner the following instructions and the case. Provide prompts where shown in *italics*. As you observe the learner, tick the boxes "Done" or "Not Done" for each activity. Indicate the baby's response to the learner's actionsusing the neonatal simulator or words if using a mannequin. For example, when the learners evaluate crying, show or saythat the baby is not crying.

"I am going to read a role play case. Please listen carefully, and then show me the actions you would take. I will indicate thebaby's response with the simulator (OR in words), but I will provide no other feedback until the end of the case."

"You are called to assist the delivery of a term baby. There are no complications in the pregnancy. The baby will be born in less than 10 minutes. Introduce yourself and prepare for the birth and care of the baby."

Activity	**Done**	**Not Done**
Prepares for birth Identifies a helper and makes an emergency plan		
Prepares the area for delivery		
Cleans hands and maintains clean technique throughout		
Prepares an area for ventilation and checks equipment *Prompt: After 5-7 minutes give baby to learner and say, "The amniotic fluid is clear. Show how you will care for the baby."*		
Dries thoroughly*		
Removes wet cloth		
Evaluates crying *Prompt: Show or say the baby is not crying.* Recognizes baby is not crying*		
Clears airway and stimulates breathing Keeps warm		
Positions head and clears airway *		
Stimulates breathing by rubbing the back		
Evaluates breathing *Prompt: Show or say the baby is breathing well.* Recognizes baby is breathing well		
Clamps or ties and cuts the cord		
Positions skin-to-skin on mother's chest and communicates with mother		

Scoring:
Successful completion requires a total score of 10 correct of 13 and "Done" must be ticked for Dries thoroughly, Recognizes baby is not crying, and Positions head and clears airway (boxes indicated by *).

OSCE – Station B

Instructions to the facilitator:Read aloud to the learner the following instructions and the case. Provide prompts where shown in *italics*. As you observe the learner, tick the boxes "Done" or "Not Done" for each activity. Indicate the baby's response to the learner's actions usingthe neonatal simulator or words. Note the time between birth and beginning ventilation. Comment on the learner's performanceonly at the end of the case.

"I am going to read a role play case. Please listen carefully, and then show me how you would care for this baby. I will indicate the baby's response with the simulator (OR in words). I will provide no other feedback until the end of the case."

"You are called to assist at the birth of 34 week (7 ½ months) gestation baby.
You arrive two minutes prior to birth. Introduce yourself and show what you will do."

Activity	**Done**	**Not Done**
Prepares for a birth Identifies a helper, prepares the area for delivery, cleans hands, prepares an area for ventilation, and checks equipment		
Prompt: After 2 minutes give baby to learner and say, "The amniotic fluid is clear. Show how you will care for the baby." Dries thoroughly and removes wet cloth.		
Evaluates crying*Prompt: Show or say the baby is not crying.* Recognizes baby is not crying		
Clears airway and stimulates breathing Keeps warm, positions head, clears airway		
Stimulates breathing by rubbing the back		
Evaluates breathing Recognizes baby is not breathing*		
Ventilates with bag and mask Cuts cord and moves to area for ventilation OR ventilates by mother		
Starts ventilation within The Golden Minute® (at ____seconds)		
Ventilates at 40 breaths /minute (30-50 acceptable)*		
Looks for chest movement*		
Evaluates breathing*Prompt: Show or say the baby is not breathing.* Recognizes baby is not breathing		
Calls for help		
Continues ventilation *Prompt: Say, "Please show what to do if the chest is not moving with ventilation." After one or more steps to improve ventilation, say "The chest is moving now."*		
Improves ventilation* Head- repositions head, reapplies mask Mouth-clears secretions, opens mouth slightly Bag-squeezes bag harder		

Evaluates breathing and heart rate *Prompt: Show or say the baby is not breathing; heart rate is normal.* Recognizes baby is not breathing but heart rate is normal		
Continues ventilation		
Prompt: After 3 minutes show or say, "The heart rate is 120 per minute and the baby is breathing." Recognizes baby is breathing and heart rate is normal		
Stops ventilation; monitors baby and communicates with mother		

Scoring:
Successful completion requires a total score of 14 correct of 18 and "Done" must be ticked for Recognizes baby is not breathing, Ventilates at 40 breaths /minute, Looks for chest movement, and Improves ventilation (boxes indicated by *).

Essential Care for Small Babies - Knowledge check
Select the best answer to each question or statement. Circle the letter of the correct answer.

1. Which of the following statements correctly describes a well small baby?
    A. Feeds by cup, stays warm with skin-to-skin care, has convulsions
    B. Feeds by cup, stays warm with skin-to-skin care, weighs 1600 grams
    C. Breastfeeds poorly, breathes at 100 times per minute, maintains temperature in an incubator
    D. Feeds by cup, weighs 1200 grams, maintains temperature in anincubator
2. Which of the following is an important step in the care of a small baby?
    A. Teaching the mother to give a bath
    B. Giving the small baby lots of time in the sunlight
    C. Preventing infection by washing hands before touching the baby
    D. Weighing the small baby five times a day
3. Which of the following statements describes preparation for the birth of a small baby?
    A. Identify a skilled helper, provide extra warmth in the area for delivery, anticipate need to help the baby breathe at birth.
    B. Prepare an area for the baby's bath, check equipment, review emergency plan.
    C. Wash hands, prepare herbs for babies first feeding.
    D. Anticipate need to help baby breathe at birth, identify a skilled helper, prepare an area for the baby's bath.
4. A 1700gram baby has been placed skin-to-skin with the mother after birth. What other care should be provided in the first 90 minutes after birth?
    A. Showing the baby to the extended family
    B. Feeding the baby with a nasogastric tube
    C. Monitoring breathing and measuring temperature
    D. Bathing the baby
5. At 90 minutes after birth, an 1800 gram baby is placed skin-to-skin with the mother and has a temperature of 36.7˚ C. What should you do to help maintain the baby's temperature?
    A. Bathe the baby in warm water.
    B. Place in direct sunlight.
    C. Assist mother with continuous skin-to-skin care.
    D. Place the baby on an open warmer set for high heat output.
6. Shortly after birth, a small baby is classified based on the temperature, weight, and physical exam. The baby is 1400 grams, is breathing at 90 breaths per minute, and has a temperature of 35˚C. What should you do?
    A. Put the baby to the breast to assess breastfeeding.
    B. Continue to watch for improvement.
    C. Place a nasogastric tube to administer a feeding.
    D. Arrange a transfer for advanced care.
7. How many feedings should a small baby receive in a day?
    A. Two to four
    B. Five to six

C. Eight to twelve
D. Twenty-four

8. Which of the following techniques can help a mother to support or improve a small baby's latch?
A. Wrapping the breasts in tight clothing between feedings
B. Supporting the head of the baby so he is positioned to take the nipple and surrounding area into an open mouth
C. Putting oils on the breast
D. Feeding first with a bottle until sucking is strong

9. What is the skin temperature of a well small baby?
A. 35.0-35.5˚C
B. 35.5-36.5˚C
C. 36.5-37.5˚C
D. 37.0-38.0˚C

10. Shortly after birth, the temperature of an 1800gram baby is 36˚C. After placing the baby skin-to-skin, the baby's temperature remains the same. Which of the following actions should be taken?
A. Place the baby in direct sunlight.
B. Place warm stones around the baby.
C. Bathe the baby in warm water.
D. Remove wet diaper and cover the mother and the baby with a blanket.

11. A 1600gram baby has been maintaining temperature with continuous skin-to-skin care. The baby will not breastfeed or cup feed and requires nasogastric feeding. What do you advise the mother about skin-to-skin care?
A. The mother can continue skin-to-skin care even while the baby is receiving nasogastric feedings.
B. The baby will need to be in an incubator while receiving nasogastric feeding.
C. The baby will need to be on a radiant warmer while receiving nasogastric feeding.
D. The mother must stop skin-to-skin care during nasogastric feeding.

12. When a baby cannot feed directly from the breast after support is provided, what should you advise a mother to do next?
A. Give the baby formula.
B. Keep trying to breastfeed the baby.
C. Express her breast milk to feed to the baby by a safe, alternate feeding method.
D. Wait until the baby can feed directly from the breast.

13. When a mother expresses her breast milk, how can it be stored safely?
A. In a covered container in a cool place for up to 6 hours
B. In an open container in a shaded area
C. In an open container in direct sunlight
D. In a covered container heated in warm water until used

14. When breastfeeding is not effective, which of the following are safe and recommended alternate feeding methods for a small baby?
A. Attempt cup feedings and if not successful, insert a nasogastric tube.
B. Use a syringe to pour milk directly into the baby's mouth.
C. Dip finger or tongue depressor into milk and allow the baby to lick the milk.
D. Give bottle feedings and insert a nasogastric tube.

15. Which of the following best describes a 3-day-old 1800gram baby who needs nasogastric tube feeding?
    A. The baby is breastfeeding 8-12 times per day.
    B. The baby is gaining 15 grams/kilogram per day.
    C. The baby shows feeding readiness cues every 2-4 hours.
    D. The baby takes 5-10 mL by cup per feeding for 4 feedings.
16. What is the proper length for nasogastric tube insertion?
    A. From the tip of the nose to earlobe to half way between the tip of the breast bone and the umbilicus
    B. From the mouth opening to the nipple to the umbilicus
    C. From the earlobe to the umbilicus
    D. From the tip of the nose to the chin to the bottom of the breast bone
17. You have just inserted a nasogastric tube into a small baby who cannot breastfeed or receive cup feedings. Which of the following best describesa method for confirming proper placement of the nasogastric tube?
    A. Measure the tube outside the nose.
    B. Inject 2 mL of air while listening with a stethoscope for the sound of air entering the stomach.
    C. Administer 5 mL of a feeding and then withdraw it back to see if itis mixed with gastric contents.
    D. Evaluate the baby's breathing.
18. What should a mother be taught to do before administering a nasogastric feeding?
    A. Wash her hands and reinsert the nasogastric tube.
    B. Wash her hands and confirm placement of the nasogastric tube by checking that the mark on the tube is at the edge of the nose.
    C. Wash her hands and confirm placement of the nasogastric tube by checking that the mark on the tube is at the sternum.
    D. Wash her hands and inject 10 mL of air into the tube.
19. After initial weight loss, how much weight should a small baby gain each day?
    A. 5 grams per kilogram per day on average
    B. 15 grams per kilogram per day on average
    C. 25 grams per kilogram per day on average
    D. 30 grams per day on average
20. On the day after birth, a 1600 gram baby cannot breastfeed or cup feed, and will be fed every three hours by a nasogastric tube. What volume should be administered for the baby's first feeding?
    A. 1 mL
    B. 8 mL
    C. 12 mL
    D. 25 mL
21. A 1600gram baby is fed by a nasogastric tube. After the initial day of feedings, what is the daily increase in the volume of each feeding?
    A. 4 mL
    B. 5 mL
    C. 10 mL
    D. 15 mL

22. Which of the following indicates feeding intolerance and the need for advanced care?
    A. Spitting up small amounts
    B. Tense abdominal distension
    C. Stooling 6-8 times per day
    D. Crying before each feeding
23. In a small baby being fed by an alternative method, how often should breastfeeding readiness be assessed?
    A. At least once per day
    B. At least once per week
    C. At least once every two weeks
    D. At least once per month
24. A small baby is now 10 days old and has been fed by nasogastric tube since birth. During the first attempt to breast feed, he sucks actively, and swallowing sounds are heard. What should be done next to make the transition to breastfeeding?
    A. Stop nasogastric feeding immediately, pull out the nasogastrictube, and breastfeed only.
    B. Continue with nasogastric feeding, while gradually increasing the number of breastfeeding attempts per day.
    C. Stop nasogastric feeding immediately and breastfeed only throughout the daytime.
    D. Continue with nasogastric feeding, wait two days, and trybreastfeeding again.
25. A 1600gram baby has been receiving nasogastric feeding for 10 days and now has started to feed at the breast. Which of the following is an indication that the baby is ready to receive all the feedings by breast?
    A. Waking and crying in between feedings.
    B. Choking during occasional feedings
    C. Sucking and swallowing audibly for 10 minutes during each feeding
    D. Weight gain of 5 grams per day when no nasogastric feedings are provided
26. Small babies should be regularly assessed for:
    A. Frequency and success at feeding, temperature, presence of hiccups
    B. Activity, breathing, color, temperature and weight gain
    C. Breathing problems, temperature, and white blood cell count
    D. Frequency and success at feeding, cough, presence of convulsions
27. A 2-day-old 1700gram baby has a normal examination and breathing rate. How often should the baby be assessed for temperature, breathing and feeding tolerance?
    A. Once per day
    B. Every 2 to 3 hours
    C. At least once per shift.
    D. Only if the baby seems ill
28. When should the mother or other providers wash their hands in order to protect a small baby?
    A. Before touching the baby and before preparing a feeding
    B. Before greeting the family
    C. Before closing a window
    D. Before leaving the hospital at the end of the day
29. A small baby needs to be referred for advanced care to a hospital 1 hour away. What should you do to prepare the baby for transport?

A. Place a nasogastric tube so that mother can feed through the tube during transport.
B. Communicate with health providers at the receiving facility and the family, and prepare a referral note.
C. Bathe the baby to prevent infection.
D. Use a radiant warmer to warm the baby to 38˚C so that the baby will maintain temperature during transport.

30. Which of the following statements below describes a small baby who should be considered for discharge from the birth facility?

A. The mother has not demonstrated competence with infant feeding, the baby has adequate weight gain documented over 3 consecutive days, and breathes 40 breaths per minute.
B. The mother has demonstrated competence with infant feeding, the baby has adequate weight gain documented over 3 consecutive days, and the baby breathes 40 breaths per minute.
C. The mother has demonstrated competence with infant feeding, the baby has adequate weight gain documented over 3 consecutive days, and the baby is breathing 80 breaths per minute.
D. The mother has demonstrated competence with infant feeding, the baby has adequate weight gain documented over 5 consecutive days, and the baby is under a radiant warmer.

Answer key

1. B	11. A	21. A
2. C	12. C	22. B
3. A	13. A	23. A
4. C	14. A	24. B
5. C	15. D	25. C
6. D	16. A	26. B
7. C	17. B	27. C
8. B	18. B	28. A
9. C	19. D	29. B
10. D	20. B	30. B

OSCE A – Classify, Provide continuous skin-to-skin care and monitor

"I am going to read a role play case. Please show and tell me what you would do to take care of this small baby.I will only give indication about the baby's condition when you ask. No other feedback will be given until the end of the case."

"A 28-year-old mother has given birth to a 1700 gram baby. You have provided essential care, including cord care, vitamin K,and eye care. You perform your first assessment. You find that the baby is breathing well and the rest of the exam is normal;the temperature is 36.3˚C. Tell me what information you will use, how you will classify the baby and what thermal care thebaby will need."

Activity	**Done**	**Not Done**
Classify the small baby Uses the weight, temperature and exam to classify the baby		
Recognizes a well small baby		
Plans to provide continuous skin-to-skin care		
Prompt: This is a well small baby who will need continuous skin-to- skin care. Describe and show how you will help mother begin continuous skin-to-skin care. **Show the mother how to do skin-to-skin care** Explains to mother the steps and advantages of skin-to-skin care		
Dresses baby with diaper, hat and socks (if available		
Places the baby upright on mother's skin between breasts		
Positions baby with arms and legs flexed, head turned		
Secures snugly with a cloth pulled up to the ear		
Covers with a garment or closes mother's shirt		
Prompt: The baby and mother are comfortable. Please demonstrate how you will monitor the baby and show the mother about how to monitor the baby while in skin-to-skin. Monitors baby's activity, breathing, color, temperature		
Advises mother how to monitor activity, breathing, color, temperature		

SCORING:
Successful completion requires a total score of 9 of 12. Incompletely done items should be marked as "Not Done."SCORE: _____ / 11

OSCE B – Feeding with a nasogastric tube and daily assessment

"I am going to read a role play case. Please show and tell me what you would do to take care of this small baby.I will only give indication about the baby's condition when you ask. No other feedback will be given until the end of the case."

"A 1700 gram baby is 8 hours old. The baby has a normal physical exam, and has been maintaining a temperatureof 36.7˚C with continuous skin-to-skin care. The baby did not latch well at the breast and did not tolerate cup feeding.Mother has successfully expressed 15mL of milk. Describe and show what you will do next to feed this small baby."

Activity	**Done**	**Not Done**
Insert a nasogastric tube Communicates with the mother about need for nasogastric feeding		
Washes hands		
Measures depth tube should be inserted and marks tube		
Lubricates tube with expressed breast milk		
Inserts tube		
Confirms proper placement		
Tapes tube on face		
Prompt: Show how you will feed breast milk with the nasogastric tube. **Feed with a nasogastric tube** Determines amount of feeding baby requires (8 mL)		
Measures the amount to be fed		
Connects syringe and transfers milk with tube pinched		
Allows milk to slowly enter stomach		
Removes syringe, recaps tube		
Prompt: The baby is now five days old and you are doing your daily assessment. Tell me what you will assess and I will provide the findings. After completing your assessment please tell me your plan. Describe a daily assessment Maternal concerns (none)		
Physical assessment (active, breathing well, pink, warm)		
Temperature (36.7^0C)		
Weight (1550 grams)		
Intake (nasogastric feeds 24 mL every 3 hours, good tolerance)		
Output (7 wet diapers, 3 stools)		
Recognizes that the baby remains well		
Advance feedings to 28 mL every 3 hours		

SCORING:
Successful completion requires a total score of 16 of 20. Incompletely done items should be marked as "Not Done."SCORE: _____ /20

Annex B: Training schedule

Federal Ministry of Health of Ethiopia
Essential Care for Every Baby Training
Training Schedule

Time	Day 1	Day 2	Day 3	Day 4
8:30 – 10: 30	**Opening, introduction, expectations and training norms** (30 min) **Session 1.1**: Newborn Care in Ethiopia (60 min) **Session 1.2**: Standard Precautions (30 min)	**Plenary discussion**: Address concerns and questions (30 min) **Session 3.8:** Baby is not crying – Ventilate with bag and mask (50 min) **Session 3.9:** Baby is not breathing with beginning ventilation –Continue/ improve ventilation (45 min)	**Plenary discussion**: Address concerns and questions (30 min) **Session 4.8:** Within 90 minutes after birth record observations and treatment provided in the registers/appropriate chart/cards (15 min) **Session 4.9:** Within 90 minutes after birth examine the baby to tell if a baby is well or has a problem (25 min) **Session 4.10:** Within 90 minutes after birth measure temperature to identify babies who require special care (25 min) **Session 4.11:** By 90 minutes after birth classify the baby to determine further care (15 min)	**Plenary discussion:** Address concerns and questions (30 min) **Session 5.3:** By 90 minutes classy a small baby to determine further care (30 min) **Session 5.4:** If a baby is small and well maintain thermal care (KMC) to prevent the baby from becoming cold (70 min)
10:30 – 10:45	**Teak break (15 min)**	**Teak break (15 min)**	**Teak break (15 min)**	**Teak break (15 min)**
10:45 – 12:30	**Session 2.1**: Standard Precautions...cont. (20 min) **Session 2.2**: Counseling and communication (35 min) **Session 2.3**: Preparation	**Session 3.10:** Baby is not breathing with ventilation, has normal heart rate – Continue ventilation (45 min) **Session 3.11:** Baby is not breathing with ventilation,	**Session 4.11**: By 90 minutes after birth classify the baby to determine further care…cont. (10 min) **Session 4.12:** Within the first 90 minutes, periodically during the first day, and at any time if you suspect a problem assess for danger signs (30	**Session 5.5:** If baby's temperature is low improve thermal care to help maintain normal temperature (25 min) **Session 5.6:** If a baby is small support

Time	Day 1	Day 2	Day 3	Day 4
	for the birth (40 min) **Session 2.4**: Essential Newborn Care at birth (15 min)	heart rate is slow –Continue ventilation and seek advanced care (45 min) **Session 3.12**: If referral/transfer is necessary transfer the mother and baby together, and support the family (15 min)	min) **Session 4.13:** If a baby has a danger sign give antibiotics to reduce risk of death (25 min) **Session 4.14:** If the face is yellow on the first day, or the palms and soles at any time recognize severe jaundice (25 min)	breastfeeding to provide best nutrition (25 min) **Session 5.7:** If a baby cannot feed directly from the breast provide expressed breast milk (25 min) **Session 5.8:** If a baby cannot feed directly from the breast feed by cup to provide breast milk until breastfeeding can occur (25 min)
12:30 – 13:30	**Lunch break (60 min)**	**Lunch break (60 min)**	**Lunch break (60 min)**	**Lunch break (60 min)**
13:30 – 15:30	**Session 3.1** Respiratory adaptation (35 min) **Session 3.2**: While the baby is on the mother's abdomen dry and stimulate (25 min) **Session 3.3:** Assess breathing. Make sure the baby is breathing well. (20 min) **Session 3.4:** Clamp and tie the cord (25 min) **Session 3.5:** Clear the airway if there is meconium (15 min)	**Session 3.12:** If referral/transfer is necessary transfer the mother and baby together, and support the family…cont. (25 min) **Session 4.1:** Place the infant in skin-to-skin contact on the mother's chest and cover both with clean linen and blanket as required. (25 min) **Session 4.2:** Initiate breastfeeding within the first hour. (35 min) **Session 4.3:** Within 90 minutes after birth	**Session 4.15:** If a baby has a Danger Sign, is <1500g, has severe jaundice, or needs extra support for another problem seek advanced care (25 min) **Session 4.16:** Case Study (30 min) **Session 4.17:** After skin-to-skin care with a well, normal weight baby maintain normal temperature (25 min) **Session 4.18:** Within one day after birth begin immunization (40 min)	**Session 5.9:** If a baby cannot feed enough by mouth insert a nasogastric tube to provide breast milk until breastfeeding can occur (40 min) **Session 5.10:** When using alternative feedings provide appropriate volume of breast milk to support growth (30 min) **Session 5.11:** Assess breastfeeding readiness to support transition from an alternative method of

Time	Day 1	Day 2	Day 3	Day 4
		administer eye drops/eye ointment. (30 min)		feeding to breastfeeding (25 min) **Session 5.12:** Case study (20 min)
15:30 – 15:45	**Tea break (15 min)**	**Tea break (15 min)**	**Tea break (15 min)**	**Tea break (15 min)**
15:45 – 17:30	**Session 3.5:** Clear the airway if there is meconium…cont. (35 min) **Session 3.6:** Baby is crying – provide routine care (20 min) **Session 3.7:** Baby is not crying – Clear the airway and stimulate breathing (50 min)	**Session 4.4:** Within 30 minutes after birth apply Chlorhexidine to the cord (45 min) **Session 4.5:** Within 90 minutes after birth administer vitamin K1 (25 min) **Session 4.6:** Within 90 minutes after birth place the baby identification bands on the wrist and ankle (15 min) **Session 4.7:** Within 90 minutes after birth weigh the newborn when he/she is stable	**Session 4.18:** Within one day after birth begin immunization…cont. (10 min) **Session 4.19:** When considering discharge reassess the baby and breastfeeding (25 min) **Session 4.20:** When discharge is appropriate give parents guidance for home care (25 min) **Session 5.1:** When a baby is expected to be small prepare for the birth to prevent problems from the beginning (20 min) **Session 5.2:** When a baby is recognized to be small provide essential newborn care to keep the baby well (25 min)	**Session 5.12:** Case study…cont. (25 min) **Session 5.13:** When providing care to a small baby assess routinely to help determine if a baby is well or needs advanced care (30 min) **Session 5.4:** When a baby needs advanced care stabilize for transport to improve outcome (25 min) **Session 5.15:** When a small baby is ready for discharge review home care to keep the baby well (25 min) **Posttest and closing** (60 min)
After 17:30	**Reading assignment**	**Reading assignment**	**Reading assignment**	

Annex C: Evaluation Forms

Federal Ministry of Health of Ethiopia
Essential Care for Every Baby Training
Daily Session Evaluation: Day 1

Please provide accurate assessment of the sessions covered today. You are expected to assess two aspects of the training: the method used in the sessions and session facilitators and usefulness of the session.

Section one: Evaluation of the method used in the session and session facilitator

#	Questions	Scale (1 = very poor, 2 = poor, 3 = fair, 4 = good, & 5 = very good)				
1	How do you feel about the pace of the sessions delivered today?	1	2	3	4	5
2	How do you evaluate the clarity of the discussion in the sessions delivered?	1	2	3	4	5
3	Were the practical sessions adequate to give you skills to practice them independently?	1	2	3	4	5
4	How do you evaluate the performance of the main session facilitator?					
	Conveyed enthusiasm	1	2	3	4	5
	Well-prepared/organized	1	2	3	4	5
	Presented clearly	1	2	3	4	5
	Responsive to participants	1	2	3	4	5
	Demonstrated knowledge	1	2	3	4	5
5	In your opinion to what extent were the session objectives met?	1	2	3	4	5

6. Please provide any additional comment you may have on the questions listed in section one.

Section two: Usefulness of the sessions covered today

#	Session	Scale (1 = least useful, 5 = very useful)					Session contains new knowledge or skills (1 = Yes, 0 = No)	
7	**Session 1.1**: Newborn Care in Ethiopia	1	2	3	4	5	1	0
8	**Session 1.2**: Standard Precautions	1	2	3	4	5	1	0
9	**Session 1.3**: Counseling and communication	1	2	3	4	5	1	0
10	**Session 1.4**: Preparation for the birth	1	2	3	4	5	1	0
11	**Session 1.5**: Essential Newborn Care at birth	1	2	3	4	5	1	0
12	**Session 2.1** Respiratory adaptation	1	2	3	4	5	1	0
13	**Session 2.2**: While the baby is on the mother's abdomen dry and stimulate	1	2	3	4	5	1	0
14	**Session 2.3:** Assess breathing. Make sure the baby is breathing well.	1	2	3	4	5	1	0
15	**Session 2.4:** Clamp and tie the cord	1	2	3	4	5	1	0
16	**Session 2.5:** Clear the airway if there is meconium	1	2	3	4	5	1	0
17	**Session 2.6:** Baby is crying – provide routine care	1	2	3	4	5	1	0
18	**Session 2.7:** Baby is not crying – Clear the airway and stimulate breathing	1	2	3	4	5	1	0

19. Please provide any additional comment you may have on the questions listed in section two.

20. If you could have changed two thingsabout the training today what would theyhave been?

Federal Ministry of Health of Ethiopia
Essential Care for Every Baby Training
Daily Session Evaluation: Day 2

Please provide accurate assessment of the sessions covered today. You are expected to assess two aspects of the training: the method used in the sessions and session facilitators and usefulness of the session.

Section one: Evaluation of the method used in the session and session facilitator

#	Questions	Scale (1 = very poor, 2 = poor, 3 = fair, 4 = good, & 5 = very good)				
1	How do you feel about the pace of the sessions delivered today?	1	2	3	4	5
2	How do you evaluate the clarity of the discussion in the sessions delivered?	1	2	3	4	5
3	Were the practical sessions adequate to give you skills to practice them independently?	1	2	3	4	5
4	How do you evaluate the performance of the main session facilitator?					
	Conveyed enthusiasm	1	2	3	4	5
	Well-prepared/organized	1	2	3	4	5
	Presented clearly	1	2	3	4	5
	Responsive to participants	1	2	3	4	5
	Demonstrated knowledge	1	2	3	4	5
5	In your opinion to what extent were the session objectives met?	1	2	3	4	5

6. Please provide any additional comment you may have on the questions listed in section one.

Section two: Usefulness of the sessions covered today

#	Session	Scale (1 = least useful, 5 = very useful)					Session contains new knowledge or skills (1 = Yes, 0 = No)	
7	**Session 2.8:** Baby is not crying – Ventilate with bag and mask	1	2	3	4	5	1	0
8	**Session 2.9:** Baby is not breathing with beginning ventilation –Continue/ improve ventilation	1	2	3	4	5	1	0
9	**Session 2.10:** Baby is not breathing with ventilation, has normal heart rate – Continue ventilation	1	2	3	4	5	1	0
10	**Session 2.11:** Baby is not breathing with ventilation, heart rate is slow –Continue ventilation and seek advanced care	1	2	3	4	5	1	0
11	**Session 2.12:** If referral/transfer is necessary transfer the mother and baby together, and support the family	1	2	3	4	5	1	0
12	**Session 3.1:** Place the infant in skin-to-skin contact on the mother's chest and cover both with clean linen and blanket as required.	1	2	3	4	5	1	0
13	**Session 3.2:** Initiate breastfeeding within the first hour.	1	2	3	4	5	1	0
14	**Session 3.3:** Within 90 minutes after birth administer eye drops/eye ointment.	1	2	3	4	5	1	0
15	**Session 3.4:** Within 30 minutes after birth apply Chlorhexidine to the cord	1	2	3	4	5	1	0
16	**Session 3.5:** Within 90 minutes after birth administer vitamin K1	1	2	3	4	5	1	0
17	**Session 3.6:** Within 90 minutes after birth place the baby identification bands on the wrist and ankle	1	2	3	4	5	1	0
18	**Session 3.7:** Within 90 minutes after birth weigh the newborn when he/she is stable	1	2	3	4	5	1	0

19. Please provide any additional comment you may have on the questions listed in section two.

20. If you could have changed two thingsabout the training today what would theyhave been?

Federal Ministry of Health of Ethiopia
Essential Care for Every Baby Training
Daily Session Evaluation: Day 3

Please provide accurate assessment of the sessions covered today. You are expected to assess two aspects of the training: the method used in the sessions and session facilitators and usefulness of the session.

Section one: Evaluation of the method used in the session and session facilitator

#	Questions	Scale (1 = very poor, 2 = poor, 3 = fair, 4 = good, & 5 = very good)				
1	How do you feel about the pace of the sessions delivered today?	1	2	3	4	5
2	How do you evaluate the clarity of the discussion in the sessions delivered?	1	2	3	4	5
3	Were the practical sessions adequate to give you skills to practice them independently?	1	2	3	4	5
4	How do you evaluate the performance of the main session facilitator?					
	Conveyed enthusiasm	1	2	3	4	5
	Well-prepared/organized	1	2	3	4	5
	Presented clearly	1	2	3	4	5
	Responsive to participants	1	2	3	4	5
	Demonstrated knowledge	1	2	3	4	5
5	In your opinion to what extent were the session objectives met?	1	2	3	4	5

6. Please provide any additional comment you may have on the questions listed in section one.

Section two: Usefulness of the sessions covered today

#	Session	Scale (1 = least useful, 5 = very useful)					Session contains new knowledge or skills (1 = Yes, 0 = No)	
7	**Session 3.13:** If a baby has a danger sign give antibiotics to reduce risk of death	1	2	3	4	5	1	0
8	**Session 3.14:** If the face is yellow on the first day, or the palms and soles at any time recognize severe jaundice	1	2	3	4	5	1	0
9	**Session 3.15:** If a baby has a Danger Sign, is <1500g, has severe jaundice, or needs extra support for another problem seek advanced care	1	2	3	4	5	1	0
10	**Session 3.16:** Case Study	1	2	3	4	5	1	0
11	**Session 3.17:** After skin-to-skin care with a well, normal weight baby maintain normal temperature	1	2	3	4	5	1	0
12	**Session 3.18:** Within one day after birth begin immunization	1	2	3	4	5	1	0
13	**Session 3.19:** When considering discharge reassess the baby and breastfeeding	1	2	3	4	5	1	0
14	**Session 3.20:** When discharge is appropriate give parents guidance for home care	1	2	3	4	5	1	0
15	**Session 4.1:** When a baby is expected to be small prepare for the birth to prevent problems from the beginning	1	2	3	4	5	1	0
16	**Session 4.2:** When a baby is recognized to be small provide essential newborn care to keep the baby well	1	2	3	4	5	1	0

19. Please provide any additional comment you may have on the questions listed in section two.

20. If you could have changed two thingsabout the training today what would theyhave been?

Federal Ministry of Health of Ethiopia
Essential Care for Every Baby Training
Daily Session Evaluation: Day 4

Please provide accurate assessment of the sessions covered today. You are expected to assess two aspects of the training: the method used in the sessions and session facilitators and usefulness of the session.

Section one: Evaluation of the method used in the session and session facilitator

#	Questions	Scale (1 = very poor, 2 = poor, 3 = fair, 4 = good, & 5 = very good)				
1	How do you feel about the pace of the sessions delivered today?	1	2	3	4	5
2	How do you evaluate the clarity of the discussion in the sessions delivered?	1	2	3	4	5
3	Were the practical sessions adequate to give you skills to practice them independently?	1	2	3	4	5
4	How do you evaluate the performance of the main session facilitator?					
	Conveyed enthusiasm	1	2	3	4	5
	Well-prepared/organized	1	2	3	4	5
	Presented clearly	1	2	3	4	5
	Responsive to participants	1	2	3	4	5
	Demonstrated knowledge	1	2	3	4	5
5	In your opinion to what extent were the session objectives met?	1	2	3	4	5

6. Please provide any additional comment you may have on the questions listed in section one.

Section two: Usefulness of the sessions covered today

#	Session	Scale (1 = least useful, 5 = very useful)					Session contains new knowledge or skills (1 = Yes, 0 = No)	
7	**Session 4.3:** By 90 minutes classy a small baby to determine further care	1	2	3	4	5	1	0
8	**Session 4.4:** If a baby is small and well maintain thermal care (KMC) to prevent the baby from becoming cold	1	2	3	4	5	1	0
9	**Session 4.5:** If baby's temperature is low improve thermal care to help maintain normal temperature	1	2	3	4	5	1	0
10	**Session 4.6:** If a baby is small support breastfeeding to provide best nutrition	1	2	3	4	5	1	0
11	**Session 4.7:** If a baby cannot feed directly from the breast provide expressed breast milk	1	2	3	4	5	1	0
12	**Session 4.8:** If a baby cannot feed directly from the breast feed by cup to provide breast milk until breastfeeding can occur	1	2	3	4	5	1	0
13	**Session 4.9:** If a baby cannot feed enough by mouth insert a nasogastric tube to provide breast milk until breastfeeding can occur	1	2	3	4	5	1	0
14	**Session 4.10:** When using alternative feedings provide appropriate volume of breast milk to support growth	1	2	3	4	5	1	0
15	**Session 4.11:** Assess breastfeeding readiness to support transition from an alternative method of feeding to breastfeeding	1	2	3	4	5	1	0
16	**Session 4.12:** Case study	1	2	3	4	5	1	0
17	**Session 4.13:** When providing care to a small baby assess routinely to help determine if a baby is well or needs advanced care	1	2	3	4	5	1	0
18	**Session 4.14:** When a baby needs advanced care stabilize for transport to improve outcome	1	2	3	4	5	1	0
19	**Session 4.15:** When a small baby is ready for discharge review home care to keep the baby well	1	2	3	4	5	1	0

20. Please provide any additional comment you may have on the questions listed in section two.

21. If you could have changed two thingsabout the training today what would theyhave been?

Federal Ministry of Health of Ethiopia
Essential Care for Every Baby Training
End of Training Evaluation:

1. Please rate the ECEB training as a whole by circling your answer. (1 is poor and 10 is excellent).

Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

2. Please rate the following items by circling your answer.

Overall Course Content:
Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

Quality of training:
Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

Training materials and equipment:
Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

Personal Relationships:
Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

Group Work:
Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

Overall Level of Satisfaction:
Poor ..... Excellent
1 2 3 4 5 6 7 8 9 10

Additional comments or suggestions?

3. How appropriate were the training methods? Please circle your answer.

Review of knowledge and Discussions:
Inappropriate .....Appropriate
1 2 3 4 5 6 7 8 9 10

Demonstration of skills:
Inappropriate .....Appropriate
1 2 3 4 5 6 7 8 9 10

Participant Activities/Small group work:
Inappropriate .....Appropriate
1 2 3 4 5 6 7 8 9 10

Case studies:
Inappropriate .....Appropriate
1 2 3 4 5 6 7 8 9 10

Plenary discussions:
Inappropriate .....Appropriate
1 2 3 4 5 6 7 8 9 10

Additional comments or suggestions?

4. Please list other topics that you would like to see covered in future ECEB training.

5. How would you rate amount of information presented during the seminar? Too much? Just right? Too little? Please indicate by circling your answer.

Too much	Just right	Too little?
1	2	3

Additional comments or suggestions?

6. How has the workshop inspired you to change or to introduce new way of caring for newborns in your health facilities?

7. How do you intend to apply the knowledge gained from this workshop in your work during the next six months and beyond?

8. Additional comments or suggestions?

Thank you!!