INTEGRATED MATERNAL AND NEWBORN CARE

BASIC SKILLS COURSE

2009

PARTICIPANT'S NOTEBOOK

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September 2009

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This publication is one in a series that make up the USAID/BASICS Newborn Health tool kit. The tool kit comprises:

Facility Level Tools:

- Reference Manual
- Technical Presentations
- Facilitator's Guide
- Participant's Notebook
- Clinical Logbook with Learning and Evaluation Checklists

Community Level Tools:

- Guide for Training Community Health Workers/Volunteers to Provide Maternal and Newborn Health Messages
- Set of Counseling Cards

ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

ABBREVIATIONS

AMTSL	**active management of the third stage of labor**
ANC	**antenatal care**
BP	**blood pressure**
CCT	**controlled cord traction**
DIC	**disseminated intravascular coagulopathy**
ENC	**essential newborn care**
FH	**fundal height**
FIGO	**International Federation of Gynecology and Obstetrics**
HB	**Hemoglobin**
HLD	**high-level disinfection**
ICM	**International Confederation of Midwives**
IM	**Intramuscular**
IMCI	**integrated management of childhood illnesses**
IPTP	**intermittent preventive treatment in pregnancy**
IPTI	**intermittent preventive treatment in infants**
ITN	**insecticide-treated bednets**
IU	**international unit**
IV	**intravenous**
LBW	**low birth weight**
MTCT	**mother-to-child transmission of HIV/AIDS**
PMTCT	**prevention of mother-to-child transmission of HIV/AIDS**
POPPHI	**postpartum hemorrhage prevention initiative**
PPC	**postpartum care**
PPH	**postpartum hemorrhage**
PPPH	**prevention of postpartum hemorrhage**
PROM	**premature rupture of membranes**
RAM	**rapid assessment and management**
TSL	**third stage of labor**
TT	**tetanus toxoid**
USAID	**United States Agency For International Development**
VVM	**vaccine vial monitor**
WHO	**World Health Organization**

INTRODUCTION

ABOUT THE LEARNING MATERIALS

This learning package for integrated maternal and newborn care consists of a reference manual, a series of technical presentations, a participant's notebook, a facilitator's guide, and a clinical logbook with the learning checklists and the evaluation checklists. This learning package was developed for use by nurses, midwives, and doctors providing selected aspects of childbirth and immediate postpartum care for the woman and newborn in peripheral health care facilities.

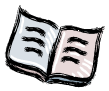
These documents comprise a set and should be used together.

- The **Reference Manual** contains the theoretical content for the training course. It is intended to serve as the "textbook" or reference for participants and facilitators.
- The series of **Technical Presentations** contains PowerPoint slides of the different sessions. These will help in having more uniform training sessions and, along with the checklists, provide the key elements of each topic for easier learning.
- The **Facilitator's Guide** includes lesson plans, knowledge evaluation tests (pre-test, mid-course test, and post-test) and their suggested answers, answers for learning exercises, and guidelines for conducting a clinical training program.
- The **Participant's Notebook** assists participants throughout the training program. The notebook has the following components: overview of and agenda for the training program, learning objectives, learning exercises, and additional printed materials.
- The **Clinical Logbook** contains clinical experience logs, learning checklists and checklists for evaluation of competencies. ***Note:*** The checklists for evaluation of competencies are also available as a separate document to be used as a part of programmatic activities after training during follow-up supervision.

Community Level Tools

- Guide for Training Community Health Workers/Volunteers to Provide Maternal and Newborn Health Messages.
- A set of counseling cards

These resources are distinguished within the series by a corresponding icon located on the top of the odd-numbered pages:

Reference Manual	
Technical Presentations	
Facilitator's Guide	
Participant's Notebook	
Clinical Logbook	
Guide for Training Community Health Workers/Volunteers to Provide Maternal and Newborn Health Messages	

GENERAL PRINCIPLES

Learning Approach

The learning approach used during this clinical skills course is based on the participants' learning needs. As such, the content of didactic sessions and the clinical practicum are designed to encourage learning, and each participant needs to take an active role in all aspects of learning.

Given the facilitator's training and previous experience, she/he will work with the participants as a subject matter expert and will guide their acquisition of new knowledge, skills, and attitudes. In addition, the facilitator creates a positive learning environment that puts participants at ease and encourages learning activities that facilitate learning new knowledge, skills, and attitudes.

"Mastery learning" is the approach used for this clinical skills course. Using this learning approach ensures that all participants master the knowledge, skills, and attitudes being taught.

Humanistic training techniques are incorporated into the overall learning approach to minimize risks to newborns and women and to facilitate learning. This technique uses anatomic models and other learning aids to facilitate gaining competence and confidence in the skills being taught before practicing on clients in the clinical area.

The clinical skills course has two phases:

- A **theoretical phase** which takes place in the classroom. The following techniques will be used: illustrated lecture, brainstorming, case studies, role plays, group work, demonstration, and practice on anatomic models.
- A **practical phase** which takes place at the clinical sites.

Learning checklists are used to measure progressive learning in small steps as the participant gains confidence and skill. A learning checklist contains the individual steps or tasks in the sequence required to perform a skill or activity in a standardized way. Learning checklists are designed to help the participant learn the correct steps and the sequence in which they should be performed. Participants can use the learning checklists as a self- or peer-assessment tool. The learning checklists are used to assist in developing skills and measuring progress towards gaining competency.

The evaluation checklists are derived from the learning checklists. Unlike the learning checklists, which are by necessity quite detailed, the evaluation checklists focus only on the key steps or tasks. Checklists are used to evaluate participants first on anatomic models and then on clients in the clinical area.

Supervision for Quality

The evaluation checklists can be used in follow-up supervisory activities. This is important as training is only one part of programmatic activities to improve maternal and newborn health. Maintaining and monitoring quality are essential components in program implementation.

Ideally, all trained health workers should be fully familiar with the skills to be assessed and the evaluation checklists to be used in the assessment. This will assist them in being prepared for the assessment.

Assessment

Participants will be assessed on their knowledge of the various content areas and on their clinical skills.

Knowledge assessment

- A pre-course test is administered at the beginning of the clinical skills course.
- A mid-course questionnaire will be given to evaluate new knowledge acquired just after the presentations, discussions, and demonstration—and before the clinical practicum with clients.
- A post-course test will be given at the end of the clinical skills course, serving as the final knowledge assessment.
- A learning matrix will be used throughout to assess individual and group learning needs and serves as a reference for choosing subjects that require additional attention.

Skills assessment

The evaluation of clinical skills will be done on an anatomic model and in the clinical area with clients. Participants must show competency on the model before proceeding to the clinical practicum.

A wall chart listing the participants and the clinical skills being taught should be posted in an area where participants and facilitators can easily refer to it. The cell corresponding to the skill will be checked off when the participant has demonstrated, observed, or practiced the skill in the clinical area.

The following clinical skills will be evaluated during the course:

- AMTSL and essential newborn care (ENC)
- Care for the newborn at birth
- Monitoring the woman and the newborn in the first six hours postpartum
- Resuscitation for birth asphyxia
- Facilitating initiation of breastfeeding (early initiation of breastfeeding and correct positioning when breastfeeding)
- Essential postnatal care of the mother
- Examination of a normal newborn and postnatal care of the baby

The participants will need to practice the skill on models and in the clinical area until they have been found competent. The number of procedures a participant needs to observe, assist with, and perform using models will vary depending on their background.

Learning checklists are used to assist and measure progress in learning each skill on an anatomic model in the classroom.

Assessment of clinical skills in a simulated setting (i.e., on anatomic models)

Before beginning the clinical practicum, the participant must be found competent on anatomic models in the skills being taught. Return demonstrations on the anatomic models will be done after the participant has completed the learning exercises and class content for the skill being evaluated, and before going to the clinical site and practicing on a client. The facilitator will observe the participant demonstrating the skill on an anatomic model and will evaluate his/her

competency using the checklist. This evaluation is done to ensure that the participant is competent in a simulated setting before beginning the clinical practicum with clients.

The criteria for a satisfactory performance are based on the knowledge, attitudes, and skills demonstrated during the clinical skills course. When preparing to be evaluated by a facilitator, participants may familiarize themselves with the content of the checklist by self-evaluating their competency. The participant's performance of each step is rated on the same scale as the learning checklist:

1 =	**Satisfactory.** Performs the step or task completely and correctly.
0 =	**Unsatisfactory.** Is unable to perform the step or task completely or correctly.
0 =	**Not observed**. The step, task, or skill was not performed by the participant during evaluation by a facilitator.
N/A (Not applicable) =	Step is not needed.

A participant will be judged competent when she/he achieves at least an 80% when evaluated on an anatomic model or in the clinical area. When determining competence, the judgment of a skilled facilitator is the most important factor. Thus, in the final analysis, competence carries more weight than just the number of cases evaluated/treated/ presented by the participant (which may be only two or less depending on the number of participants attending this course). Because the goal of this training is to enable every participant to achieve competency, additional training or practice in these skills may be necessary.

Once the participant can competently perform the newly acquired skill on an anatomic model, the participant can practice the skill in the clinical area to gain competency and proficiency in the skills acquired. When the facilitator determines a participant can competently perform the newly acquired skills on an anatomic model, he/she records the date on the wall chart and records the date and the participant's score in the logbook section of the learning checklists.

Assessment of clinical skills at the training site

After demonstrating their skills in a simulated situation (i.e., on models), participants will spend time in the clinical area to observe and—when possible—apply the newly gained knowledge and skills in a clinical setting. Ward staff and clinical preceptors are vital to a quality, positive learning environment. Clinical preceptors will supervise the training, but ward staff will be guiding, coaching, and mentoring participants through the training. Ward staff must practice the skills according to standards agreed upon in the training program to ensure consistency and improve the chances that the participant will be competent in the newly acquired skills.

When the facilitator determines a participant can competently perform the newly acquired skills in the clinical site, he/she records the date on the wall chart and records the date and the participant's score in the clinical logbook section of the Learning Checklists.

Note related to assessment of skills for resuscitation

As there may not be adequate numbers of cases of birth asphyxia during the training period for participants to observe first hand, it may be necessary for them to practice only on anatomical models or "mannequins" that demonstrate the rising of the chest wall during ventilation. If there should be a case of birth asphyxia during the clinical practicum, as many participants as feasible should be invited to observe the resuscitation.

Evaluating the Clinical Skills Course

A daily evaluation of the course is done by the participants at the end of each day, and a daily report is written by participants. In addition, an evaluation form is completed by all the participants at the end of the clinical skills course. This form can be found at the end of the Participant's Notebook.

Selection Criteria for Participants

The following criteria should be considered when selecting participants for this clinical skills course:

- Participants must be health care professionals (doctors, midwives, nurses) who are currently providing maternal and newborn care services.
- Participants must have an interest in providing quality services.
- The participant's institution should be capable of offering the services being taught in this course.
- Participants must have the support of their supervisors or managers.
- Participants must be motivated and ready to change their clinical practices and attitudes.

If possible and appropriate, two individuals from each site should attend the same clinical skills course.

Supervisors who are not actively providing services may participate in the clinical skills course, but priority for clinical experiences should be given to participants who are currently providing services.

COURSE OVERVIEW

TRAINING GOALS AND OBJECTIVES

Goal

The goal of this training program is to provide participants with an opportunity to acquire skills that will improve the quality of maternal and newborn care they provide from pregnancy up to the postpartum period with emphasis on the early period. This training will equip participants to provide safe, respectful, and friendly care to women, newborns, and their families, thereby encouraging mothers and families to use the health care system with confidence.

Objectives

By the end of this clinical training course, the participant should be able to:

1. Describe the importance of and the key components of preventing infection.
2. Explain the importance of and provide integrated maternal and newborn care.
3. Perform active management of the third stage of labor (AMTSL).
4. Provide care for the newborn at birth.
5. Perform resuscitation with a bag and mask, at least on the training model.
6. Assist the mother to breastfeed her newborn.
7. Describe how to manage breastfeeding problems.
8. Provide maternal care during the immediate postpartum period (from delivery of the placenta until discharge from the health care facility).
9. Perform a systematic examination of the newborn baby.
10. Provide postnatal care for the newborn.
11. Describe how to identify and provide basic care for low birth weight babies, including the practice of kangaroo mother care.
12. Describe how to identify and provide basic treatment of major and minor infections in the newborn at peripheral health centers, including the procedure for referral to higher centers.
13. Use clinical decision-making skills.

PRACTICE IN SIMULATED SITUATIONS

Before demonstrating a new skill, the facilitator will first explain the skill and, if possible, show the skill using videos or slide presentations. When demonstrating the skill, the facilitator will follow the steps as they are written in the Learning Checklists for the skill being taught. It is important to use the learning checklists to ensure that everyone is practicing in the standardized way.

The facilitator will demonstrate the skill as many times as is necessary, or may repeat certain steps/tasks of the skill that require additional explanation. When the participant has adequately understood the demonstration, she/he will work with a learning partner to practice the steps/tasks on an anatomic model, being careful to follow the steps as outlined in the learning checklist. Participants can use the learning checklists to evaluate their learning partners or themselves. Participants should also become familiar with the shorter evaluation checklists (in the Clinical Logbook), as these will be used to evaluate them at the end of the course. These same evaluation checklists also serve as supervisory checklists later on during follow-up to

improve quality of care. The facilitator should be available if participants have questions or problems, as well as to provide guidance to participants as they learn the new skill.

Participants will practice on anatomic models with the learning checklists until they feel they can accomplish the skill without referring to the checklists. At this point, the facilitator will evaluate the participant on an anatomic model using the appropriate evaluation checklist. When the participant is found to be competent in a skill on an anatomic model, he/she can then practice the skill in the clinical area.

CLINICAL PRACTICUM

The clinical practical experience draws on knowledge and experiences that the participant brings to the clinical skills course, gives participants the opportunity to practice newly acquired skills and integrate them into current practice, and depends upon the participant's motivation to become competent in as short a time as possible. In a clinical skills course, the emphasis is on "doing" and not simply on "knowing" something, and competency-based tools are used to objectively assess if participants have acquired the new knowledge and skills.

Important points about the clinical practicum include:

- Acquisition of new knowledge is evaluated at various times during the clinical skills course using a standardized written questionnaire (mid- and post-course questionnaires).
- The skills being taught build upon maternal and newborn care skills that the participants already have. For most of the skills being taught, participants will first practice on anatomic models using a learning checklist. This process facilitates gaining confidence and competence in the skills being taught and guides the participant to practice according to a set standard.
- Acquisition of new skills is evaluated using checklists for the skills being taught.
- Clinical decision-making skills are learned and evaluated using case studies, simulated exercises, and while participants are providing services in the clinical area.
- Interpersonal skills are acquired while observing behavior modeled by the facilitators and during role plays, and they are evaluated while the participant is providing services in the clinical area with clients.

The success of the clinical practicum is based on assimilating new knowledge, attitudes, and skills and applying them satisfactorily while providing services to women and newborns.

KEEPING TRACK OF DEMONSTRATIONS AND CLINICAL EXPERIENCE

Participants and facilitators will keep track of how many times a participant has either "demonstrated," or "observed," or "performed" a skill by marking experiences on a wall tabulation chart (see next page). Keeping track of each participant's experiences will help ensure the very best clinical experience for all of the participants. Participants will:

- Write the date you were found competent in a skill on an anatomic model in the "demonstrated" column.
- Write the date you were found competent in a skill in the clinical area in the "performed" column.
- Make a mark (a " | ") under a skill each time you have observed another learner or a provider performing the skill in the clinical area on a client.

Wall Chart: Skills to be Learned and Assessed

Skill / Learner	AMTSL + essential newborn care (ENC)			Monitoring the woman and newborn in the immediate postpartum		Care for the newborn at birth			Newborn resuscitation			Facilitating initiation of infant feeding		Examination and essential postnatal care for the woman			Examination and essential postnatal care for the newborn		
	Demonstrated	Observed	Performed	Observed	Performed	Demonstrated	Observed	Performed	Demonstrated	Observed	Performed	Demonstrated	Performed	Demonstrated	Observed	Performed	Demonstrated	Observed	Performed

Demonstrated: Task demonstrated by the participant to the facilitator on an anatomic model.
Observed: Task observed by the participant while performed by a facilitator or another participant on a client.
Performed: Task performed by the participant on a client.

MODEL COURSE SCHEDULE

<table>
<tr><th>Day 1</th><th>Day 2</th><th>Day 3</th><th>Day 4</th><th>Day 5</th><th>Day 6</th></tr>
<tr><td colspan="6">Morning (4.5 Hours): 8:30-13:00</td></tr>
<tr><td rowspan="2">Opening ceremony
Introduction
• Welcome
• Participant introductions
• Participant expectations
• Logistics
• Workshop norms
• Election of a person to represent the participants
Overview
• Goals, objectives, schedule
• Approach to training
• Review of course materials

Pre-course questionnaire: 30 min

Session 1: Preventing Infection: 1hr 15min
Session 2: Clinical Decision-Making: 45min</td><td colspan="5">Agenda and opening activity</td></tr>
<tr><td>Session 5: Routine Care during the Third Stage of Labor:
• Preparations for child-birth: 45min
• AMTSL: 2hrs 15min

(Demonstration and simulated practice: AMTSL)
• ENC integrated with AMTSL: 1hr

(Demonstration and simulated practice: ENC and AMTSL integrated)</td><td>Session 8: Resuscitation for Birth Asphyxia: 6hrs.

(Demonstration and simulated practice in small groups on the mannequin: Resuscitation for birth asphyxia)</td><td>Session 9: Basic Systematic Examination of the Newborn At Peripheral Centers: 3hrs

(Demonstration and simulated practice in small groups on the mannequin: Newborn exam)

Session 10: Postnatal Care of the Newborn: 1hr</td><td>Sessions 12: Care of the Low Birth Weight Baby: 2hrs

Session 13: Treatment of Infections in the Newborn (including referral): 2hrs</td><td>Validation of skills on anatomic models

Briefing on the clinical practicum/Guide-lines for clinical experiences

Mid-course questionnaire</td></tr>
<tr><td colspan="6">Lunch</td></tr>
</table>

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Evening (3 Hours): 14:00-17:00					
Session 3: Maternal Care To Improve Maternal and Newborn Survival (with interactive game**:** Care During Pregnancy): 2hrs **Session 4: Preventing PPH**: 45 min	**Session 6: Monitoring the Woman and Newborn during the First 6 Hours Postpartum:** 1hr **Session 7: Routine Postpartum Care for the Woman** – 1hr 30min	**Session 8: Resuscitation for Birth Asphyxia** (continued) **Test for competence**: Resuscitation for birth asphyxia for those who are ready	**Session 10: Postnatal Care of the Newborn** (continued): 1hr 30 min **Session 11: Diagnosing and Treating Breastfeeding Problems**: 1hr	**Sessions 13: Treatment of Infections in the Newborn** (continued): 2hrs 30min	
Review of the day's activities / Evaluation					
Homework • Review sessions in the Reference Manual • Complete and correct learning activities for sessions 1-4	**Homework** • Practice/Get checked off on skills on anatomic models • Review sessions in the Reference Manual • Complete and correct learning activities for sessions 5-7	**Homework** • Practice/Get checked off on skills on anatomic models • Review sessions in the Reference Manual • Complete and correct learning activities for session 8	**Homework** • Practice/Get checked off on skills on anatomic models • Review sessions in the Reference Manual • Complete and correct learning activities for sessions 9-11	**Homework** • Practice/Get checked off on skills on anatomic models • Review sessions in the Reference Manual • Complete and correct learning activities for sessions 12 and 13 • Prepare for the mid-course questionnaire	**Homework** • Get checked off on skills on anatomic models **Homework**: Prepare for clinical practicum by reviewing checklists and job aids

<table>
<tr><th>Skills to be evaluated</th><th>Day 7</th><th>Day 8</th><th>Day 9</th><th>Day 10</th><th>Day 11</th></tr>
<tr><td rowspan="6">• AMTSL + essential newborn care (ENC)
• Care for the newborn at birth
• Facilitating initiation of breastfeeding (early initiation of breastfeeding and correct positioning when breastfeeding)
• Monitoring the woman and newborn during the first 6 hours postpartum
• Care for the newborn at discharge
• Essential postpartum care for the woman
• Examination and postnatal care of a normal newborn
• Newborn resuscitation in the delivery/birth room

Group discussions:
• Organizational changes needed to promote postpartum care for the woman and newborn</td><td colspan="5">Morning (4.5 Hours): 8:30-13:00</td></tr>
<tr><td colspan="4">• Agenda and pre-clinical meeting
• Supervised clinical practice
• Complete tests for competence in participants not evaluated earlier, before practice on cases.
• For resuscitation for birth asphyxia, as there may not be adequate numbers of cases, re-evaluate all participants on the model during the period of clinical practicum.</td><td>Agenda and opening activity

Session: Presentation of action plans to the group – 3h</td></tr>
<tr><td colspan="5">Lunch</td></tr>
<tr><td colspan="5">Evening (3 Hours): 14:00-17:00</td></tr>
<tr><td colspan="4">Supervised clinical practice

Pre-clinical meeting and review of the day’s activities</td><td rowspan="2">• Retake of post- test
• Formal evaluation of the clinical skills course
• Recommendations
• Next steps
• Closing ceremony</td></tr>
<tr><td colspan="3">Develop action plans</td><td>Finalize action plans
Post- Test</td></tr>
</table>

TRAINING SESSIONS

SESSION 1: Preventing Infection

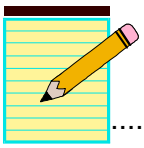
Summary

Understanding and using infection prevention practices is important for preventing major infections while providing care. These practices reduce the risk of transmission of serious bacterial infections and others such as hepatitis B, hepatitis C, and HIV/AIDS while providing maternal and newborn care services. This session covers important infection prevention principles, focusing on hand washing, waste disposal, and proper use of gloves, aprons, and needles. This session also covers the four-step process for processing instruments and supplies.

Objectives

By the end of this topic, participants will have the knowledge to:

- Explain the five basic principles of infection prevention practices.
- Describe ways to protect oneself and others from infection, focusing on hand washing; proper waste disposal; use of gloves, aprons, and other protective gear; and injection safety.
- describe the four steps for decontaminating instruments.
- Explain how to mix a 0.5% chlorine decontamination solution.



CLASSROOM LEARNING ACTIVITIES

Infection prevention interactive game

Purpose	▪ Present basic information on infection prevention in an easy and enjoyable way. ▪ Allow participants the opportunity to demonstrate their knowledge.
Duration	30 minutes
Instructions	The facilitator divides participants in teams. The objective is to be the first team to complete its circle. A team can fill in one-sixth of the circle each time they get a correct answer in one of each of the following six categories: • Hand washing • Protective gear • Handling sharps • Preventing splashes • Waste disposal • Instrument processing
Activities	• Each team has 15–20 minutes to answer the questions. • Record your answers on the question sheet. • Keep the answers simple and do not take a long time with any one question. • Once each team has finished their questions, the game begins. The first team chooses a topic and a question, reads the question aloud, and has 10 seconds to provide its answer. • If correct, the team colors in one-sixth of its circle and writes next to the circle the name of the topic from which the question came. • A team may only answer one question per topic. • If the answer is incorrect, the next team gets to answer that question or another question they choose. • Once a question is answered correctly, no other team may use that question. • The facilitator will clarify answers during the discussion after the question is correctly answered. • The next team takes a turn.
Goal	The first team to complete its circle by coloring in all six pieces (representing six correct answers on six different topics) is the winner and receives the prize.

Category 1: Hand washing

For each practice or situation described below, select whether it is an acceptable or unacceptable hand washing practice.

Practice	Answer (circle one)
1. A doctor washes his hands by dipping them in a basin of water before examining a patient.	Acceptable/Unacceptable
2. If there is no running water at a clinic, one staff member pours water over the other's hands for hand washing.	Acceptable/Unacceptable
3. A large bar of soap is kept in a saucer for use by all personnel in the examination room.	Acceptable/Unacceptable
4. Staff members wash their hands for approximately five seconds.	Acceptable/Unacceptable
5. A staff member arrives at the clinic to find many people waiting for her, so she immediately begins seeing clients without washing her hands.	Acceptable/Unacceptable

Category 2: Protective gear

For each practice or situation described below, select whether it is an acceptable or unacceptable infection prevention practice.

Practice	Answer (circle one)
1. Put gloves in the labor room sink after use.	Acceptable/Unacceptable
2. Rub the fundus after delivery of the placenta without using gloves.	Acceptable/Unacceptable
In the space provided, circle *True* or *False* for each statement.	
3. Protective gear should be worn when handling a baby after delivery, before the infant is bathed.	True/False

4. Gloves provide a barrier against possible infectious microorganisms that can be found in blood, other body fluids, and waste.	True/False
5. Even when gloves are decontaminated, cleaned, and high-level disinfected, they should not be used if there are holes in them.	True/False

Category 3: Handling sharps

In the space provided, circle *True* or *False* for each statement.

Practice	Answer (circle one)
1. Injuries with sharp objects occur when sharps are left on surgical drapes or bed linens.	True/False
2. To reduce the risk of a needlestick, recap a needle by holding the syringe in one hand and holding the needle in the other hand.	True/False
3. Housekeeping staff are rarely at risk of injury or infections caused by sharps—such as hypodermic needles or scalpel blades—because they are not directly involved in client-care activities.	True/False
For each of the practices described below, select whether it is an acceptable or unacceptable infection prevention practice:	
4. Break a hypodermic needle before disposal.	Acceptable/Unacceptable
5. Wash a needlestick or cut with soap and water.	Acceptable/Unacceptable

Category 4: Preventing splashes

For each practice or situation described below, select whether it is an acceptable or unacceptable infection prevention practice.

Practice	Answer (circle one)
1. The provider drops instruments into a bucket with decontamination solution to avoid contact with the solution.	Acceptable/Unacceptable
2. The provider artificially ruptures membranes during a contraction to prevent splashes.	Acceptable/Unacceptable
3. Irrigate eyes well with water when blood or body fluids splash into them.	Acceptable/Unacceptable
4. If you accidentally get blood or body fluids on your hands, wash with a 0.5% chlorine solution.	Acceptable/Unacceptable
5. Hold contaminated instruments under the water while scrubbing.	Acceptable/Unacceptable

Category 5: Waste disposal

In the space provided, circle *True* or *False* for each statement.

Practice	Answer
1. Everyone who handles medical waste—from the point generated until final disposal—is at risk of infections and injury.	True/False
2. If medical waste is stored at the health facility before being burned, it can be placed in a pile behind the clinic.	True/False
3. Liquid medical waste can be poured down a sink, drain, toilet, or latrine.	True/False
4. Burial sites for medical waste should not be located near water sources because of the potential to contaminate the water.	True/False
5. Scavenging of medical waste is rarely a problem in low-resource settings.	True/False

Category 6: Instrument processing

In the space provided, circle *True* or *False* for each statement.

Practice	Answer (circle one)
1. Decontamination kills all microorganisms on soiled instruments and other items.	True/False
2. When preparing a chlorine solution for decontamination, it is important to know the amount of active chlorine in the product used.	True/False
3. Cleaning instruments before sterilizing them is not necessary if they were soaked in a 0.5% chlorine solution for 10 minutes.	True/False
4. Sterilizing may not be effective if blood and other organic material are not cleaned from instruments before sterilizing.	True/False
5. High-level disinfection kills all microorganisms.	True/False

INDIVIDUAL LEARNING ACTIVITIES

Based on the safety practices discussed previously, **what changes should you or your facility make to improve infection prevention practices**? Review the precautions, think about your current practices and situation, and then write your specific answers below. Discuss these changes with your supervisor.

Hand washing:

Wearing protective clothing:

Wearing appropriate gloves:

Preventing splashes:

Preventing needlesticks:

Handling the placenta:

SESSION 2: Clinical Decision-Making

Summary

This session provides an overview of why the problem-solving method is important, the steps of the problem-solving method, and how to document care provided with the problem-solving method.

Objectives

When asked to explain a methodical approach to making clinical decisions, the participants will be able to:

- Define the concept of clinical decision-making.
- Describe the steps to follow when making a clinical decision:
  - gather information
  - identify needs and problems
  - make a plan of care
  - implement the plan of care
  - evaluate the care provided

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INDIVIDUAL LEARNING ACTIVITIES

Questions

1. The first step in the problem solving method is to:

   a) collect information by asking questions
   b) implement a plan
   c) make a plan of care

2. The midwife gave Ms. A medication for an infection. The midwife asks Ms. A to return to the clinic in three days. The midwife says: "I will examine you then to see if the infection is gone." What steps in the decision-making process will the midwife carry out when the woman comes for the visit in three days?

   a) Ask and listen.
   b) Look and feel.
   c) Identify the problem or needs.
   d) All the steps, to determine if Ms. A's problem is improving.

3. A plan of care for taking appropriate action may include the following. Circle all that apply:

   a) medicine
   b) diet advice about nutrition
   c) counseling about family planning methods
   d) advice to get more rest

Case studies

A woman at full term comes to the labor ward and states that she thinks she is in labor.

1. Step 1 and 2: Take a targeted history: What questions will you ask to collect the information needed to give her appropriate care? Where relevant, make a list of possible problems based on presenting features.

The client states her contractions are painful and started three hours ago. She has not noticed bleeding or leaking of fluid. The baby is moving. She does not have fever.

2. Step 3: Perform a targeted physical examination: What observations and examination will you do?

Her vital signs are normal. By palpation the contractions are coming every three minutes, lasting 45 seconds, and are of moderate intensity. FHR is 140 and regular. The examination shows that the baby appears to be average size, left-occipito-anterior (LOA) presentation with the head engaged. The cervix is 5 cm dilated, and the bag of water is intact.

3. Step 4: Identify problems/needs: What problems or health care needs does this situation present? Write your problem identification.

4. Step 5: Make a plan of care based on identified needs and problems: What will you include in your plan for this client?

5. How will you evaluate your plan of care?

SESSION 3: Maternal Care to Improve Maternal and Newborn Survival

Summary

During this session, participants will review antenatal care that will improve maternal health and, at the same time, improve the probability that the woman will give birth to a healthy, term newborn. By the end of this session, participants will be able to offer counsel and care to the pregnant woman that will improve her health and the survival of her newborn baby.

Objectives

When providing health maintenance care and counsel to pregnant women, participants will be able to:

- Identify times that care should be provided to a woman to improve her health and her baby's health.
- List health problems that may have consequences for the survival of the pregnanet woman and her baby.
- Describe care and counseling provided to pregnant women that can benefit both the woman and her baby.
- List the elements of essential antenatal care.
- Describe how to develop a birth-preparedness and complication-readiness plan.

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CLASSROOM LEARNING ACTIVITIES

Knowledge Game on Maternal Care

Purpose	To present basic and advanced information about maternal care in a simple and enjoyable way. This game allows participants an opportunity to demonstrate what they already know. This game also gives participants a chance to get to know each other.
Duration	45 minutes
Instructions	**Introduction** The aim of this game is to be the first team to correctly answer one question in **each of the five** categories. It is a competition! Each team will have identical questions to answer as a group. The questions are organized in the following five categories: 1. Antenatal care 2. Prevention 3. Birth-preparedness plan 4. Prescriptions 5. Miscellaneous **Preparation within teams** • You will be divided into teams. Working within your teams, you will have 10 minutes to read and answer aloud the questions that start on the next page. • Within your teams, choose a recorder to write your team's answers on the team's question/answer sheet. Keep your answers simple and do not linger on any one question. **The competition** • After 10 minutes, the trainer will ask the first team to choose a category and a question. One person from that team should read the question aloud and give the answer. The team has 10 seconds to answer. • If the answer is correct, the team (or the trainer) should place a tick (✓) in the corresponding cell on the scoreboard. • If the answer is incorrect, the next team gets to answer that question or another question of its choosing. • A team may only answer one question per category. • Once a question has been answered correctly, no other team may use it. Teams take turns. The first team to correctly answer one question in all five categories is the winner!

Category 1: Antenatal care

Question	Answer
How many times should a woman seek antenatal care?	
How many months/weeks pregnant should a woman be when she goes for her first antenatal visit?	
What laboratory tests should be done to evaluate the woman's health and her pregnancy?	
Which pregnant women should be referred for specialized care during pregnancy?	

Category 2: Prevention

Question	Answer
List three benefits of having nutritious and balanced meals during pregnancy.	
Explain why a woman needs additional rest during pregnancy and while breastfeeding.	
Describe three things a pregnant woman can do to protect herself and her fetus from environmental pollution.	
Which pregnant/lactating women should always insist on using condoms during sexual intercourse?	

Category 3: Prescriptions

Question	Answer
How many times should a woman take sulfadoxine-pyrimethamine (SP) during pregnancy if she is infected with HIV?	
How often should a pregnant woman be offered a dose of mebendazole during pregnancy?	
Ms. X received her first dose of TT three months before becoming pregnant. She presents for her first ANC at 20 weeks gestation. How many TT doses should she receive during this pregnancy?	

Category 4: Miscellaneous

Question	Answer
List at least three pregnancy-related complications that may affect the baby's survival.	
List at least four maternal illnesses/diseases that may affect the baby's survival.	
What is the best spacing between births?	
If a woman has just taken a dose of SP, how much time should she wait before restarting her iron/folic acid tablets?	

Category 5: Birth-preparedness plan

Question	Answer
List danger signs during pregnancy.	
List the four delays.	
What are the principal elements of a birth-preparedness plan?	
Describe how a woman will need to prepare herself to give birth in a health facility.	

SESSION 4: Preventing Postpartum Hemorrhage

Summary

The prevention, timely diagnosis, and treatment of postpartum hemorrhage are particularly important during the period immediately following the birth of the baby and the first hours postpartum. Compared to other maternal complications (such as infection), bleeding can rapidly become a mortal danger. A woman with PPH may die quickly (in less than two hours) if she does not receive the appropriate medical care, including medication, simple clinical procedures, blood transfusion, or surgical intervention.

This brief session gives an overview of postpartum hemorrhage, its causes, and the actions women, families, and health care providers can take to prevent it from occurring.

Objectives

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

- Define postpartum hemorrhage (PPH).
- Explain ways to prevent PPH.
- Explain ways to ensure timely diagnosis and management of PPH when it occurs.

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INDIVIDUAL LEARNING ACTIVITIES

1. Explain why a provider needs to respond immediately to "any amount of bleeding that causes deterioration in the woman's condition" even if she has not yet lost 500 mL.

2. Explain why a strategy to prevent postpartum hemorrhage should not be based on identification of risk factors.

3. Describe a prevention strategy for each of the factors listed in the first column that may contribute to the loss of uterine muscle tone in the postpartum period.

Factors contributing to the loss of uterine muscle tone	**Prevention Strategy**
Full bladder	
Prolonged/obstructed labor	
Oxytocin induction or augmentation of labor	

4. Explain how each of the components of AMTSL helps to prevent PPH.

5. Describe a strategy to ensure timely diagnosis and treatment of PPH for each of the factors listed in the first column that may contribute to the loss of uterine muscle tone in the postpartum period.

Factors contributing to the loss of uterine muscle tone	**Strategy for ensuring timely diagnosis and management**
Full bladder	
Prolonged/obstructed labor	
Uterine atony	
Retained placental fragments	

6. Explain how focused antenatal care can considerably reduce a woman's risk of dying from PPH.

SESSION 5: Routine Care during the Third Stage of Labor

Summary

In this session, participants will learn the steps in active management of the third stage of labor as well as how to integrate them into steps for providing immediate newborn care.

Objectives

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

- Describe preparation for the birth of the baby.
- Describe the steps of AMTSL.
- Explain how AMTSL prevents PPH.
- Describe immediate care of the newborn at birth.
- Apply AMTSL and provide immediate newborn care at birth using a learning checklist.
- Describe components of essential newborn care at birth.

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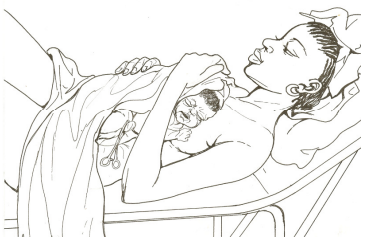
STEPS FOR AMTSL

1: Dry the baby and place the baby in skin-to-skin contact on the abdomen of the mother, assess the baby's breathing and perform resuscitation if needed. Cover the baby's head, with a cloth or a hat/bonnet. Cover the woman and baby, leaving the face exposed.

2: Administer a uterotonic (the uterotonic of choice is oxytocin 10 IU IM) immediately after birth of the baby, and after ruling out the presence of another baby.

3: Clamp and cut the cord after cord pulsations have ceased or approximately 2-3 minutes after birth of the baby, whichever comes first. Cover the cord with a piece of gauze when cutting the cord to avoid splashing of blood.

4: Place the infant directly on the mother's chest, prone, with the newborn's skin touching the mother's skin. Cover the baby's head with a cap or cloth. Cover the woman and baby.



5: Perform controlled cord traction while, at the same time, supporting the uterus by applying external pressure on the uterus in an upward direction towards the woman's head.

6. Massage the uterus immediately after delivery of the placenta and membranes until it is firm.

7. During recovery, assist the woman to breastfeed if this is her choice, monitor the newborn and woman closely, palpate the uterus through the abdomen every 15 minutes for two hours to make sure it is firm and monitor the amount of vaginal bleeding. Provide PMTCT care as needed.

USAID FROM THE AMERICAN PEOPLE

POPPHI Prevention of Postpartum Hemorrhage Initiative

Pan American Health Organization Regional Office of the World Health Organization

INTEGRATION OF AMTSL AND ENC

Keep required items for the mother and baby close by, load oxytocin in syringe.
Inform the woman what is being planned in a way she can understand.

Receive and dry the baby, discard wet linen.

Baby cries well

Place the baby on the mother's abdomen; cover with a dry cloth.

Inform the mother about her baby and AMTSL; administer uterotonic after checking for a second baby.

Clamp cord when pulsations stop/2-3 minutes after birth. Place the baby on the mother's chest and keep the baby warm.

Apply controlled cord traction + countertraction; perform uterine massage.

Cry not heard

Place the baby on the mother's abdomen; cover the baby with a dry cloth.

Breathing well

Inform the mother about her baby and AMTSL; administer uterotonic after checking for a second baby.

Clamp cord when pulsations stop/2-3 mins. after birth. Place the baby on the mother's chest and keep warm.

Apply controlled cord traction + counter-traction; perform uterine massage.

Not breathing/ gasping

Cut the cord; resuscitate the baby. If possible, administer uterotonic after checking for a second baby.

Depending on the level of resuscitation efforts needed and whether an assistant is present, deliver placenta by maternal effort or controlled cord traction.

Monitor the woman and baby closely.
Implement ENC at birth: eye prophylaxis; cord care; warmth (skin-to-skin); breastfeeding.
Continue routine care for the woman and her baby.

INDIVIDUAL LEARNING ACTIVITIES

1. Ms. B is about the deliver and you plan to actively manage the third stage of labor. When will you administer 10 IU of oxytocin to Ms. B?

2. What must the provider rule out before giving oxytocin for AMTSL?

3. List the three main steps of AMTSL.

4. To safely perform controlled cord traction for delivery of the placenta, the provider holds the clamped cord with one hand. With the other hand placed on the woman's abdomen above the pubic bone, the provider pushes the uterus upwards toward the woman's head. Why does the provider push the uterus upward?

5. Ms. B just gave birth to a healthy baby. Her perineum is intact. After delivery of the placenta, how often will the provider monitor her vaginal bleeding?

6. How will you react:
   a. if the placenta is not delivered after the first attempt at controlled cord traction?

   b. if the cord is ruptured during controlled cord traction?

   c. if the placenta is not delivered after four attempts at controlled cord traction?

7. List the key steps of essential newborn care at birth.

8. What steps will you take to ensure that the newborn baby is warm after birth?

9. What counseling will you provide to the woman about care for her baby before transferring her out of the delivery room?

SESSION 6: Monitoring the Woman and Newborn during the First Six Hours Postpartum

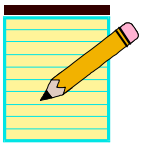
Summary

During this session, participants will learn how to monitor the woman and newborn during the first six hours following childbirth.

Objectives

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

- Identify principles of care to follow when providing care to the woman and newborn during the first six hours after childbirth.
- Describe how to integrate maternal and newborn care.
- Monitor the woman and newborn during the first six hours after childbirth.



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INDIVIDUAL LEARNING ACTIVITIES

Case studies

1. Ms. Kabongo:

   Ms. Kabongo gave birth at 1:20 pm. It is now 3:50 pm. You assess Ms. Kabongo and find the following:

   - BP: 120/70, Pulse: 88 beats/minute
   - Uterus well contracted; vaginal bleeding: <1 sanitary pad since the last time you checked her 30 minutes ago.
   - Her bladder is distended and Ms. Kabongo cannot pass urine.
   - The newborn is breastfeeding well.
   - Ms. Kabongo looks very happy.

   Are there any danger signs?

2. Ms. Mpo:

   Ms. Mpo gave birth at 3:00 pm. It is now 7:00 pm. You assess Ms. Mpo and find the following:

   - BP: 90/-, Pulse: 120 beats/minute
   - Uterus well contracted; vaginal bleeding: >7 sanitary pads since the last time you checked her 1 hour ago.
   - Ms. Mpo just passed urine.
   - The newborn is breastfeeding well.
   - Ms. Mpo has cold, clammy skin.

   Are there any danger signs?

3. Ms. Kabamba:

   Ms. Kabamba gave birth at home four hours ago. She came to the health center because she has been bleeding excessively. You find:

   - Pulse: 96 beats/minute; BP: 110/70; respirations: 21/minute; temperature: 37 ℃; her conjunctivae are pale.
   - The uterus is soft.
   - Sanitary cloths are soaked in blood; she put the cloth there about one hour ago.
   - There are no vaginal or perineal tears.
   - Her extremities are hot; she is fully conscious and oriented.
   - She just passed "a good amount" of urine.

   Are there any danger signs?

4. Ms. Tona:

   You assisted Ms. Tona during labor. You actively managed the third stage of labor. Thirty minutes after delivery of the placenta you notice that Ms. Tona has soaked four sanitary pads since you checked her 15 minutes ago. When you check her you find:

   - Pulse: 112 beats/minute; BP: 80/40; respirations: 36/minute;
   - The uterus is soft.
   - Temperature: 36 ℃; pale conjunctivae; cold extremities
   - Ms. Tona is very anxious.
   - You can't remember the last time she passed urine.
   - The newborn is breastfeeding well.

   Are there any danger signs?

5. Baby Kabongo was born at 9:20 am. It is now 11:50 am. During routine monitoring, you find:

- The color of the palms, soles, lips, and tongue is pink.
- Respiratory rate is 45/minute with no grunting or subcostal retraction.
- The mother informs you that the baby breastfed for 10 minutes.
- Blood is oozing from the umbilicus.

What steps should be taken?

6. Baby Mpo was born at 3:00 pm. Routine monitoring findings at 6:00 pm are:

- Respiratory rate: 65/minute; repeat count is 70/minute.
- Grunting
- The mother says that the baby sucked weakly when offered the breast.

What do the findings indicate? What should be done?

SUMMARY

Monitoring the Woman during the Immediate Postpartum
(0-6 hours after delivery of the placenta)

Parameter	Frequency	Danger signs
• Vital signs ○ Blood pressure ○ Pulse • Vaginal bleeding • Uterine hardness	• Every 15 minutes for 2 hours, then • Every 30 minutes for 1 hour, then • Every hour for 3 hours	• Systolic BP ≤90; Diastolic BP ≤60
		• Fast, thready pulse: >110/minute • Sweaty or cold, clammy skin; cold extremities • Anxiety, confusion, loss of consciousness
		• More than one sanitary napkin soaked in five minutes. • Slow, continuous bleeding or a sudden increase in vaginal bleeding.
		• Uterus is soft or too big given the time that has elapsed since delivery. • Uterus soft/not contracted. • Uterus is neither firm nor round.
		• 3rd or 4th degree genital laceration.
• Temperature • Respiration	Every 4 hours	• Temperature > 38 ℃.
		• Rapid breathing (rate of 30 breaths per minute or more). • Palmar or conjunctival pallor associated with 30 or more respirations per minute (the woman tires rapidly or has tachypnea at rest).
• Bladder (help the woman empty her bladder if it is distended)	Every hour	• The woman can't void on her own and her bladder is distended. • Urinary incontinence.
• Breastfeeding	Every hour; verify either by asking or evaluating feeding (observe feeding at least once or twice in the 6 hours)	• Breastfeeding has not yet been initiated. • Other fluids/foods being given to the newborn.
• Psychological reaction	Every hour	• Negative feelings about herself or her child

SUMMARY

Monitoring the Newborn in the First Six Hours After Birth

Parameter	Frequency of assessment	Danger signs
• Respiration • Color • Temperature (Record axillary temperature at least once in the first 6 hours. At other times, touch the baby's hands and feet and check axillary temperature if they are cold.) • Umbilical cord for bleeding • Presence of other danger signs • Ensure breastfeeding within one hour of birth and subsequent exclusive breastfeeding on demand	Assess the baby in general when the mother is assessed in the AMTSL strategy: • Immediately after birth then • Every 15 minutes for 2 hours, then • Every 30 minutes for 1 hour, then • Every hour for the next 3 hours	• Rapid respirations (more than 60 respirations per minute) • Slow respirations (less than 30 respirations per minute) • Flaring of the nostrils • Grunting • Severe subcostal retractions
		• Poor sucking/not sucking
		• Cyanosis, especially of the lips and tongue. (Cyanosis of the hands and feet may also be due to hypothermia for which the baby needs to be warmed.)
		• Hypothermia: body feeling cold (temperature <36.5 °C.) • Fever: usually later in the postnatal period; while the usual recommendation is >38 °C, some feel that in the newborn it's better to act when the temperature is even 37.5 °C.
		• Convulsions
		• Umbilical cord bleeding usually in the first day or two; needs retying of the cord; referral not required if that is the only sign.
• First voiding of urine (within 48 hours) • First stool (within 24 hours)	Check anal opening after birth. Ask about urine and stools every day and before discharge from the health care facility.	• Absence of stool or urine after the 24 hours and 48 hours, respectively

SESSION 7: Routine Postpartum Care for the Woman

Summary

This session provides an overview of routine care for the woman during the postpartum period.

Objectives

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

- Describe essential care for the postpartum woman.
- Provide essential care to the postpartum woman.
- Provide counseling to the woman during the postpartum period.

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INDIVIDUAL LEARNING ACTIVITY

1. Ms. A gave birth at 2:15 am. It is now 3:15 am and you found three pads soaked in the 15 minutes since you last checked her. What is your assessment?

    a. Her vaginal bleeding is normal for this time in the immediate postpartum.
    b. Her vaginal bleeding is slightly more than normal for this time in the immediate postpartum but is still within normal limits.
    c. Her vaginal bleeding is excessive for this time in the immediate postpartum.

2. Ms A. gave birth at 2:15 am. It is now 5:15 am and you just checked Ms. A's BP, pulse, uterus, and vaginal bleeding and found that her uterus was boggy. You massaged her uterus until it was well contracted and noted that her vaginal bleeding was not excessive. When will you check Ms. A again?

    a. At 5:30 am
    b. At 5:45 am
    c. At 6:15 am
    d. Prior to discharge

3. Which of the following statements is **not** true?

    a. Ms. A. should stay in bed during the first six hours postpartum to reduce the risk of PPH.
    b. Ms. A should be encouraged to eat and drink during the first six hours postpartum.
    c. Ms. A should never be left alone during the first six hours postpartum.
    d. Ms. A may take paracetamol for pain if she experiences pain after delivery.

4. When you check Ms. A at 5:15 you noted that her bladder was distended. How will you manage this?

    a. Tell Ms. A to empty her bladder as soon as she feels the urge to do so.
    b. Assist Ms. A to empty her bladder.
    c. Catheterize her immediately as this may prevent her uterus from contracting.
    d. Call the doctor to consult her on how best to manage Ms. A's distended bladder.

5. What advice can you give to a woman to improve genitourinary health?

SESSION 8: Resuscitation for Birth Asphyxia

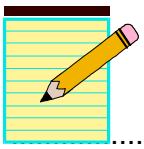
Summary

Neonatal resuscitation is one of the most important practices for the survival of the newborn. Health care personnel must be able to **quickly** evaluate the baby and carry out the necessary actions for resuscitation in a **timely** manner if the baby is to recover well from birth asphyxia.

Objectives

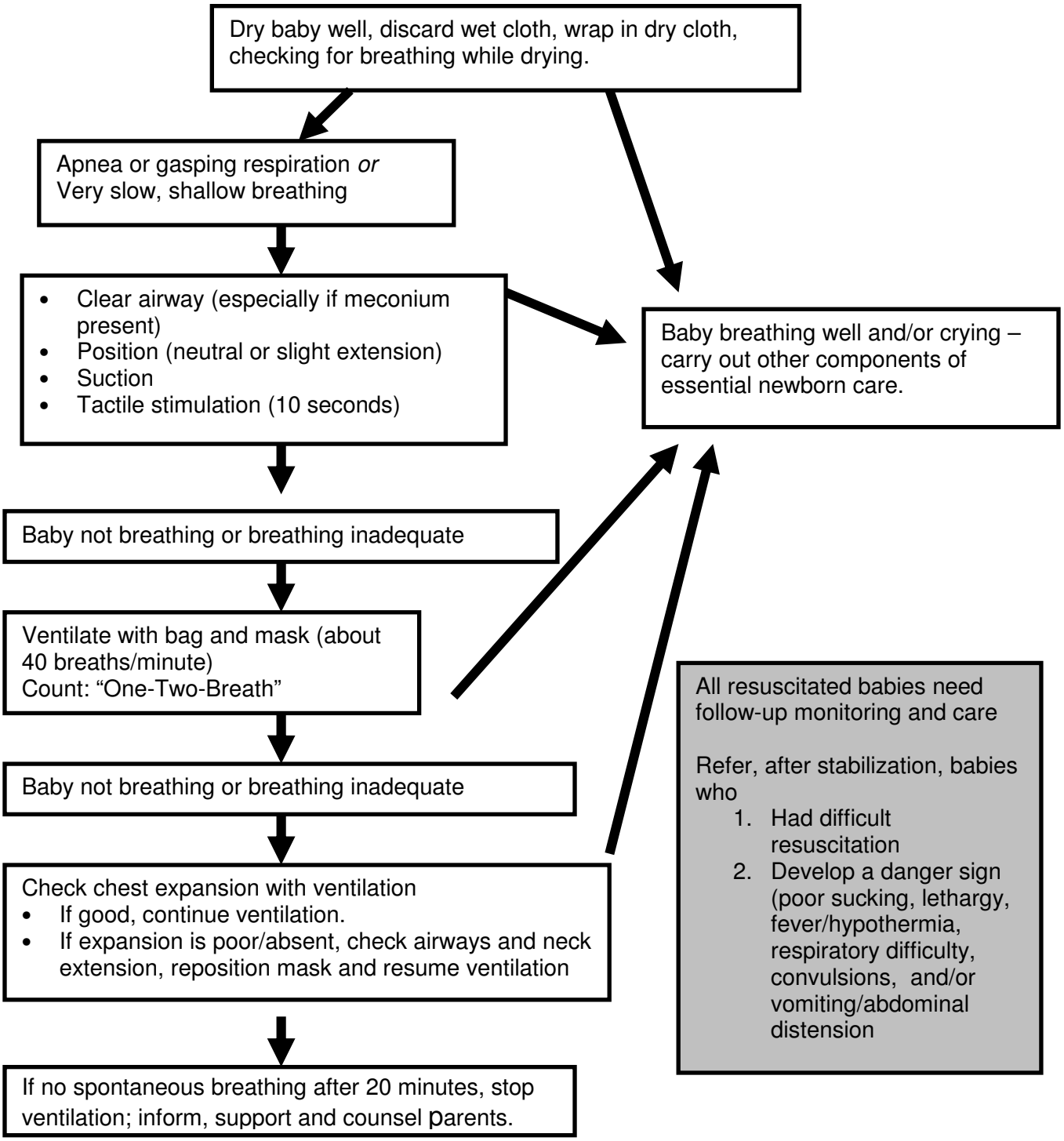
At the end of the session, participants will be able to:

- Assemble and prepare the necessary equipment for resuscitation of the asphyxiated newborn.
- List the signs of asphyxia in the newborn.
- Explain how to resuscitate an asphyxiated baby.
- Demonstrate basic resuscitation on the mannequin, including clearing of the airways and bag/mask ventilation.
- Describe post resuscitation care (follow-up and transfer where required).



SUMMARY: The Key Steps of Training on Neonatal Resuscitation	
1.	During the slide presentation, make sure that you participate actively through brainstorming and in group work on the topic.
2.	During the presentation many questions will be raised about the reasons not to use the Apgar score, cardiac massage, and medications such as epinephrine. Clear all doubts that you can focus on the different tasks that will be shown.
3.	In the demonstration, observe the different tasks one by one as described in the learning checklist. Make sure that all doubts are cleared.
4.	Group sessions will be organized during which co-facilitators will repeat the demonstrations and when each participant can also demonstrate the steps while another participant reads the task from the checklist. It is important : • To not only carry out the different steps **correctly,** but also in a **timely** manner, as the baby has to be revived **quickly.** • For participants to train in pairs so that one practices and the other one assists and uses the checklist for evaluation.
5.	The mannequin and the accessories will be left in a secure place to allow the participants to continue to practice when they have free time, as in the evenings.
6.	Evaluation may start as soon as you are ready and you should aim to carry out at least 80% of the steps, preferably before starting the practical sessions and definitely before the end of the course. Discuss with the facilitators if you have difficulties in carrying out the steps.
7.	Practice frequently on the mannequin. It is unlikely that in the short period of training there will be adequate numbers of cases of birth asphyxia to allow all participants to practice on cases at the clinical site.
8.	During the practical clinical training period, whenever there is a case of birth asphyxia, where feasible, participants at the site should call others to observe how the case is managed.

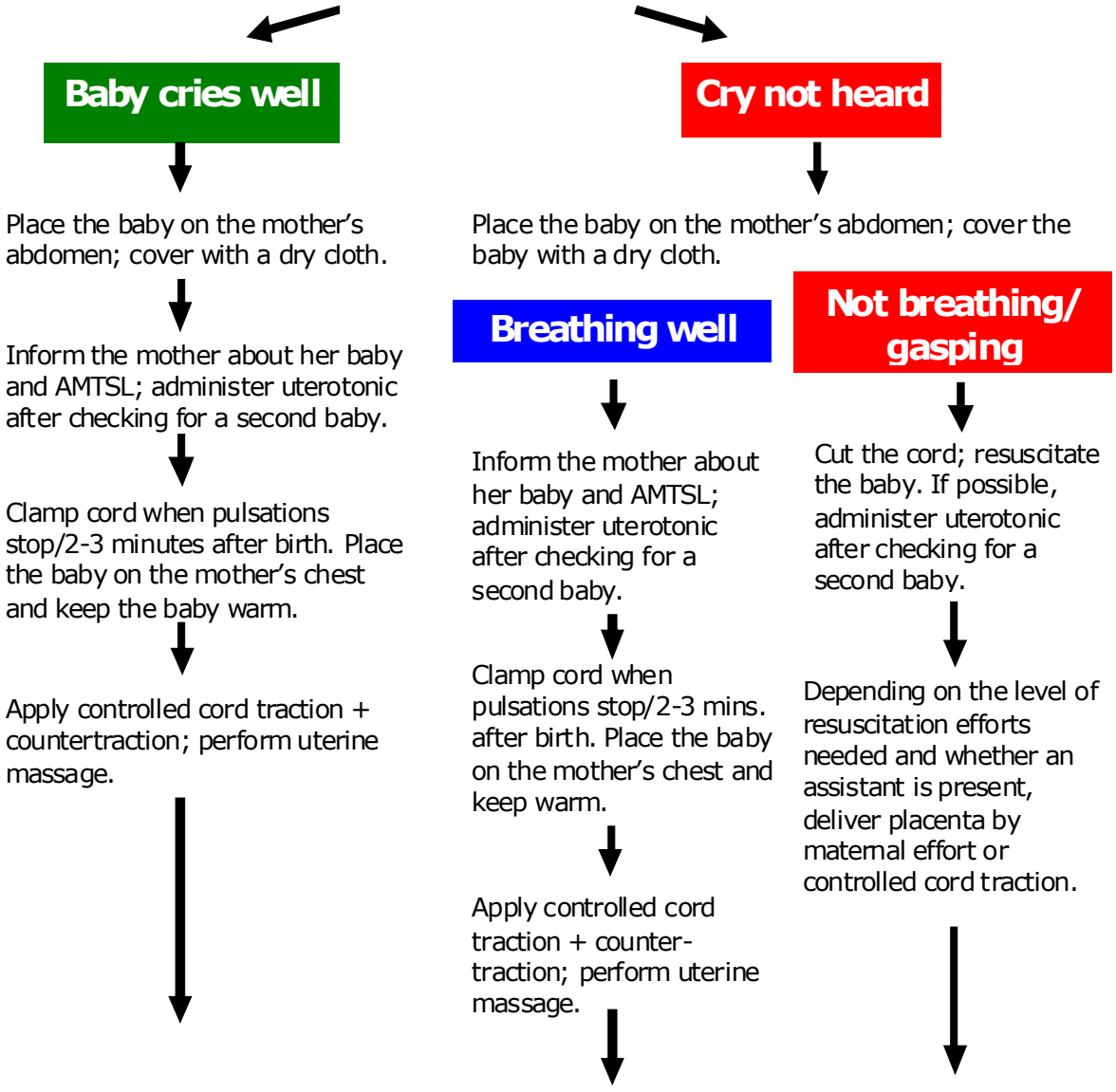
USAID/BASICS: ALGORITHYM FOR RESUCITATION FOR BIRTH ASPHYSIA



INTEGRATION OF AMTSL AND ENC

Keep required items for the mother and baby close by, load oxytocin in syringe.
Inform the woman what is being planned in a way she can understand.

Receive and dry the baby, discard wet linen.



Monitor the woman and baby closely.
Implement ENC at birth: eye prophylaxis; cord care; warmth (skin-to-skin); breastfeeding.
Continue routine care for the woman and her baby.

INDIVIDUAL LEARNING ACTIVITIES

1. True or False: Only specialized providers should perform basic neonatal resuscitation.

2. True or False: Basic neonatal resuscitation can be performed at all levels of care of the healthcare structure.

3. List the minimal equipment and supplies needed for resuscitating a newborn:

4. List maternal factors associated with birth asphyxia:

5. List fetal factors associated with birth asphyxia:

6. True or False: Supplemental oxygen is always needed for the resuscitation of the newborn.

7. Case study: A male baby was born after a prolonged second stage of labor. You are the only provider without anyone to assist you. Your health center is equipped with mechanical suction and bag and mask. You place the baby on the mother's abdomen while you cut the cord. The baby is floppy and has no spontaneous breathing. List the key steps of the management at this stage.

8. What care do you provide to the baby after resuscitation?

SESSION 9: Basic Systematic Examination of the Newborn at Peripheral Centers

Summary

During the session, the participants will learn the elements of the basic examination of the newborn at peripheral centers.

Note that this session is closely linked with Session 10 on postnatal visits/care.

Objectives

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

- Describe how to prepare for the basic examination of the newborn.
- Describe how to prevent hypothermia during the examination.
- Describe the key steps of the basic examination of the newborn.
- Demonstrate examining the newborn on a doll with the help of a learning checklist.

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INDIVIDUAL LEARNING ACTIVITY

List the key steps of the basic examination of the newborn at the peripheral center.

SESSION 10: Postnatal Care of the Newborn, at the Facility and during Postnatal Visits

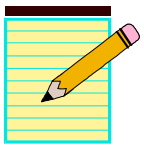
Summary

During this session, the participants will learn the importance of early postnatal care and the key components of evaluation and care of the baby.

Objectives

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

- Describe the importance of providing care in the early postnatal period and related challenges and solutions.
- Describe the evaluation and the care of the newborn in the postnatal period.
- Describe how to promote quality early postnatal assessment and care in the first week of life, especially the crucial first 2-3 days.
- Provide the mother/family counseling on:
  - preventive care
  - identifying danger signs
  - appropriate care seeking



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INDIVIDUAL LEARNING ACTIVITIES

1. Outline the timings for the postnatal visits for the newborn baby with the mother.

2. List the key components of postnatal care related to the baby at the key different contact points.

SUMMARY: Postnatal Evaluation and Care
1. Implement tasks at the appropriate time. After birth evaluate and provide care: • before transfer out of the delivery room. • at least once a day during the stay of the baby at the facility (more frequently for low birth weight babies and if a problem needing observation was noted). • at discharge. • during postnatal visits.
2. Carry out a basic systematic examination of the baby (see session 9 for details).
3. Provide relevant care: • If a danger sign exists (even if only one), give the first dose of antibiotics and refer the baby. • Administer/prescribe treatment for minor infections. • Give immunizations, OPV, BCG, hepatitis B (based on recommendations of the Ministry of Health), if it was not already done.
4. Document findings/care in mother/baby card/register.
5. Promote continued follow-up and schedule the next appointment.
6. Counsel the mother/family on basic preventive care at home, identifying danger signs, and appropriate care seeking.
7. Where the mother is HIV positive, ensure appropriate care for the mother and baby including ARV and later, cotrimoxazole prophylaxis from 4 – 6 weeks.
8. Where feasible and appropriate, put the family in contact with an available trained community health worker/volunteer.

SESSION 11: Diagnosing and Treating Breastfeeding Problems

Summary

During this session, participants will learn how to manage breast conditions that are associated with breastfeeding problems.

Objectives

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

- Describe the prevention and treatment of engorged breasts, mastitis, and breast abscess and related counseling of women.
- Describe the prevention and treatment of sore and cracked nipples and related counseling of women.
- Explain management of inverted nipples.
- Describe and demonstrate how to express milk and feed it to the baby.

INDIVIDUAL LEARNING ACTIVITIES

Read the list of findings for each of the following women, who are new mothers and came to you with fever. Based on the findings, write the most likely diagnosis for each woman. Choose the diagnosis from the following list (not all the diagnoses will be used).

Breast abscess, Breast engorgement, Malaria, Mastitis, Pneumonia, Urinary tract infection

1. Ms. Rosa:

   - Firm, very tender breast
   - Overlying reddened skin
   - Fluctuant swelling in breast
   - Draining pus

   Ms. Rosa probably has: _____

2. Ms. Anita:

   - Fever
   - Painful urination
   - Increased frequency and urgency of urination
   - Lower back pain
   - Suprapubic pain
   - Abdominal pain

   Ms. Anita probably has: _____

3. Ms. Bobo:

   - 3-4 weeks after delivery
   - Headache
   - Breast pain and tenderness
   - Reddened, wedge-shaped area on breast
   - Inflammation preceded by engorgement
   - Only one breast affected

   Ms. Bobo probably has: _____

4. Ms. Mohini:

   - Fever
   - Chills
   - Sweating
   - Sweating
   - Headache
   - Enlarged/tender spleen

   Ms. Mohini probably has: _____

5. Ms. Mpo:

   - Breast pain and tenderness
   - 3-5 days after delivery
   - Hard and enlarged breasts
   - Both breasts affected

   Ms. Mpo probably has: _____

CLASSROOM LEARNING ACTIVITIES

Case study 1

Directions:

Read and analyze this case study individually. When the others in your group have finished reading it, answer the case study questions. Consider the steps in clinical decision-making as you answer the questions. The other groups in the room are working on the same or a similar case study. When all groups have finished, we will discuss the case studies and the answers each group has developed.

Ms. Kabongo is 17-years-old. She gave birth to her first newborn three weeks ago at the health center. Her birth was uncomplicated and the newborn was healthy and of normal birth weight. You last saw Ms. Kabongo two days after the birth, when she and her newborn were found to be doing well. She has come to the health center today because she has breast pain and tenderness and feels unwell.

ASSESSMENT: History, Physical Examination, Screening Procedures/Laboratory Tests)

1. What will you include in your assessment of Ms. Kabongo and why?

2. What particular aspects of Ms. Kabongo's physical examination will help you make a diagnosis or identify her problems/needs and why?

3. What screening procedures/laboratory tests will you include (if available) in your assessment of Ms. Kabongo and why?

[1] http://www.reproline.jhu.edu/english/2mnh/2mcpc/5_Learning_Pkg/C_14_Fever_after_childbirth/14-CS-14.2.htm (accessed October 13, 2008)

DIAGNOSIS: Identification of Problems/Needs

You have completed your assessment of Ms. Kabongo and your main findings include the following:

- Her temperature is 38º C, her pulse rate is 120 beats/minute, her blood pressure is 120/80 mm Hg, and her respiration rate is 20 breaths/minute.
- She has pain and tenderness in her left breast, and there is a wedge-shaped area of redness in one segment of the breast.
- Ms. Kabongo reports that for the first week or so after birth her newborn seemed to have difficulty taking the nipple into his mouth, but more recently she thinks that he has been doing better. He feeds about six times in a 24-hour period and is given water between feedings. Ms Kabongo had breastfed the newborn less than an hour before you examined her.

4. Based on these findings, what is Ms Kabongo's diagnosis and why?

CARE PROVISION: Planning and Intervention

5. Based on your diagnosis, what is your plan of care for Ms. Kabongo and why?

EVALUATION

Three days later Ms. Kabongo reports that she is feeling better and has stopped taking her medication. Her temperature is 37.6 ºC, her pulse is 90 beats/minute, her blood pressure is 120/80 mm Hg, and her respiration rate is 20 breaths/minute. There is less pain and swelling in her breast. She reports that she has stopped giving her newborn water and he has been feeding more than 6 times in 24 hours. She also reports that the newborn seems to be attaching better to the breast.

6. Based on these findings, what is your continuing plan of care for Ms. Kabongo and why?

SESSION 12: Care of the Low Birth Weight Baby, Including Kangaroo Mother Care

Summary

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

Objectives

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

- Define the low birth weight (LBW) baby.
- Describe factors associated with LBW and some measures for preventing low birth weight.
- Describe complications noted in LBW babies.
- Describe evaluation of LBW babies to identify those that may be managed locally and those that need to be transferred to a referral center.
- Describe care of the LBW baby.
- Describe kangaroo mother care (KMC) and its advantages.
- Describe the technique of implementing KMC.
- Describe counseling for the mother/family.

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INDIVIDUAL LEARNING ACTIVITIES

1. How do you define a low birth weight baby?

2. Which types of low birth weight babies can be managed at peripheral centers/home?

3. What are the advantages of kangaroo mother care?

4. Summarize the approach to the care of the LBW infant in the form of an algorithm.

SESSION 13: Treatment of Infections in the Newborn

Summary

During this session, participants will learn the basic steps of how to identify and manage minor and major infections at peripheral centers. Major infections are a leading cause of neonatal mortality.

Objectives

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

- The special features related to newborn infections and list the risk factors.
- The main types of infections (major and minor).
- The danger signs associated with major infections (sepsis).
- Management of major and minor infections.
- the appropriate method of referral where needed

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INDIVIDUAL LEARNING ACTIVITIES

Case Study 1

Mrs. Kalonji, age 35, gave birth at the general hospital to her fifth baby eight days ago. Pregnancy was uncomplicated. Because she found pus in the umbilical area, she brought her baby today to the health center.

1. What is the diagnosis?

2. What is the care plan for this baby and why?

Mrs. Kalonji comes back to clinic two days later. She reports that she gave the treatment as recommended. You observe a diffuse area of redness around the umbilical stump. The baby has a fever.

3. Based on these findings, what is your new care plan for the baby and why?

Case Study 2

The baby of Mrs. Mutombo, a 17-year-old primipara, was born after prolonged labor and PROM >24 hours. Mrs. Mutombo was discharged from the health center after one day. She and her baby did not receive any evaluation and counseling. She returns to the health center on day 5 because her baby refuses to suck. Upon examination, the baby is found to be hypothermic and has very poor activity.

1. What is the diagnosis? Why?

2. What care plan do you propose?

3. What should have been done after birth for this baby?

Practical Guidelines for Identification and Treatment of Major Infections at Peripheral Centers (Note: The first five danger signs are the most important.)

Management of the newborn <u>at risk</u> for early infection
For a newborn with maternal infections and PROM of 18 hours or more, even in the absence of symptoms, give intramuscular antibiotic treatment (ampicillin and gentamycin) for at least 3 days and preferably for 5 days, as blood cultures are not feasible at peripheral centers. Observe the baby at the facility. If there are no dangers signs, discharge the infant. If there are danger signs, transfer to a higher level of care.

DANGER SIGNS	IDENTIFICATION (Ask and look for/verify)	MANAGEMENT
Sucking less or poor, or not sucking at all	Not sucking at all; sucking less than usual; not opening the mouth when offered feeds; not demanding feeds	• Administer (a) first doses of the two antibiotics: ampicillin and gentamycin; (b) Vitamin K 1 mg if it was not given at birth; (c) Diazepam if convulsions: 0.5 ml rectally, or IM (thigh) or slow IV . • Send the baby to the referral hospital. • Explain to the mother why the baby needs referral and advise her to go along with another attendant. • Advise how to care for the baby during transport: o Keep the baby warm by skin-to-skin contact (see session on LBW and KMC). o To prevent hypoglycemia, if the baby can accept feeds, give direct breastfeeding or expressed breast milk with cup. Do not attempt to feed a baby that cannot swallow fluids. o Check the baby frequently to ensure that there is no additional problem. • If possible, contact the referral center to inform them. • Send a referral note with the mother indicating: o Name and address of the mother o Date and time of birth o Problems if any at birth o Reasons for referral o Treatment given o Advice given
Lethargy/ inactivity	Not as active as usual, sleeping excessively, difficult to arouse, not waking up for feeds, lying limp, "loose-limbed," excessively quiet or "too good"	
Fever/low body temperature	*Fever:* Body hot to touch, history of the mouth feeling excessively hot during breastfeeding; temperature more than 37.5 ^{0}C *Hypothermia:* body colder than normal; temperature less than 36.5 ^{0}C	
Rapid breathing/ difficulty in breathing	Respiration more than 60/minute (verify by counting a second time), flaring of the nostrils, groaning or grunting, severe sub-costal retraction	
Convulsions	Features of convulsions are often atypical in the newborn such as a "staring" look, blinking of eyelids, "chapping" movements of the lips, clonic/tonic movements of the limbs.	
Persistent vomiting	Occasional vomiting is common but persistent vomiting is abnormal, as is green-colored vomitus.	
Abdominal distension	Distension or fullness of the abdomen	
Spreading umbilical infection	Spreading redness or swelling around the umbilicus and/or foul smell, with or without pus discharge	

The first five danger signs are the most important. Although these are standard danger signs, it is essential that health workers should look at babies carefully at least once a day in adequate light while they remain in the facility. Even if they do not detect a specific danger sign, health workers should take care if they feel the baby is "not looking or doing well". In this way, sick newborns can be identified and treated early which is particularly important in the newborn period when the condition can deteriorate rapidly. Mothers should also be counseled on these points to promote early care-seeking.

ANSWERS TO LEARNING ACTIVITIES

SESSION 1: Preventing Infection—Answers

Answers to the learning game are found below.

Other questions in the learning activities do not have "correct" answers; learners are asked to evaluate their working conditions and should write down the problems they encounter with infection prevention in their work places.

CLASSROOM LEARNING ACTIVITIES

Category 1: Hand washing

For each practice or situation described below, select whether it is an acceptable or unacceptable hand washing practice.

Practice	Answer
1. A doctor washes his hands by dipping them in a basin of water before examining a patient.	***Unacceptable: Hands can be contaminated by dipping them in a basin of water. Standing water can easily become contaminated even if antiseptic is added.***
2. If there is no running water at a clinic, one staff member pours water over the other's hands for hand washing.	***Acceptable: If there is no running water, this practice is an acceptable substitute, as long as the water being poured is clean.***
3. A large bar of soap is kept in a saucer for use by all personnel in the examination room.	***Unacceptable: Small pieces of soap kept in a dish that allows drainage are best. A large bar of soap in a dish with no drainage can become contaminated easily.***
4. Staff members wash their hands for approximately five seconds.	***Unacceptable: Staff must wash their hands for 10-15 seconds.***
5. A staff member arrives at the clinic to find many people waiting for her, so she immediately begins seeing clients without washing her hands.	***Unacceptable: Staff should wash their hands when they arrive, before they leave a health facility and in between handling different clients.***

Category 2: Protective gear

For each practice or situation described below, select whether it is an acceptable or unacceptable infection prevention practice.

Practice	Answer (circle one)
1. Put gloves in the labor room sink after use.	***Unacceptable: Gloves should be decontaminated immediately after use and then discarded or cleaned and high-level disinfected or sterilized.***
2. Rub the fundus after delivery of the placenta without using gloves.	***Unacceptable: The woman's abdomen can be contaminated by body fluids and blood during counter-traction and skin-to-skin contact with the newborn, and exam gloves should be worn to protect the provider.***
In the space provided, circle true or false for each statement.	
3. Protective gear should be worn when handling a baby after delivery, before the infant is bathed.	***True***
4. Gloves provide a barrier against possible infectious microorganisms that can be found in blood, other body fluids, and waste.	***True: Gloves act as a barrier.***
5. Even when gloves are decontaminated, cleaned, and high-level disinfected, they should not be used if there are holes in them.	***True***

Category 3: Handling sharps

In the space provided, circle true or false for each statement.

Practice	Answer (circle one)
1. Injuries with sharp objects occur when sharps are left on surgical drapes or bed linens.	***True: Sharp objects left on drapes or bed linen can cause injuries.***
2. To reduce the risk of a needle stick, recap a needle by holding the syringe in one hand and holding the needle in the other hand.	***False: You should avoid recapping needles.***

3. Housekeeping staff are rarely at risk of injury or infections caused by sharps—such as hypodermic needles or scalpel blades—because they are not directly involved in client-care activities.	***False: Housekeeping staff are often at risk of injury or infection by sharps.***
For each of the practices described below, select whether it is an acceptable or unacceptable infection prevention practice:	
4. Break a hypodermic needle before disposal.	***Unacceptable: Providers are at risk when breaking a needle after using it and before disposal. Sharps can cause injury and transmission of serious infections, including HIV and hepatitis B.***
5. Wash a needle stick or cut with soap and water.	***Acceptable: A needlestick or cut may be washed with soap and water.***

Category 4: Preventing splashes

For each practice or situation described below, select whether it is an acceptable or unacceptable infection prevention practice.

Practice	Answer (circle one)
1. The provider drops instruments into a bucket with decontamination solution to avoid contact with the solution.	***Unacceptable: Place items in the decontamination bucket without splashing the solution.***
2. The provider artificially ruptures membranes during a contraction to prevent splashes.	***Unacceptable: Avoid rupturing membranes during a contraction to prevent splashes.***
3. Irrigate eyes well with water when blood or body fluids splash in them.	***Acceptable***
4. If you accidentally get blood or body fluids on your hands, wash with a 0.5% chlorine solution.	***Unacceptable: If blood or body fluids get in your mouth or on your skin, wash with plenty of water and soap as soon as it is possible and safe for the woman and baby. Chlorine is very abrasive and can cause small wounds on your hands which increase your risk of exposure to blood-borne pathogens.***

5. Hold contaminated instruments under the water while scrubbing.	***Acceptable: Holding instruments and other items under the surface of the water while scrubbing and cleaning will help prevent splashing.***

Category 5: Waste disposal

In the space provided, circle true or false for each statement.

Practice	Answer
1. Everyone who handles medical waste—from the point generated until final disposal—is at risk of infections and injury.	***True: A large percentage of staff report having experienced waste-related injuries and infection.***
2. If medical waste is stored at the health facility before being burned, it can be placed in a pile behind the clinic.	***False: Place waste in a container in a closed area that is minimally accessible, and make sure all containers have lids.***
3. Liquid medical waste can be disposed down a sink, drain, toilet, or latrine.	***True: If this is not possible, bury it along with solid medical waste.***
4. Burial sites for medical waste should not be located near water sources because of the potential to contaminate the water.	***True***
5. Scavenging of medical waste is rarely a problem in low-resource settings.	***False***

Category 6: Instrument processing

In the space provided, circle true or false for each statement.

Practice	Answer (circle one)
1. Decontamination kills all microorganisms on soiled instruments and other items.	***False: Decontamination kills viruses such as HIV and many—but not all—other microorganisms.***
2. When preparing a chlorine solution for decontamination, it is important to know the amount of active chlorine in the product used.	***True: It is important to know the amount of active chlorine in order to make a solution of the correct strength for decontamination.***

3. Cleaning instruments before sterilizing them is not necessary if they were soaked in a 0.5% chlorine solution for 10 minutes.	***False: Although decontamination makes items safer to handle, cleaning is still necessary to remove organic material, dirt, and other matter that can interfere with further processing.***
4. Sterilizing may not be effective if blood and other organic material are not cleaned from instruments before sterilizing.	***True: It is important to clean items before sterilization; microorganisms trapped in blood and other matter can survive the sterilization process.***
5. High-level disinfection kills all microorganisms.	***False: High-level disinfection does not reliably kill all bacterial endospores.***

SESSION 2: Clinical Decision-Making—Answers

INDIVIDUAL LEARNING ACTIVITIES

Questions

1. The first step in the problem solving method is to:

   ***a) collect information by asking questions** **
   b) implement a plan
   c) make a plan of care

2. The midwife gave Ms. A medication for an infection. The midwife asks Ms. A to return to the clinic in three days. The midwife says: "I will examine you then to see if the infection is gone." What steps in the decision-making process will the midwife carry out when the woman comes for the visit in three days?

   a) Ask and listen.
   b) Look and feel.
   c) Identify the problem or needs.
   ***d) All the steps, to determine if Ms. A's problem is improving** **

3. A plan of care for taking appropriate action may include the following. Circle all that apply:

   a) medicine *
   b) diet advice about nutrition *
   c) counseling about family planning methods *
   d) advice to get more rest *

Case studies

A woman at full term comes to the labor ward and states that she thinks she is in labor.

1. Steps 1 and 2: Take a targeted history: What questions will you ask to collect the information needed to give her appropriate care? Where relevant, make a list of the possible problems based on presenting features.

   A list of the possible needs the woman may have and the problems she may be experiencing:

   - ***true labor***
   - ***false labor***
   - ***any complications/problems associated with abdominal pain (urinary tract infection, etc.)***

   A list of the questions to ask to get more information about her problem:

   - ***What is your expected date of delivery (EDD)?***
   - ***Is the baby moving?***
   - ***When did you start having contractions?***
   - ***Do you have fever, bleeding, leaking of water, any illness?***
   - ***Have you had any complications of pregnancy?***

The client states her contractions are painful and started three hours ago. She has not noticed bleeding or leaking of fluid. The baby is moving. She does not have fever.

2. Step 2: Perform a targeted physical examination: What observations and examination will you do?

   - ***temperature, blood pressure, pulse***
   - ***fetal heart rate, fundal height, presentation and position and descent***
   - ***urine test***
   - ***inspect and palpate the abdomen, palpate the contractions, listen to the fetal heart rate (FHR)***
   - ***sterile vaginal examination***

Her vital signs are normal. By palpation the contractions are coming every three minutes, lasting 45 seconds, and are of moderate intensity. FHR is 140 and regular. The examination shows that the baby appears to be average size, left occipito-anterior (LOA) presentation with the head engaged. The cervix is 5 cm dilated and the bag of water is intact.

3. Step 4: Identify problems/needs: What problems or health care needs does this situation present? Write your problem identification.

   - ***term pregnancy***
   - ***active labor***
   - ***mother and fetus are normal***

2) Step 5: Make a plan of care based on identified needs and problems: What will you include in your plan for this client?

   - ***midwifery care***
   - ***comfort measures***
   - ***support***
   - ***monitoring of maternal and fetal status***
   - ***information for client and family***
   - ***record on partograph***

3) How will you evaluate your plan of care?

   In a case of labor, the plan will be evaluated frequently by repeating the steps to assure things are going normally.

SESSION 3: Maternal Care to Improve Maternal and Newborn Survival—Answers

CLASSROOM LEARNING ACTIVITIES

Knowledge Game on Maternal Care

Category 1: Antenatal care

Question	Answer
How many times should a woman seek antenatal care?	***At least 4 antenatal visits: at 16 weeks (before the end of the 4th month) or as soon as the woman knows she is pregnant; 24-28 weeks (6-7 months); 32 weeks (8 months); 36 weeks (9 months) for a total of 2 visits during the third trimester***
How many months/weeks pregnant should a woman be when she goes for her first antenatal visit?	***16 weeks (before the end of the 4th month) or as soon as the woman knows she is pregnant***
What laboratory tests should be done to evaluate the woman's health and her pregnancy?	***Hemoglobin, blood group and Rh, sickle cell test, RPR/VDRL, albuminuria, glycosuria, HIV, and urine for bacteriuria where feasible***
Which pregnant women should be referred for specialized care during pregnancy?	• ***Any woman with an identified complication, condition, infection, or disease***

Category 2: Prevention

Question	Answer
List three benefits of having nutritious and balanced meals during pregnancy.	***Nutritious and balanced meals during pregnancy:*** • ***assist the woman in providing the fetus' nutritional needs to ensure growth and development.*** • ***improve the pregnant woman's resistance to illness and infections.*** • ***improve the pregnant woman's chances of survival if she has PPH.***
Explain why a woman needs additional rest during pregnancy and while breastfeeding.	***The woman's body uses more energy during pregnancy and when breastfeeding.***
Describe three things a pregnant woman can do to protect herself and her fetus from environmental pollution.	• ***Follow rules of hygiene for the home.*** • ***Only drink potable water.*** • ***Wash raw foods before eating.*** • ***Wash hands before meal preparation and eating.***

Which pregnant/lactating women should always insist on using condoms during sexual intercourse?	***Ideally a condom should be used in all cases and particularly:*** • ***if either of the sexual partners has been diagnosed with an STI.*** • ***when having sexual intercourse with a new sexual partner.*** • ***if either of the sexual partners had sexual intercourse with a third person.***

Category 3: Prescriptions

Question	Answer
How many times should a woman take sulfadoxine-pyrimethamine (SP) during pregnancy if she is infected with HIV?	***3 times***
How often should a pregnant woman be offered a dose of mebendazole during pregnancy?	***Every 6 months after the 16th week of gestation***
Ms. X received her first dose of TT three months before becoming pregnant. She presents for her first ANC at 20 weeks gestation. How many TT doses should she receive during this pregnancy?	***One dose of TT***

Category 4: Miscellaneous

Question	Answer
List at least three pregnancy-related complications that may affect the baby's survival.	• ***Preeclampsia*** • ***Eclampsia*** • ***Abruptio placentae*** • ***Placenta prævia*** • ***Uterine rupture*** • ***Coagulopathies***
List at least four maternal illnesses/diseases that may affect the baby's survival.	• ***Malaria*** • ***Anemia*** • ***Diabetes*** • ***Syphilis*** • ***Urinary tract infections*** • ***Tuberculosis*** • ***HIV/AIDS***
What is the best spacing between births?	***3 years***
If a woman has just taken a dose of SP, how much time should she wait before restarting her iron/folic acid tablets?	***It is recommended that there should be one week between doses of SP and iron/folic acid because of their interaction.***

Category 5: Birth-preparedness plan

Question	Answer
List danger signs during pregnancy.	• ***Vaginal bleeding*** • ***Severe headache or blurred vision*** • ***Abdominal pain*** • ***Decreased or no movements of the baby*** • ***Loss of consciousness or convulsions*** • ***Fever*** • ***Watery vaginal discharge*** • ***Foul-smelling vaginal discharge, itching, or genital ulcers*** • ***Painful urination*** • ***Persistent vomiting*** • ***Lethargy and fatigue*** • ***Difficulty breathing*** • ***Night blindness***
List the four delays.	• ***Delay in recognizing the problem*** • ***Delay in deciding to seek care*** • ***Delay in arriving at the appropriate facility*** • ***Delay in receiving quality care***
What are the principal elements of a birth-preparedness plan?	• ***Elements of a birth preparedness plan include: Prepare the necessary items for birth; identify a skilled attendant and arrange for her/his presence at birth; identify an appropriate site for birth and how to get there; identify support people, including who will accompany the woman and who will take care of the family; establish a financing plan/scheme.*** • ***Elements of a complication readiness plan include: Establish a financing plan/scheme; make a plan for decision-making; arrange a system of transport; establish a plan for blood donation.***
Describe how a woman will need to prepare herself to give birth in a health facility.	• ***Plan how to get to the health care facility. This needs to be planned in advance of the estimated date of childbirth.*** • ***Establish a financing plan/scheme to pay for care at the facility. Begin to save money as soon as the woman becomes pregnant, particularly if the family has budgetary constraints.*** • ***Identify support people who will accompany the woman.*** • ***Prepare a suitcase or bag with the necessary items for herself and the baby to take along when she goes into labor.***

SESSION 4: Preventing Postpartum Hemorrhage —Answers

INDIVIDUAL LEARNING ACTIVITIES

1. Explain why a provider needs to respond immediately to "any amount of bleeding that causes deterioration in the woman's condition" even if she has not yet lost 500 mL.
   - ***It is difficult to measure blood loss accurately.***
   - ***Research has shown that blood loss is frequently underestimated.***
   - ***Nearly half of women who deliver vaginally often lose at least 500 mL of blood.***
   - ***For severely anemic women, blood loss of even 200 to 250 mL can be fatal.***
2. Explain why a strategy to prevent postpartum hemorrhage should not be based on identification of risk factors.
   - ***Up to two-thirds of women who have PPH have no risk factors.***
3. Describe a prevention strategy for each of the factors listed in the first column that may contribute to the loss of uterine muscle tone in the postpartum period.

Factors contributing to the loss of uterine muscle tone	Prevention Strategy
Full bladder	• ***Encourage/assist women to empty their bladder during labor and before second stage.*** • ***Encourage/assist women to empty their bladder regularly in the immediate postpartum period.***
Prolonged/obstructed labor	• ***Give birth with a skilled provider.*** • ***Monitor labor using the partograph.*** • ***Transfer women to a facility with Cesarean facilities once unsatisfactory progress in labor has been identified.***
Oxytocin induction or augmentation of labor	• ***Give birth with a skilled provider.*** • ***Monitor labor using the partograph.*** • ***Only augment or induce labor when there are clear emergency or obstetric indications.*** • ***Only augment or induce labor in a health facility where personnel are trained to monitor the woman and fetus and where a Cesarean operation can be performed if necessary.*** • ***Never give oxytocin intramuscularly in the antepartum period.***

4. Explain how each of the components of AMTSL helps to prevent PPH.

- ***Administration of a uterotonic drug stimulates uterine contractions that 1) facilitate separation of the placenta from the uterine wall, resulting in rapid delivery of the placenta and 2) that compress maternal blood vessels at the placental site after delivery of the placenta.***
- ***Controlled cord traction facilitates rapid delivery of the placenta and emptying of the uterus.***
- ***Uterine massage stimulates uterine contractions and removes clots that may inhibit uterine contraction.***

5. Describe a strategy to ensure timely diagnosis and treatment of PPH for each of the factors listed in the first column that may contribute to the loss of uterine muscle tone in the postpartum period.

Factors contributing to the loss of uterine muscle tone	**Strategy for ensuring timely diagnosis and management**
Full bladder	• ***Give birth with a skilled birth attendant.*** • ***Carefully monitor the woman during labor.*** • ***Carefully monitor the woman during at least the first 6 hours postpartum.***
Prolonged/obstructed labor	• ***Give birth with a skilled provider.*** • ***Monitor labor using the partograph.***
Uterine atony	• ***Give birth with a skilled birth attendant.*** • ***Carefully monitor the woman during at least the first 6 hours postpartum.*** • ***Teach the woman how to palpate and massage her own uterus and ask her to call for help if her uterus is not "hard" or the amount of bleeding has increased.***
Retained placental Fragments	• ***Give birth with a skilled birth attendant.*** • ***Carefully examine the placenta and membranes to make sure they are complete.***

6. Explain how refocused antenatal care can considerably reduce a woman's risk of dying from PPH.

Anemia can be screened for, prevented, and treated during pregnancy. If a woman is not anemic when she gives birth, this will not prevent PPH but will improve her chances of surviving PPH if she has it.

SESSION 5: Routine Care during the Third Stage of Labor—Answers

INDIVIDUAL LEARNING ACTIVITIES

1. Ms. B is about the deliver and you plan to actively manage the third stage of labor. When will you administer 10 IU of oxytocin to Ms. B?

   Within one minute after the birth of the baby and after ruling out the presence of another fetus.

2. What must the provider rule out before giving oxytocin for AMTSL?

   An additional baby or babies

3. List the three main steps of AMTSL.

   - ***Administration of a uterotonic within one minute after the birth of the baby***
   - ***Controlled cord traction***
   - ***Uterine massage after delivery of the placenta***

4. To safely perform controlled cord traction for delivery of the placenta, the provider holds the clamped cord with one hand. With the other hand placed on the woman's abdomen above the pubic bone, the provider pushes the uterus upwards toward the woman's head. Why does the provider push the uterus upward?

   To stabilize the uterus and prevent uterine inversion

5. Ms. B just gave birth to a healthy baby. Her perineum is intact. After delivery of the placenta, how often will the provider monitor her vaginal bleeding?

   Every 15 minutes for 2 hours, then every 30 minutes for 1 hour, then every hour for 3 hours.

6. How will you react :

   a. if the placenta is not delivered after the first attempt at controlled cord traction?

   Release tension on the cord while still holding the cord and then release pressure on the uterus. Wait for the next contraction.

   Repeat controlled cord traction with countertraction on the uterus with the next contraction.

   b. if the cord is ruptured during controlled cord traction?

   Ask the woman to squat and deliver the placenta.

   c. if the placenta is not delivered after four attempts at controlled cord traction?

   Consider placenta accreta and prepare the patient for a surgical intervention.

7. List the key steps of essential newborn care at birth.

The key components of essential newborn care at birth include the steps noted below:

Key Steps for Immediate Care of the Newborn (The order may be changed according to the local needs except for steps 1-3)	
Step 1	Dry the baby and keep him/her warm by placing the baby on the mother's abdomen.
Step 2	Assess breathing. Make sure the baby is breathing well.
Step 3	If the **baby does not breath**e, clamp/tie and cut the cord immediately and start resuscitation. If the **baby does cry/breathe well**, clamp/tie and cut the cord after pulsations stop or after 2-3 minutes.
Step 4	Place the infant in skin-to-skin contact on the mother's chest and cover them with clean linen and blanket as required. Carry out all the steps noted below up to # 9 with the baby on the mother's chest.
Step 5	Administer eye drops/eye ointment.
Step 6	Administer vitamin K1.
Step 7	Place the baby identification bands on the wrist and ankle.
Step 8	Assist the mother to initiate breastfeeding within the first hour. Select the appropriate method of feeding for the HIV-infected mother, based on informed choice.
Step 9	Weigh the infant when he/she is stable.
Step 10	Record observations and treatment provided in the registers/appropriate chart/cards.
Note	Defer the bath for at least six hours. Clean the newborn of HIV-infected mother as recommended by the Ministry of Health.

8. What steps will you take to ensure that the newborn baby is warm after birth?

The steps include the following:

- ***Dry the baby immediately after birth with a clean, dry cloth (preferably sterile and pre-warmed).***
- ***Discard the wet cloth and cover the bay over the mother with a fresh, dry cloth.***
- ***Place the baby in skin-in-skin contact, first on the mother's abdomen and later, after cutting the cord, on the mother's chest and cover the body and head of the baby over the mother's chest.***
- ***Have a source of warmth and a table for special procedures, such as resuscitation.***
- ***Check that the baby is warm by noting the axillary temperature with a thermometer or at least by touching the baby's abdomen, hands, and feet and ensuring that they are all warm.***

9. What counseling will you provide to the woman about care for her baby before transferring her out of the delivery room?

Counsel the mother before she leaves the delivery room. However, if she is very tired after delivery, only talk to her about the key points noted below.

- ***Keep the baby warm.***
- ***Continue breastfeeding frequently on demand day and night.***
- ***Do not give any other fluids/food to the baby.***
- ***Do not apply any harmful substances on the cord such as ash or herbal preparations.***

More detailed counseling can be done in the postnatal period in the facility before the mother is discharged and at subsequent postnatal visits.

SESSION 6: Monitoring the Woman and Newborn during the First Six Hours Postpartum—Answers

INDIVIDUAL LEARNING ACTIVITIES

Case studies

1. Ms. Kabongo:

   Ms Kabongo gave birth at 1:20 pm. It is now 3:50 pm. You assess Ms. Kabongo and find the following:

   - BP: 120/70, Pulse: 88 beats/minute
   - Uterus well contracted; vaginal bleeding: <1 sanitary pad since the last time you checked her 30 minutes ago.
   - Her bladder is distended and Ms. Kabongo cannot pass urine.
   - The newborn is breastfeeding well.
   - Ms. Kabongo looks very happy.

   Are there any danger signs?

   Danger sign:

   - ***Ms. Kabongo's bladder is distended and she cannot pass urine.***

2. Ms. Mpo:

   Ms. Mpo gave birth at 3:00 pm. It is now 7:00 pm. You assess Ms. Mpo and find the following:

   - BP: 90/-, Pulse: 120 beats/minute
   - Uterus well contracted; vaginal bleeding: >7 sanitary pads since the last time you checked her 1 hour ago.
   - Ms. Mpo just passed urine.
   - The newborn is breastfeeding well.
   - Ms. Mpo has cold, clammy skin.

   Are there any danger signs?

   Danger signs:

   - ***BP: 90/-, Pulse: 120 beats/minute***
   - ***Vaginal bleeding: >7 sanitary pads since the last time you checked her 30 minutes ago.***
   - ***Ms. Mpo has cold, clammy skin.***

   Ms. Mpo's bleeding is most likely due to a genital tear.

3. Ms. Kabamba:

   Ms. Kabamba gave birth at home four hours ago. She came to the health center because she has been bleeding excessively. You find:

   - Pulse: 96 beats/minute; BP: 110/70; respirations: 21/minute; temperature: 37 ℃; her conjunctivae are pale.
   - The uterus is soft.
   - Sanitary cloths are soaked in blood; she put the cloth there about one hour ago.
   - There are no vaginal or perineal tears.
   - Her extremities are hot; she is fully conscious and oriented.
   - She just passed "a good amount" of urine.

   Are there any danger signs?

   Danger signs:

   - ***The uterus is soft.***
   - ***Sanitary cloths are soaked in blood; she put the cloth there about one hour ago.***
   - ***Her conjunctivae are pale.***

   Ms. Kabamba's bleeding is most likely due to uterine atony.

4. Ms. Tona:

   You assisted Ms. Tona during labor. You actively managed the third stage of labor. Thirty minutes after delivery of the placenta you notice that Ms. Tona has soaked four sanitary pads since you checked her 15 minutes ago. When you check her you find:

   - Pulse: 112 beats/minute; BP: 80/40; respirations: 36/minute
   - The uterus is soft.
   - Temperature: 36 ℃; pale conjunctivae; cold extremities
   - Ms. Tona is very anxious.
   - You can't remember the last time she passed urine.
   - The newborn is breastfeeding well.

   Are there any danger signs?

   Danger signs:

   - ***Soaked 4 sanitary pads in 15 minutes***
   - ***Pulse: 112 beats/minute; BP: 80/40; respirations: 36/minute***
   - ***The uterus is soft.***
   - ***Temperature: 36 ℃; pale conjunctivae; cold extremities***
   - ***Ms. Tona is very anxious.***
   - ***You can't remember the last time she passed urine.***

   Ms. Tona's bleeding is most likely due to uterine atony.

5. Baby Kabongo was born at 9:20 am. It is now 11:50 am. During routine monitoring, you find:

   - The color of the palms, soles, lips and tongue is pink.
   - Respiratory rate is 45/minute with no grunting or subcostal retraction.
   - The mother informs you that the baby breastfed for 10 minutes.
   - Blood is oozing from the umbilicus.

   What steps should be taken?

   Answer:

   - ***The only abnormality is blood oozing from the umbilical cord.***
   - ***There are no real serious danger signs at this stage.***
   - ***Action: Retie the cord.***
   - ***Counsel the mother.***
   - ***Continue monitoring.***

6. Baby Mpo was born at 3:00 pm. Routine monitoring findings at 6:00 pm are:

   - Respiratory rate is 65/minute; repeat count is 70/minute.
   - Grunting.
   - The mother says that the baby sucked weakly when offered the breast.

   What do the findings indicate? What should be done?

   Answer:

   - ***The baby has two danger signs: breathing too fast and a weak suck.***
   - ***The baby needs to be referred to the appropriate referral center after administration of the first doses of antibiotics; details related to this will be discussed during session 13 on major infections.***

SESSION 7: Routine Postpartum Care for the Woman—Answers

INDIVIDUAL LEARNING ACTIVITY

1. Ms. A gave birth at 2:15 am. It is now 3:15 am and you found three pads soaked in the 15 minutes since you last checked her. What is your assessment?

   a. Her vaginal bleeding is normal for this time in the immediate postpartum.
   b. Her vaginal bleeding is slightly more than normal for this time in the immediate postpartum but is still within normal limits.
   c. Her vaginal bleeding is excessive for this time in the immediate postpartum.

2. Ms A. gave birth at 2:15 am. It is now 5:15 am and you just checked Ms. A's BP, pulse, uterus, and vaginal bleeding and found that her uterus was boggy. You massaged her uterus until it was well contracted and noted that her vaginal bleeding was not excessive. When will you check Ms. A again?

   a. At 5:30 am
   b. At 5:45 am
   c. At 6:15 am
   d. Prior to discharge

3. Which of the following statements is **not** true?

   a. Ms. A. should stay in bed during the first six hours postpartum to reduce the risk of PPH.
   b. Ms. A should be encouraged to eat and drink during the first six hours postpartum.
   c. Ms. A should never be left alone during the first six hours postpartum.
   d. Ms. A may take paracetamol for pain if she experiences pain after delivery.

4. When you check Ms. A at 5:15 you noted that her bladder was distended. How will you manage this?

   a) Tell Ms. A to empty her bladder as soon as she feels the urge to do so.
   b) Assist Ms. A to empty her bladder.
   c) Catheterize her immediately as this may prevent her uterus from contracting.
   d) Call the doctor to consult her on how best to manage Ms. A's distended bladder.

5. What advice can you give to a woman to improve genitourinary health?

   Answer:
   - ***Encourage the woman to drink plenty of fluids so that she passes urine at least six times a day.***
   - ***Show the woman how to clean her genital area by wiping from front to back.***
   - ***Teach her how to do perineal tightening exercises, starting immediately postpartum: Have the woman urinate and try to stop her urine following a "go-stop-go-stop-go" pattern. When she is doing this, she can identify which muscles she tightens and uses in order to stop the flow of urine. There is no limit to how often or how many times she does this exercise.***

SESSION 8: Resuscitation for Birth Asphyxia—Answers

INDIVIDUAL LEARNING ACTIVITIES

1. True or false: Only specialized providers are able to perform basic resuscitation of a newborn at birth.

   False

2. True or false: Basic resuscitation of the newborn may be provided at all levels of the health structures.

   True

3. List the minimum equipment and supplies necessary to perform neonatal resuscitation:

   It is mandatory to ascertain (a) every morning, (b) at the beginning of every shift, and (c) before each delivery that the following equipment/supplies are available, in working order, sterile/clean, and ready to be used.

   - ***A heat and light source***
   - ***A table for resuscitation with a mattress with a clean washable surface covered with a clean, preferably sterile cloth. This could be part of the warming table.***
   - ***Three to five pieces of clean, preferably sterile, cloth to dry and wrap the baby, including the head (a cap or bonnet, where available) and a washable blanket or several layers of cloth where required***
   - ***Sterile gauzes/pieces of cloth***
   - ***Disposable sterile (preferable)/ high-level disinfected gloves***
   - ***Sterile equipment and supplies for cutting and tying the cord***
   - ***Suction equipment with suction tubes/catheters***
   - ***A self-inflating resuscitator bag (500 mL) and masks (sizes 1 and 0)***
   - ***A stethoscope***
   - ***An oxygen source (if available)***
   - ***A wall clock with a second hand***
   - ***A wall thermometer***
   - ***A clinical thermometer to record axillary temperature of the baby***
   - ***Disposable syringes (1ml, 2ml, 10ml)***
   - ***Vitamin K1***

4. List two maternal factors associated with neonatal asphyxia:

   Maternal causes for birth asphyxia include problems such as:

   - ***Eclampsia***
   - ***Bleeding (e.g., placenta previa/abruption)***
   - ***Fever***
   - ***Maternal sedation/anesthesia***
   - ***Abnormal presentations***
   - ***Prolonged/difficult labor***
   - ***Infections such as malaria, syphilis, tuberculosis, and HIV/AIDS***

5. List two fetal factors associated with neonatal asphyxia :

Factors in the baby include problems such as:

- ***Cord prolapse/knot***
- ***Thick meconium in the amniotic fluid (This may be due to fetal distress, but if aspirated into the lungs it may perpetuate asphyxia after birth.)***
- ***Prematurity/IUGR***
- ***Post-maturity***
- ***Multiple births***
- ***Selected congenital malformations***

6. True or false: Supplemental oxygen is always necessary for the basic resuscitation of the newborn.

False

2. **Case study:** A male baby was born after a prolonged second stage of labor. You are the only provider without anyone to assist you. Your health center is equipped with mechanical suction and bag and mask. You place the baby on the mother's abdomen while you cut the cord. The baby is floppy and has no spontaneous breathing. List the key steps of the management at this stage.

Answer*:*

- ***Dry and stimulate the baby.***
- ***Maintain the body temperature.***
- ***Clear the upper airways.***
- ***Ventilate the baby with the resuscitator bag and mask.***

8. What care do you provide the baby after resuscitation?

Answer:

- ***Prevent hypothermia. Keep the baby warm and dry, if feasible, in skin-to-skin contact with the mother, and cover his/her body and head.***
- ***Help the mother to start breastfeeding as soon as the baby is stable.***
- ***After resuscitation, reassesses the baby periodically every 15 minutes for 2 hours and every 30 minutes for 6 hours for breathing, color, and activity. Continue assessment, including evaluation of feeding every 3 hours for the next 48-72 hours.***
- ***If any danger sign is noted, transfer the infant to a hospital with the ability to care for sick newborns.***
- ***If the baby improves, commence routine essential newborn care, including breastfeeding.***
- ***Record key findings and treatment provided in the partogram, delivery room register, and maternal/baby records as recommended by MOH guidelines.***
- ***Make sure that all equipment is decontaminated, cleaned, and sterilized/subjected to high-level disinfection as appropriate, and all disposable supplies are replenished and kept ready for the next delivery.***
- ***Explain what happened to the mother and family and what additional care is required at the facility and subsequently at home.***

SESSION 9: Basic Systematic Examination of the Newborn at Peripheral Centers—Answers

INDIVIDUAL LEARNING ACTIVITIES

1. List the key steps of the basic systematic examination of the newborn at the peripheral center.

Answer: The key steps of the basic systematic examination of the newborn at the peripheral enter are noted in the table below:

Key Steps in Examining a Newborn at a Peripheral Center
1. Ask the mother for danger signs. 2. Ask about other problems. 3. Evaluate for danger signs that are features of major infections. (Even if there is only one danger sign, institute steps to transfer the baby to an appropriate referral center after administration of the first dose of antibiotics.) 4. Evaluate for jaundice. 5. Evaluate for minor infections. 6. Evaluate feeding. 7. Weigh the baby. 8. Prescribe treatment for minor infections. 9. Document the findings and care provided on cards/chart/record books. 10. Take advantage of this contact to provide care such as the necessary vaccines. 11. Counsel the mother/family members on basic care at home.

SESSION 10: Postnatal Care of the Newborn at the Facility and during Postnatal Visits—Answers

INDIVIDUAL LEARNING ACTIVITIES

1. Outline the options for the postnatal visits for the newborn baby with the mother.

The suggested timings for the postnatal visits/contacts, depending on the place of delivery and time of discharge in facility births, are summarized in the table below.

Suggested Timings of Postnatal Visits Ideally should be provided by a skilled attendant who is usually at the facility level, linked with a community health worker/volunteer (CHW). If access to the facility is extremely difficult, have the postnatal visit through the CHW.			
Scenario	**1st postnatal visit**	**2d postnatal visit**	**3d postnatal visit**
Facility delivery, normal baby, discharge within 24 hrs	In the first 2-3 days, ideally 2 days after birth	5-7 days (may coincide with special events)	4-6 weeks
Facility delivery, normal baby discharge day 2 or 3	4-7 days	Second week	4-6 weeks
Delivery by Cesarean section, normal baby, discharged after a week or, in some cases, earlier	2 weeks	4-6 weeks	
Home delivery	Ideally on day of birth and within 48-72 hrs; If not feasible, at least one visit within 48 hrs	5-7 days (may be adjusted to accommodate special family events)	4-6 weeks
LBW babies should ideally stay at least 3-7 days at facility. Refer very small babies and those with problems to higher center.	Visit every week until weight gain adequate, e.g., 2000-2500 grams and baby doing well.		
The number and timing of home visits by the CHW can vary based on feasibility and the recommendations of the program implementing agency/MOH and on existing problems, but advocacy should be carried out for coverage during the first week, especially during the first 2 – 3 days.			

2. List the key components to be evaluated during postnatal contacts/visits.

The key components are noted in the two tables given below.

Care of the Newborn During the 4-6 Weeks After Birth (Use the learning checklist on the postnatal visit)							
	From birth to six weeks						
Action	**At birth**	**Before mother and baby leave the delivery room**	**At least once a day during stay in postnatal ward**	**At discharge**	**First postnatal visit**	**Second postnatal visit**	**Third postnatal visit at 4-6 weeks**
Provide care/ counseling	**Essential Newborn Care**						
Observe/look for	Brief examination, look for danger signs		Full basic systematic examination				
Provide counseling	Targeted counseling, on breastfeeding, protection against hypothermia, danger signs.		Full counseling				
Give specific care	Eye care Cord care Vitamin K Identification band Breastfeeding		BCG, OPV, and hepatitis B any time in the postpartum period according to the recommendations of the Ministry of Health Care of the baby of the HIV positive mother including ARV.				DPT, oral polio, and BCG if not administered earlier and cotrimoxazole for babies of HIV positive mothers
Weigh		weight		weight	weight	weight	weight
Document information in mother/ baby card /registers	X	X	X	X	X	X	X

SUMMARY: Postnatal Evaluation and Care
1. Implement tasks at the appropriate time. After birth evaluate and provide care: • Before transfer out of the delivery room. • At least once a day during the stay of the baby at the facility (more frequently for low birth weight babies and if a problem needing observation was noted). • At discharge. • During the postnatal visits.
2. Carry out a basic systematic examination of the baby (see session 9 for details).
3. Provide relevant care: • If a danger sign exists (even if only one), give the first dose of antibiotics and refer the baby. • Administer/prescribe treatment for minor infections. • Administer immunizations: OPV, BCG, hepatitis B (based on recommendations of the Ministry of Health), if it was not already done.
4. Document findings/care in mother/baby card/register.
5. Promote continued follow-up and schedule the next appointment.
6. Counsel mother/family on the basic preventive care at home, identifying danger signs, and appropriate care seeking.
7. Where the mother is HIV-positive, ensure appropriate care for the mother and baby including ARV and later cotrimoxazole from 4 – 6 weeks.
8. Where feasible and appropriate put the family in contact with an available trained community health worker/volunteer.

SESSION 11: Diagnosing and Treating Breastfeeding Problems—Answers

INDIVIDUAL LEARNING ACTIVITIES

Read the list of findings for each of the following women, who are new mothers and came to you with fever. Based on the findings, write the most likely diagnosis for each woman. Choose the diagnosis from the following list (not all the diagnoses will be used).

Breast abscess, breast engorgement, malaria, mastitis, pneumonia, urinary tract infection.

1. Ms. Rosa:

   - Firm, very tender breast
   - Overlying reddened skin
   - Fluctuant swelling in breast
   - Draining pus

   Ms. Rosa probably has a breast abscess.

2. Ms. Anita:

   - Fever
   - Painful urination
   - Increased frequency and urgency of urination
   - Lower back pain
   - Suprapubic pain
   - Abdominal pain

   Ms. Anita probably has a urinary tract infection.

3. Ms. Bobo:

   - 3-4 weeks after delivery
   - Headache
   - Breast pain and tenderness
   - Reddened, wedge-shaped area on breast
   - Inflammation preceded by engorgement
   - Only one breast affected

   Ms. Bobo probably has mastitis.

4. Ms. Mohini:

   - Fever
   - Chills
   - Sweating
   - Headache
   - Enlarged/tender spleen

   Ms. Mohini probably has malaria.

5. Ms. Mpo:

- Breast pain and tenderness
- 3-5 days after delivery
- Hard and enlarged breasts
- Both breasts affected

Ms. Mpo probably has engorgement.

Case study[2]

DIRECTIONS: Read and analyze this case study individually. When the others in your group have finished reading it, answer the case study questions. Consider the steps in clinical decision-making as you answer the questions. The other groups in the room are working on the same or a similar case study. When all groups have finished, discuss the case studies and the answers each group has developed.

Ms. Kabongo is 17-years-old. She gave birth to her first newborn three weeks ago at the health center. Her birth was uncomplicated and the newborn was healthy and of normal birth weight. You last saw Ms. Kabongo two days after the birth, when she and her newborn were found to be doing well. She has come to the health center today because she has breast pain and tenderness and feels unwell.

ASSESSMENT: History, Physical Examination, Screening Procedures/Laboratory Tests

6. What will you include in your assessment of Ms. Kabongo and why?

- ***Ms. Kabongo. should be greeted respectfully and with kindness.***
- ***She should be listened to carefully and told what is going to be done in a way she can understand. In addition, her questions should be answered in a calm and reassuring manner.***
- ***A rapid assessment should be done to determine the degree of illness. Ms. Kabongo's temperature, pulse, respiration rate, and blood pressure should be checked. In addition, she should be asked how breastfeeding is going, whether she has had any problems, how many times in a 24-hour period the newborn is feeding, whether she has fed the newborn anything other than breast milk, and whether she has cracked or sore nipples.***

7. What particular aspects of Ms Kabongo's physical examination will help you make a diagnosis or identify her problems/needs and why?

- ***Ms. Kabongo's breasts should be checked for pain and tenderness, swelling and inflammation, and cracked nipples.***

8. What screening procedures/laboratory tests will you include (if available) in your assessment of Ms. Kabongo and why?

- ***None at this stage.***

[2] http://www.reproline.jhu.edu/english/2mnh/2mcpc/5_Learning_Pkg/C_14_Fever_after_childbirth/14-CS-14.2.htm (accessed October 13, 2008)

DIAGNOSIS: Identification of Problems/Needs

You have completed your assessment of Ms. Kabongo and your main findings include the following:

- Her temperature is 38 ºC, her pulse rate is 120 beats/minute, her blood pressure is 120/80 mm Hg, and her respiration rate is 20 breaths/minute.
- She has pain and tenderness in her left breast, and there is a wedge-shaped area of redness in one segment of the breast.
- Ms. Kabongo reports that for the first week or so after birth her newborn seemed to have difficulty taking the nipple into his mouth, but more recently she thinks that he has been doing better. He feeds about six times in a 24-hour period and is given water between feedings. Ms. Kabongo had breastfed the newborn less than an hour before you examined her.

9. Based on these findings, what is Ms. Kabongo's diagnosis and why?

- ***Ms. Kabongo's symptoms and signs (e.g., fever, breast pain and tenderness, and a reddened, wedge-shaped area on one breast) are consistent with mastitis.***

CARE PROVISION: Planning and Intervention

10. Based on your diagnosis, what is your plan of care for Ms. Kabongo and why?

- ***Ms. Kabongo should be treated with one of the following antibiotics: cloxacillin 500 mg by mouth 4 times/day for 10 days; or erythromycin 250 mg by mouth 3 times/day for 10 days.***
- ***Her breastfeeding technique should be observed for correct positioning (i.e., newborn's head and body straight, well supported, and held close to the mother's body, with the newborn facing the breast with nose opposite the nipple) and attachment (i.e., more areola visible above than below the mouth, mouth open wide, lower lip turned outward, chin touching the breast).***
- ***Ms. Kabongo should be provided reassurance and encouragement to continue breastfeeding, at least 8 times in a 24-hour period. She should also be encouraged to stop giving her newborn water and counseled about exclusive breastfeeding.***
- ***She can continue breastfeeding even from the affected breast if possible and if the baby will accept the milk. Sometimes, perhaps due to the change in taste because of the infection, babies may not accept milk from the affected breast. In such cases, the mother should be advised to continue breastfeeding on the normal breast and supplement with another milk/formula until the baby accepts the breastfeeding. Counsel the mother on safe methods of giving other milks and ask her to express and discard milk from the affected breast until it is better and the baby accepts direct breastfeeding for about 24-48 hours.***
- ***A breast binder or brassiere should be worn to support her breasts and cold compresses should be applied between expressions/feedings to reduce swelling and pain.***
- ***Paracetamol 500 mg by mouth should be given, as needed.***
- ***Ms. Kabongo should be asked to return for follow-up in three days.***

EVALUATION

Three days later Ms. Kabongo reports that she is feeling better and has stopped taking her medication. Her temperature is 37.6 ºC, her pulse is 90 beats/minute, her blood pressure is 120/80 mm Hg and her respiration rate is 20 breaths/minute. There is less pain and swelling in her breast. She reports that she has stopped giving her newborn water and he has been feeding more than 6 times in 24 hours. She also reports that the newborn seems to be attaching better to the breast.

11. Based on these findings, what is your continuing plan of care for Ms. Kabongo and why?

- ***Ms. Kabongo should be counseled about the importance of completing the full 10-day course of antibiotics (3 days of antibiotic therapy is insufficient to resolve infection).***
- ***Her breastfeeding technique should be observed again to check positioning and attachment, and further reassurance and encouragement should be provided to Ms. Kabongo to continue breastfeeding at least 8 times in 24 hours.***
- ***Ms. Kabongo should be followed up on every 2-3 days to ensure that she complies with antibiotic therapy, that her symptoms and signs resolve, and to provide continuing reassurance and encouragement for breastfeeding.***

SESSION 12: Care of the Low Birth Weight Baby, Including Kangaroo Mother Care—Answers

INDIVIDUAL LEARNING ACTIVITIES

1. How do you define a low birth weight baby?

The low-birth weight baby is one that weighs less than 2500 grams at birth.

2. Which types of low birth weight babies can be managed at peripheral centers/home?

Ideally, all low birth weight babies should be evaluated and cared for by a competent skilled attendant. It may, however, not be practical to refer all low birth weight babies to a higher center. Thus, those babies who can be looked after at the place of birth are those who:

- ***Maintain body temperature with minimal help, such as additional clothing or skin-to-skin contact.***
- ***Are able to breast feed or to drink expressed breast milk with a cup or a spoon.***
- ***Have no problem or danger sign.***

3. What are the advantages of kangaroo mother care?

The main advantages for the baby are:

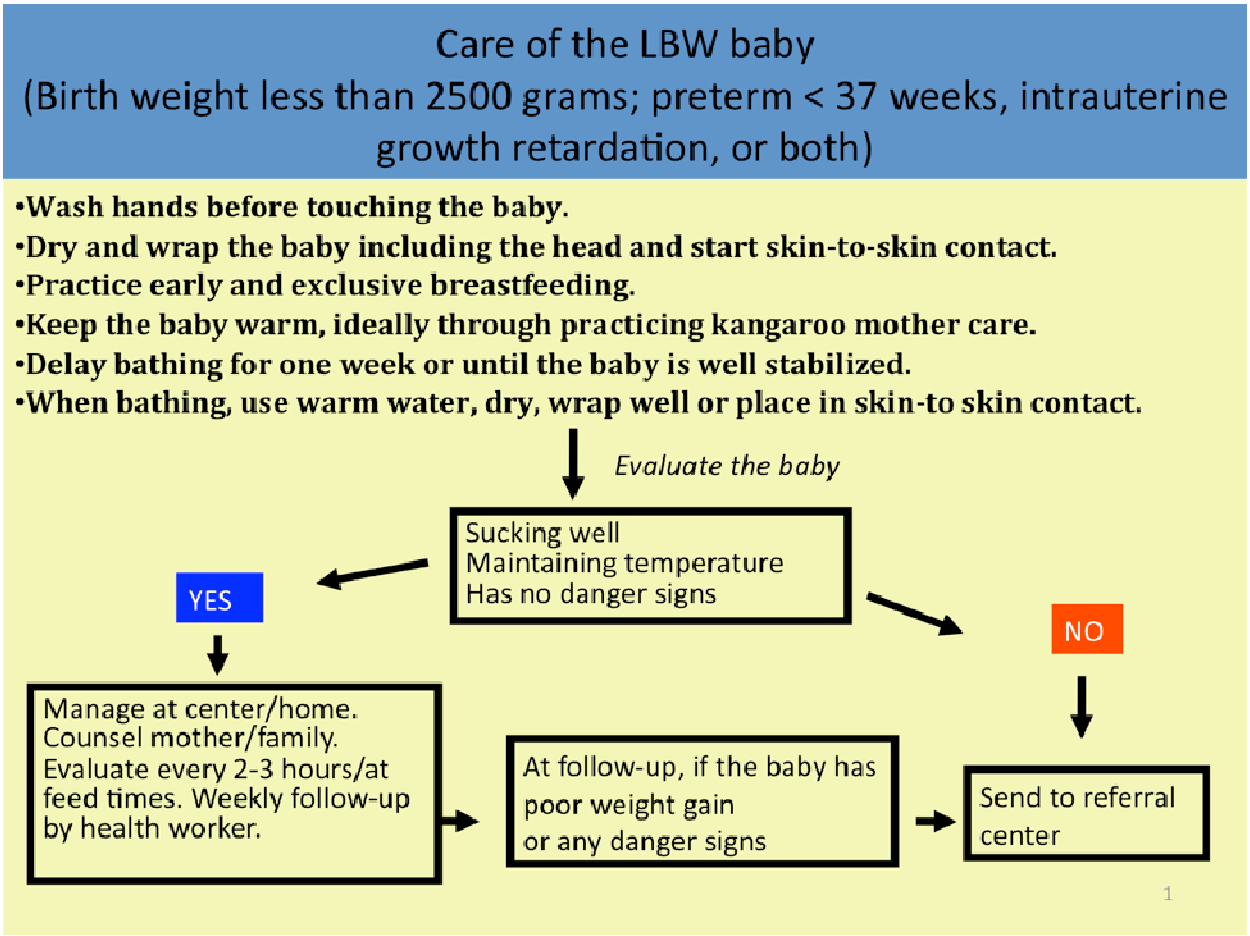
- ***It is a low cost method that is a good alternative to conventional care of preterm/LBW babies in low-resource countries.***
- ***The outcome has been found to be similar to the use of the incubator, which is expensive and more difficult to maintain.***
- ***The baby is comfortable in this position and is quieter, crying less frequently than in incubators.***
- ***The vertical position decreases the risk of aspiration , improves cardio-respiratory functions, and decreases apnea.***
- ***Closeness to the breast favors frequent sucking that prolongs the duration of breastfeeding.***
- ***The length of the hospital stay is reduced, thus decreasing the occurrence of nosocomial infections.***
- ***The baby gains weight faster.***

The main advantages for the mother are:

- ***KMC helps to empower the mother as she plays the main role by providing warmth to her baby, protection against infections, and nutrition via breastfeeding.***
- ***An additional benefit is the promotion of mother-infant bonding and decreased rejection of preterm babies.***
- ***The method involves other family members, reinforcing family interaction.***

4. Summarize the approach to the care of the LBW infant in the form of an algorithm.

The approach to care of the LBW infant is summarized in the algorithm noted below:



SESSION 13: Treatment of Infections in the Newborn—Answers

INDIVIDUAL LEARNING ACTIVITIES

Case Study 1

Mrs. Kalonji, aged 35, gave birth at the general hospital, to her fifth baby eight days ago. Pregnancy was uncomplicated. Because she found pus in the umbilical area, she brought her baby today to the health center.

1. What is the diagnosis?

Localized umbilical infection, as there is only pus discharge without surrounding redness or swelling or a foul smell.

2. What is the care plan for this baby and why?

The recommended care plan for a localized umbilical infection is as follows:

- ***Perform a systematic examination of the newborn and look for danger signs (absent in this baby). Treat as a minor umbilical infection.***
- ***Open the umbilical skin folds and clean the depth with a swab/compress soaked in alcohol or an antiseptic solution and apply the solution in the umbilicus after the cleaning.***
- ***Show the mother what you do.***
- ***Ask the mother to demonstrate how she would do this.***
- ***Take advantage of the visit to counsel the mother about herself and the baby.***
- ***Explain that she should come back to come back immediately if the baby develops even one danger sign or in two days for the routine evaluation.***

Mrs. Kalonji comes back to clinic two days later. She reports that she gave the treatment as recommended. You observe a diffuse area of redness around the umbilical stump. The baby has fever.

3. Based on these findings, what is your new care plan for the baby of Mrs. Kalonji and why?

The new care plan for a major infection should be as follows:

- ***The baby now presents with two danger signs: fever and extended redness around the umbilicus. These indicate that the infection has spread and should be treated as a major infection.***
- ***Administer the first doses of antibiotics.***
- ***Send the baby to the appropriate referral center following all the guidelines for referral outlined earlier in this session.***

Case Study 2

The baby of Mrs. Mutombo, a 17-year-old primipara, was born after prolonged labor and PROM >24 hours. Mrs. Mutombo was discharged from the health center after one day. She and her baby did not receive any evaluation and counseling. She returns to the health center on day 5 because her baby refuses to suck. Upon examination, the baby is found to be hypothermic and has very poor activity.

1. What is the diagnosis? Why?

Sepsis, because three danger signs are present (refusal to suck, hypothermia, poor activity).

2. What care plan do you propose?

Treat as a major infection:

- ***Stabilize the baby (warm by skin-to skin-contact).***
- ***Administer the first doses of antibiotics.***
- ***Prepare for referral.***
- ***Refer the baby with appropriate advice and a referral note.***
- ***Follow the guidelines for treatment of sepsis and referral presented earlier.***

3. What should have been done after birth for this baby?

- ***The baby had a high risk factors for infection: premature rupture of membranes (PROM) >24 hours and prolonged labor.***
- ***The baby should have received antibiotics (ampicillin and gentamycin).***
- ***The mother and baby should have been kept longer at the center and examined and evaluated carefully 2-3 times a day.***
- ***If even a single danger sign was noted, the baby should have been referred to a higher center.***
- ***In cases where the baby remained normal, active, and taking feeds well, antibiotics should have been continued for at least 3 days, preferably 5 days, as blood tests are not feasible at most peripheral centers.***

FINAL EVALUATION FORM– Integrated Maternal and Newborn Clinical Skills Course

1. What were the strong points of the classroom portion of this clinical skills course?

2. How would you improve the classroom portion of the course? What are your recommendations?

3. What were the strong points of the clinical practicum? Did you have enough practical experiences in clinical to feel competent and confident in your newly acquired skills?

4. How would you improve the clinical practicum? What are your recommendations?

5. What seemed to be the most innovative thing that you learned during this clinical skills course?

6. How will you put what you learned into practice when you return to your place of work?